



East Renfrewshire Local Development Plan

LOCAL
DEVELOPMENT
PLAN

Supplementary Planning Guidance: Dams to Darnley Country Park Strategic Environmental Assessment June 2015



PART 1

To: SEA.gateway@scotland.gsi.gov.uk

or

SEA Gateway
Scottish Executive
Area 1 H (Bridge)
Victoria Quay
Edinburgh EH6 6QQ

PART 2

An SEA Environmental Report is attached for the plan, programme or strategy (PPS) entitled:

Dams to Darnley Country Park - Supplementary Planning Guidance

The Responsible Authority is:

East Renfrewshire Council

PART 3

Please tick the appropriate box

- The PPS falls under the scope of Section 5(3) of the Act and requires an SEA under the Environmental Assessment (Scotland) Act 2005. ***or***
- The PPS falls under the scope of Section 5(4) of the Act and requires an SEA under the Environmental Assessment (Scotland) Act 2005. ***or***
- The PPS does not require an SEA under the Environmental Assessment (Scotland) Act 2005. However, we wish to carry out an SEA on a voluntary basis. We accept that, as this SEA is voluntary, the statutory 5 week timescale for views from the Consultation Authorities cannot be guaranteed.

PART 4

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PART 5

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(electronic
signature
is acceptable)

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Date

June 2015

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1. NON-TECHNICAL SUMMARY

1.1. Introduction

- 1.1.1. East Renfrewshire Council has prepared Supplementary Planning Guidance associated with the Dams to Darnley Country Park. The guidance forms part of the East Renfrewshire Local Development Plan. It aims to identify the priority enhancements that the Council wishes to support in order for the Country Park to realise its full potential as a visitor and community facility.
- 1.1.2. This Environmental Report forms the basis of the Strategic Environmental Assessment associated with the guidance. The report highlights any adverse environmental impacts brought about by those proposals contained within the guidance and provides measures to mitigate against them.
- 1.1.3. The Strategic Environmental Assessment process has helped to inform the guidance and in particular has sought to influence the proposals contained within it.

1.2. Consultation

- 1.2.1. As required under Section 16 of the Environmental Assessment (Scotland) Act 2005, copies of the Environmental Report associated with the Proposed Supplementary Planning Guidance, together with the proposed guidance document, were sent to the three Consultation Authorities. As additionally required, an advert was also placed in local newspapers inviting comments on this report and it was made available to view at Council Offices, libraries and on the Council's website.
- 1.2.2. The consultation period for the Environmental Report ran for six weeks, ending on 18 February 2015. Consultation on the accompanying Proposed Supplementary Planning Guidance ran in parallel. Following representations received, a small number of changes were made to the finalised Environmental Report.

1.3. Summary of Strategic Environmental Assessment Findings

- 1.3.1. The proposals contained within the guidance are listed under four themes: access, facilities, natural and built heritage and promotion and management.
- 1.3.2. The Environmental Report noted that in most cases the negative environmental impacts of the proposals contained within the guidance were not considered significant. In addition, the report established that many proposals would have a positive or neutral environmental impact.
- 1.3.3. No proposals contained within the guidance impact directly upon the Waulkmill Glen Site of Special Scientific Interest or the Category A Listed Waulkmill Glen Reservoir.
- 1.3.4. The report identified that collectively, the proposals contained within the guidance were likely to lead to a significant increase in visitor numbers and that this would have a potential environmental impact. Subsequently,

proposals relating to the development of the Country Park path network and facilities were recognised as having an important role in managing increased visitor pressure.

- 1.3.5. The proposal to establish a new Dams to Darnley Wake Park at Balgray Reservoir, and the resultant activities undertaken from it, was identified within the report as having the greatest potential environmental impact. As a result, the report concluded that an opinion should be sought on the requirement to undertake an Environmental Impact Assessment to provide a detailed examination of proposed activities and their likely effect. Such an assessment would ultimately accompany a subsequent planning application and assist to inform the decision making process.
- 1.3.6. Measures to mitigate against the potential environmental impacts of the proposals contained within the guidance are identified throughout the report.

1.4. Monitoring

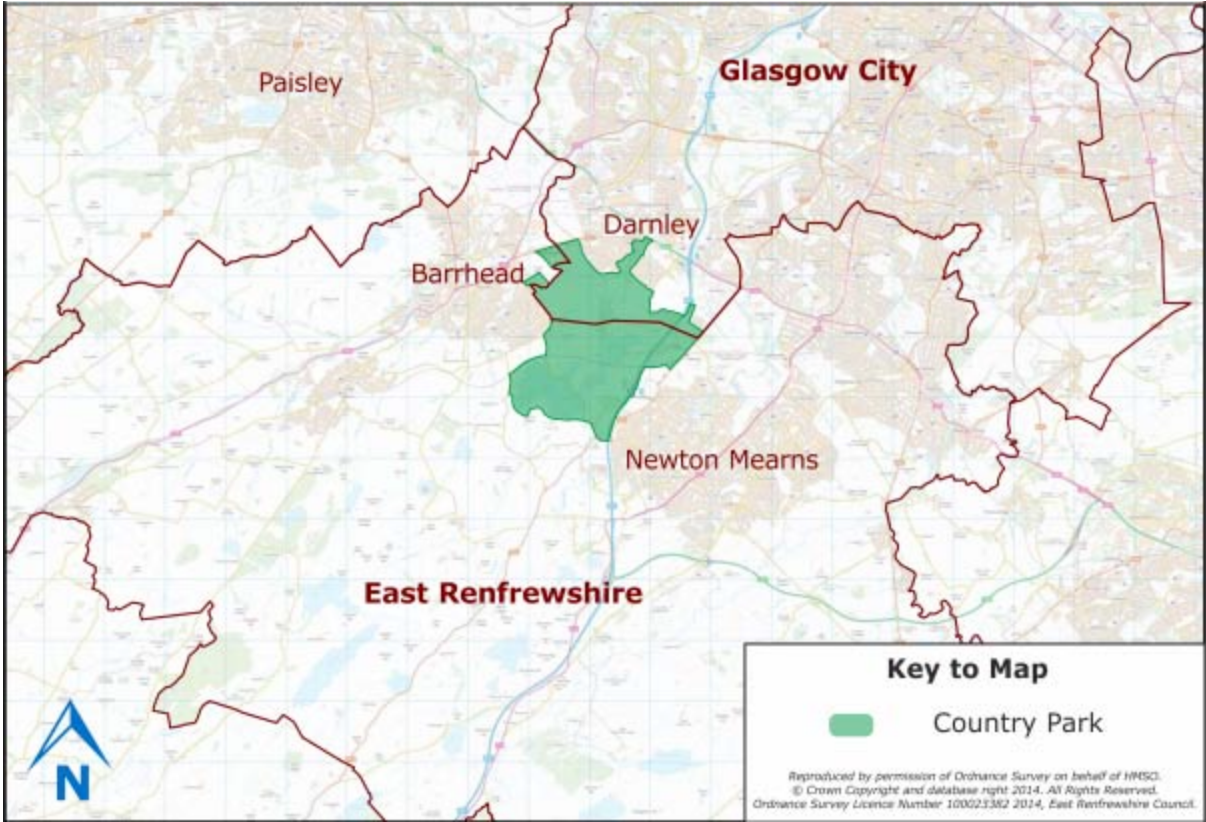
- 1.4.1. The Council as the Responsibility Authority is required to monitor the significant environmental impacts of implementing the Supplementary Planning Guidance. A Monitoring Statement sets out how the Council intends to undertake this duty.

2. INTRODUCTION

2.1. Dams to Darnley Country Park

2.1.1 Dams to Darnley Country Park sits between Barrhead, Darnley and Newton Mearns. It encompasses approximately 550 hectares of green space land between the East Renfrewshire and Glasgow City boundary (figure 1). Since 2004 East Renfrewshire and Glasgow City Councils have worked in partnership to develop and manage the Country Park. In 2006 a minute of agreement was signed outlining the terms of the partnership, this enabled a Joint Committee to meet for the first time. During the past five years, the Country Park has seen a significant increase in visitor numbers, resulting largely from the creation of new paths and car parking, the success of countryside ranger led activities and increased publicity and promotion. Annual Country Park visitor numbers are estimated to be 90,000, with the vast majority of visits being made by residents from surrounding communities. Despite progress, Country Park facilities are limited; there is no visitor centre, toilets or indoor education space. In addition, access to the Country Park remains problematic. Key walking and cycling links are absent, public transport choices are limited and car parking options are restricted within the heart of Dams to Darnley.

Figure 1: Dams to Darnley Country Park



2.1.2. Improving access to the Country Park, and establishing facilities within it, is critical if the vision behind Dams to Darnley is to be realised and its potential as a regional visitor attraction and valued community resource is to be

fulfilled. Facilities are also central in terms of generating income to support the Country Park's enhancement and long-term sustainability.

2.1.3. In September 2014, the Joint Committee approved a Country Park Plan. The plan seeks to guide the Country Park's development and aid its effective and efficient management. The plan is based around eight aims, to:

- Develop a range of inclusive land and water based recreation opportunities within the country park, suitable for all ages and abilities, and manage their impact upon heritage and land management interests;
- Provide good quality, appropriate, sustainable and inclusive facilities for visitors, in keeping with the landscape of the Country Park;
- Conserve and enhance the biodiversity, geodiversity and landscape of the Country Park;
- Conserve, protect and enhance the built heritage of the Country Park;
- Raise awareness, understanding and appreciation of the Country Park and promote its responsible use through information, interpretation and education;
- Develop inclusive opportunities for training, volunteering and business diversification as part of the development and management of the Country Park;
- Promote community safety and tackle antisocial behaviour within the Country Park;
- Ensure that the Country Park and its resources are effectively managed and maintained.

2.1.4. Subsequently East Renfrewshire Council has prepared Supplementary Planning Guidance associated with the Country Park. The guidance forms part of the East Renfrewshire Local Development Plan. The guidance identifies the priority enhancements that the Council wishes to support in order for the Country Park to realise its full potential as a visitor and community facility. These enhancements have been framed by the Country Park Plan.

2.2. Strategic Environmental Assessment

2.2.1. The Environmental Assessment (Scotland) Act 2005 (the Act) requires responsible authorities to assess the environmental impact of certain plans, programmes and strategies. Strategic Environmental Assessment is the mechanism through which this is achieved. It aims to:

- Integrate environmental decision making into plan preparation;
- Improve plans and enhance environmental protection;
- Increase public participation in environmental decision making;
- Facilitate openness and transparency of decision making.

2.2.2. The Strategic Environmental Assessment process has been an integral part of the preparation of the Supplementary Planning Guidance. This has ensured that environmental considerations have been taken on board in the preparation of the guidance. It has also looked to ensure that appropriate

proposals will be taken forward in the right location and with minimal environmental impact.

2.3. Scoping Report

2.3.1. The Council initially carried out a Strategic Environmental Assessment Scoping Report in relation to the Proposed Supplementary Planning Guidance. The Scoping Report defined the necessary level of detail required within this subsequent Environmental Report and set out the consultation timescale.

2.3.2. A Strategic Environmental Assessment was previously undertaken in relation to the East Renfrewshire Proposed Local Development Plan. This established a set of 22 Environmental Objectives in order to assess the environmental impact of the plan. These objectives were based upon a number of Environmental Issues, derived from Schedule 3 of the Act and Appendix 5 of the Strategic Environmental Assessment Directive (2005). The Proposed Supplementary Planning Guidance Scoping Report identified existing baseline data and information associated with each of these same Environmental Objectives and Environmental Issues. This enabled an initial consideration of the likely environmental impact of the guidance (appendix 1). This led to three potential Environmental Issues being scoped out of this subsequent Environmental Report, the reasoning being that the limited scale of the proposals contained within the guidance resulted in limited impact (table 1). As a result, this Environmental Report focuses upon the impact of the guidance upon a set of 17 Environmental Objectives, across nine Environmental Issues (table 1).

Table 1: Scoping Report Environmental Issues Scoped In and Out

Environmental Issues	Scoped In	Scoped Out	If Scoped Out, Why	Environmental Objectives
Biodiversity, Flora and Fauna	X			1) Protect, enhance and where necessary restore (specified) species and habitats
				2) Ensure sustainable use of agricultural and forestry resources
Population and Human Health	X			3) Provide environmental conditions promoting health and well-being (including increasing opportunities for indoor and outdoor recreation)
				4) Minimise noise and vibration
Water	X			5) Minimise water pollution
				6) Ensure sustainable use of water resources
				7) Ensure proposals do not increase the risk of flooding
Geology	X			8) Protect, enhance and where necessary restore geological features

Soil		X	When considered individually and cumulatively, the scale of proposals contained within the Proposed Supplementary Planning Guidance will not result in significant environmental impacts in relation to soil quality and contamination.	
Air	X			9) Minimise air pollution and ensure a high level of air quality
Climatic Factors	X			10) Reduce greenhouse gas emissions
				11) Reduce energy use and ensure sustainable use of energy
Material Assets		X	When considered individually and cumulatively, the scale of the proposals contained within the Proposed Supplementary Planning Guidance will not result in significant environmental impact in relation to infrastructure, property and land.	
Cultural Heritage	X			12) Protect, enhance and where appropriate restore archaeological sites and the historic environment
				13) Protect, enhance and where appropriate restore the built environment and regenerate degraded environments
Landscape	X			14) Protect, enhance and create green spaces important for recreation and biodiversity
				15) Protect, enhance and where necessary restore the natural landscape
Transport	X			16) Reduce the need to travel
				17) Promote sustainable transport modes

Waste		X	When considered individually and cumulatively, the scale of the proposals contained within the Proposed Supplementary Planning Guidance will not result in significant environmental impact in relation to an increase in waste production.	
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2.3.3. As required under the Act, the views of the three Consultation Authorities (Scottish Natural Heritage, Scottish Environmental Protection Agency and Historic Scotland) were sought on the Scoping Report. Their responses, detailed in table 2, have informed this Environmental Report.

Table 2: Scoping Report Consultation Authorities' Responses

Scottish Natural Heritage (SNH) Comments	East Renfrewshire Council Response
SNH is content with the SEA issues which have been scoped both in and out of this assessment. The issues are fairly broad however and we would hope to ensure for example that any assessment of 'biodiversity, flora & fauna' included consideration of protected species (particularly European Protected Species), local natural heritage designations (Sites of Importance for Nature Conservation as identified in the East Renfrewshire Local Plan) and species and habitats from the relevant Local Biodiversity Action Plan.	The Council notes that SNH is content with the scoping in and out of Environmental Issues identified in the Scoping Report. This Environmental Report identifies protected species (including European) and designations associated with the Country Park. Habitat and Species Actions Plans relevant to the Country Park, associated with Local Biodiversity Action Plans, are also identified. The impact of proposals contained within the guidance are assessed against these species, designations and habitats.
We are pleased to note the commitment to consider reasonable alternatives for paths and facilities etc. It is our belief that the SEA should be used firstly as a means of identifying the solution to the requirement for Supplementary Planning Guidance for the Park that will have the least environmental impact. Where other considerations mean that aspects of this optimal alternative cannot be adopted, this then can be used as a means of identifying the appropriate mitigation measures which will be required. However this approach can only be truly meaningful and of value if the alternatives considered in the first place are genuine solutions that could realistically be put in place.	As part of the development of the Country Park Plan, which informed the guidance, the Council considered options associated with access and facilities. A number of alternative proposals associated with the location of paths, car parks and visitor facilities were assessed within the Environmental Report, including options previously identified within the Country Park Plan.
SNH notes that a period of six weeks is proposed for consultation on the Environmental Report and is content with this proposed period.	The Council notes that SNH is content with the proposed consultation period associated with this Environmental Report.

Historic Scotland (HS) Response	East Renfrewshire Council Response
The Scoping Report provides a clear description of the approach to the assessment of the guidance and HS are content with the scope and level of detail proposed for the SEA. HS note and welcome that the historic environment is to be scoped into the assessment and are therefore content to agree with the proposed approach to the assessment.	The Council notes that HS is content with the scope and level of detail proposed within the Environmental Report.
HS note that it is proposed that the draft guidance and environmental report will be out for a consultation of six weeks and are content with this period.	The Council notes that HS is content with the proposed consultation period associated with the Environmental Report.
HS note that there is a Category C Listed Building at Lyoncross.	This listing has been included within the State of the Environment Report (appendix 3).
HS note that there are a number of built heritage assets within the Country Park that appear on the Buildings at Risk Register of Scotland.	These listings have been included as part of the Baseline Data Tables (appendix 4) and within the State of the Environment Report (appendix 3).
HS note that it is the intention to utilise a similar approach to that carried out for the Local Development Plan. HS welcome this approach and note that, given the proposed outcomes of the plan, the assessment will be able to go into a greater level of detail given the site-specific nature of the proposals.	The Council notes that HS welcome the intention to utilise a similar approach to the Local Development Plan within the SEA and the fact that it will be able to go into a greater level of site-specific detail.
HS notes that both SHEP (2011) and SPP (2014) have been updated since those editions referenced in appendix 1 of the Scoping Report.	These references have been updated in the Environmental Report (appendix 3).
Scottish Environmental Protection Agency (SEPA) Response	East Renfrewshire Council Response
Generally, the scoping report provides clear and detailed information on the proposed scope and level of detail of the assessment and covers most of the aspects that we would wish to see addressed at this stage. Subject to the comments below, SEPA are generally content with the scope and level of detail proposed for the Environmental Report.	The Council notes that SEPA is content with the scope and level of detail proposed within the Environmental Report.
SEPA are satisfied with the proposal to scope out soil, material assets, and waste.	The Council notes that SEPA is content with the scoping out of three issues from the Environmental Report.
SEPA are content with the proposed detailed assessment matrix and particularly welcome the identification of mitigation and potential enhancement opportunities within the matrix.	The Council notes that SEPA is content with the assessment matrix to be used within the Environmental Report.
SEPA note that alternative proposals are still being considered and will relate primarily to options associated with the location of paths and facilities. Any reasonable alternatives identified during the preparation of the plan should be assessed as part of the SEA process and the findings of the assessment should inform the	As part of the development of the Country Park Plan, which informed the guidance, the Council considered options associated with access and facilities. A number of alternative proposals associated with the location of paths, car parks and visitor facilities were assessed within the Environmental Report,

choice of the preferred option. This should be documented in the Environmental Report.	including options previously identified within the Country Park Plan.
One of the most important ways to mitigate significant environmental effects identified through the assessment is to make changes to the plan itself so that significant effects are avoided. The Environmental Report should therefore identify any changes made to the plan as a result of the environmental assessment. Where the mitigation proposed does not relate to modifications to the plan itself then it should be clear how the mitigation will be achieved and by whom. These should follow the mitigation hierarchy (avoid, reduce, remedy or compensate).	Section 8 of the Environmental Report details how the SEA process has influenced the development of the guidance. Section 7 of the Environmental Report provides details of enhancement and mitigation associated with proposals contained within the guidance. It details specific enhancement and mitigation measures and identifies anticipated delivery mechanisms.
SEPA note that the Environmental Report will contain a monitoring framework. Wherever possible and appropriate, existing monitoring frameworks and indicators can be used effectively to meet the SEA monitoring requirements.	Section 9 and appendix 4 of the Environmental Report provide details of the arrangements to monitor the environmental effects of the implementation of the guidance. These arrangements will utilise existing indicators where appropriate.
SEPA are satisfied with the proposal for a six week consultation period for the Environmental Report.	The Council notes that SEPA is content with the proposed consultation period associated with this Environmental Report.

2.4. Purpose of the Environmental Report

2.4.1. This Environmental Report is the key document within the Strategic Environmental Assessment process. It is the main mechanism for describing and evaluating the significant effects, both positive and negative, of the implementation of the Supplementary Planning Guidance. It is also the key consultation document in the Strategic Environmental Assessment process. There is a specific requirement under the Act for the Council, as Responsible Authority, to take account of the views expressed by the Consultation Authorities and any other respondents to the Environmental Report.

2.4.2. Specifically this Environmental Report aims to:

- Provide information on the Supplementary Planning Guidance and its Strategic Environmental Assessment process;
- Identify, describe and evaluate the likely significant effects of the Supplementary Planning Guidance and reasonable alternatives;
- Provide an early and effective opportunity for the Consultation Authorities and the public to offer views on any aspect of this Environmental Report.

2.4.3. This Environmental Report underwent a six-week consultation period, which ended on 18 February 2015. Following representations received, a number of changes were made to the finalised Environmental Report (table 3). The consultation on the Proposed Supplementary Planning Guidance, which ran in parallel, included a number of representations that were relevant to the Environmental Report. These representations, together with the Council's response are also included in table 3.

Table 3: Environmental Report Consultation Responses

Strathclyde Geoconservation Group Comments	East Renfrewshire Council Response
The inclusion of geology in the Environmental Assessment (table 1 and sections 6.14.1 and 8.1.3) is commended.	The Council notes the support for the inclusion of geology in the assessment.
The document 'A Geological Audit of the City of Glasgow', carried out and published by the British Geological Survey in 2013, should be referenced in relation to appendix 1 (Soil and Geology), appendix 3 (section 4.3) and appendix 4 (Baseline Data). The Site Assessment of Waulkmill Glen SSSI (GGS 13) contained within the audit provides a more up to date assessment than the SNH report.	The finalised Strategic Environmental Assessment will be re-drafted to reference the British Geological Survey audit of 2013. The audit findings will be included in the State of the Environment Report (appendix 3, section 4.3). The audit will also form part of baseline geological data, as listed in appendix 4. The audit will not be listed as a source in appendix 1, as this refers to data used within the previous Scoping Report which has already been completed.
Scottish Natural Heritage (SNH) Comments	East Renfrewshire Council Response
SNH is happy to concur with the conclusions of the assessment, which assessed the various proposals referred to in the Proposed Supplementary Planning Guidance against those Environmental Objectives that relate to the natural heritage. Where negative environmental impacts were identified, the need for mitigation is stated and suggestions made. Where proposals have been included in the guidance that have been assessed as having likely negative environmental impacts the reasons for their adoption are also explained.	The Council notes that SNH concurs with the conclusions of the assessment.
Historic Scotland (HS) Comments	East Renfrewshire Council Response
The assessment provides a clear understanding of the likely significant effects of the guidance and its reasonable alternatives and HS are content to agree with the findings presented.	The Council notes that HS agrees with the findings of the assessment.
The descriptive approach to the assessment is welcomed and offers a clear consideration of the potential effects of each of the proposals and alternatives on the historic environment baseline. Where effects are identified mitigation and enhancement are suggested as appropriate.	The Council notes that HS welcomes the descriptive approach to the assessment and the presentation of mitigation and enhancement measures as appropriate.
It is particularly welcomed that the findings of the assessment have been reflected in the content of the guidance, giving greater understanding of the environmental effects of the proposals.	The Council notes that HS welcomes the fact that the findings of the assessment have been reflected in the guidance.
Scottish Environmental Protection Agency (SEPA) Comments	East Renfrewshire Council Response
SEPA are satisfied that an adequate assessment of the Proposed Supplementary Planning Guidance has been carried out and would agree with the findings of the Environmental Report.	The Council notes that SEPA are satisfied with the adequacy of the assessment and agree with the findings of the Environmental Report.
As the proposed guidance is finalised, East Renfrewshire Council as Responsible Authority, will be required to take account of the findings of	As required the Council will draft a Post-adoption SEA Statement shortly after the Supplementary Planning Guidance has been

<p>the Environmental Report and of views expressed upon it during this consultation period. As soon as reasonably practical after the adoption of the proposed guidance, the Responsible Authority should publish a statement setting out how this has occurred. SEPA normally expect this to be in the form of an "SEA Statement" similar to that advocated in the Scottish Government Guidance. A copy of the SEA statement should be sent to the Consultation Authorities via the Scottish Government SEA Gateway on publication.</p>	<p>finalised. This statement will outline how the assessment and consultation responses have been taken into account, within the adopted guidance. The statement will be forwarded to the SEA statement for circulation to the three Consultation Authorities.</p>
<p>Dams to Darnley Country Park Countryside Ranger Service</p>	<p>East Renfrewshire Council Response</p>
<p>Sections 6.2.3, 6.5.3, 6.6.2, 6.7.2, 6.8.3, 6.10.7, 6.11.3 and 6.12.2 state that 'as far as possible' construction will not take place during the breeding season. If work was to take place during the breeding season a licence would be required or it would need to be confirmed that no nesting birds were present.</p>	<p>The Council recognises the position in relation to the disturbance of nesting birds during construction as set out in the Wildlife and Countryside Act 1981 (as amended). As it is unlikely that a license would be granted in such circumstances the sections of the Strategic Environmental Assessment noted will be re-drafted to indicate that if works were to take place during the season it would have to be confirmed that no nesting birds were present.</p>
<p>Sections 6.3.3 and 6.11.3 indicate that increased activity associated with visitor facilities has potential to impact upon biodiversity, at least in the short term. As facilities will be permanent it is suggested that these impacts will be long-term.</p>	<p>The Council notes the suggestion that the impact upon biodiversity associated with facilities is likely to be long-term because of their permanency. The increased activity may have a negative impact upon the biodiversity of the reservoir, in particular in the short-term, prior to any potential acclimatisation by wildlife.</p>
<p>Great to read that the birch scrub woodland at Balgray Reservoir will not only be protected, but enhanced.</p>	<p>The Council notes the support for the enhancement of the birch scrub woodland at Balgray Reservoir.</p>
<p>In section 6.5.2 there is no mention of the pond in the field to the south east of Balgray Reservoir that the path will pass from Newton Mearns to Balgray. This is well used by birds.</p>	<p>The Council notes the importance of this pond. The Strategic Environmental Assessment will be re-drafted to highlight that the proposed path route passes close to the pond and that it is well used by birds.</p>
<p>There is no mention of surveys to be done for bats. Will this be in with an EIA? There is no mention of bats throughout the Strategic Environmental Assessment. Sections 1.5.3 and 1.6.1 of appendix 3 should include bats as notable species think that bats are notable species. They should also be identified in table 5 of appendix 3.</p>	<p>The Council notes the omission of any reference to bats in the Strategic Environmental Assessment. Bats are not recorded in the available species information associated with the Country Park but as they are present they should be referenced in the assessment. The assessment will be re-drafted to include reference to the presence of bats and their significance as a protected European protected and LBAP species in relation to relevant proposals. The need to carry out relevant surveys will also be noted.</p> <p>Sections 1.5.3, 1.6.1, 1.9.1, 1.10.1 and 1.11.1 will be updated to include bats as</p>

	notable species. Bat species found within the Country Park will also be added to tables 4 and 5 of appendix 3. Finally sections 1.17.6 and 1.17.7 will be re-drafted to identify the protection afforded to bats under the Wildlife and Countryside Act 1981 (as amended) and European Habitats Directive.
Section 6.10.10 makes specific reference to the potential need for a powered craft to be positioned on stand-by if canoeing is promoted. But wakeboarding is also likely to require one.	The Council notes the comment in relation to the potential need for a motorised rescue boat. The Strategic Environmental Assessment will be re-drafted to omit the specific reference to canoeing in terms of the requirement for a motorised rescue boat to be positioned on stand-by.
In relation to mitigation measures associated with grassland habitat creation it is more likely that such habitats will be enhanced, rather than created.	The Council notes the comment in relation to grassland habitat enhancement. The relevant mitigation measure contained within the Strategic Environmental Assessment will be re-drafted to include 'grassland habitat enhancement and creation.'
With reference to section 1.2.2 of appendix 3, we have never seen river limpets. Better perhaps to say various species of mayfly nymphs instead as they are found within the Country Park and they are good water quality indicators.	The Council notes the comment in relation to the presence of river limpets. The Strategic Environmental Assessment will be re-drafted to refer to the presence of various species of mayfly nymphs as good indicators of water quality.
With reference to section 1.7.1 of appendix 3 the presence of greater butterfly orchid should be noted.	The Council notes the comment in relation to the presence of greater butterfly orchid. The Strategic Environmental Assessment will be re-drafted to refer to their presence.
Should cable wakeboarding be referred to as non-motorised? If it is it should at least be explained how it is powered.	The Council notes the query as to whether cable wakeboarding should be described as 'non-motorised'. The Council has used the term 'non-motorised' to describe cable wakeboarding in distinguishing it from motorised activities such as water skiing and jet skiing, which it has no plans to promote at the Barrhead dams.
Clydebirds Comments	East Renfrewshire Council Response
The reservoir hosts large numbers of wintering wildfowl including geese and swans. The overhead cables will be extremely hazardous to flying birds.	The Council notes the potential hazard of overhead cables on flying birds. The Strategic Environmental Assessment will be re-drafted to highlight the potential additional hazard caused by wakeboarding cables and the need for specific mitigation measures associated with the design, operation and management of the Wake Park. This issue will be addressed as part of a future proposed planning application.
The Coal Authority Comments	East Renfrewshire Council Response
One of the proposed paths (figure 5) will be directly over a recorded mine entry and within the zone of influence of a recorded mine entry. It is recognised that no significant operational development is required as part of the formation	The Council notes that the indicative route of a path, as detailed in figure 5 of the Strategic Environmental Assessment, is directly over a recorded mine entry. The indicative route of the path shown in figure 5

<p>of a path, however as the Council is promoting public access to these areas that may not be intensively used at this time, it will be necessary to change the path route slightly to avoid these mining features with regards to public safety.</p>	<p>will be adjusted so that it is outwith the zone of influence of the recorded mine entry.</p>
<p>Member of the Public Comments</p>	<p>East Renfrewshire Council Response</p>
<p>The Wake Park cables would seem to be a hazard to any waterbirds flying from one end of the waterbody to the other, especially tired migrating species arriving at dusk in the autumn. The moulting flocks of tufted ducks resident from June-September, although able to fly, really cannot gain much height and would also be vulnerable to collision with the ropes.</p>	<p>The Council notes the potential hazard of overhead cables on flying birds. The Strategic Environmental Assessment will be re-drafted to highlight the potential additional hazard caused by wakeboarding cables and the need for specific mitigation measures associated with the design, operation and management of the Wake Park. This issue will be addressed as part of a future proposed planning application.</p>
<p>Scottish Ornithologists' Club (Clyde Branch)</p>	<p>East Renfrewshire Council Response</p>
<p>The overhead cables will present a significant hazard to flying birds, inevitably this will lead to potentially fatal collisions; this is of particular concern for large slow flying birds like swans and geese.</p>	<p>The Council notes the potential hazard of overhead cables on flying birds. The Strategic Environmental Assessment will be re-drafted to highlight the potential additional hazard caused by wakeboarding cables and the need for specific mitigation measures associated with the design, operation and management of the Wake Park. This issue will be addressed as part of a future proposed planning application.</p>
<p>Dams to Darnley Angling Club</p>	<p>East Renfrewshire Council Response</p>
<p>The bays proposed for cable wakeboarding are known to be nursery areas for fish due to the large number of sunken trees and other structures within them. As this underwater structure is missing from large parts of Balgray Reservoir, the club believes that these bays are critical for new generations of fish.</p>	<p>The Council notes the critical importance of the bays proposed for wake boarding as nursery areas for fish, and in turn for breeding and wintering bird species. The Strategic Environmental Assessment will be re-drafted to highlight the potential impact of the wake park upon fish populations and aquatic ecology, whilst identified mitigation measures will also be appropriately updated in both the finalised assessment and guidance.</p>

3. COUNTRY PARK SUPPLEMENTARY PLANNING GUIDANCE

3.1. Policy Context

3.1.1. Support for Dams to Darnley is established within the East Renfrewshire Local Development Plan (Policy M10.1: Environmental Projects - Dams to Darnley Country Park). The Council is pursuing the enhancement of the Country Park in part through policies contained within the plan associated with the M77 Strategic Development Opportunity. The M77 area spans Junctions 4 and 5 of the motorway, taking in the urban edges of Barrhead and Newton Mearns and the green belt in between. Much of the northern extent of the M77 area is within the Country Park.

3.1.2. The M77 area has been defined through a comprehensive master planning process associated with two Strategic Development Opportunity locations at Barrhead South and Malletsheugh/Maidenhall, Newton Mearns. This process culminated in the publication of Supplementary Planning Guidance for each location. Both documents have recently been the subject of public consultation. The central portion of Barrhead South is adjacent to Dams to Darnley, whilst its eastern extent at Lyoncross is within its boundary. As a result, the Barrhead South guidance, amongst other objectives, addresses in broad terms the enhancement of the Country Park through access, biodiversity, landscape and management improvements.

3.1.3. The Local Development Plan also establishes East Renfrewshire Council's position whereby it wishes to secure development contributions to support community infrastructure and environmental benefits associated with new developments, including Barrhead South and Malletsheugh/Maidenhall, by way of mitigation for the removal of these areas from the green belt and their likely impact on existing infrastructure. These contributions will be used in part to enhance the Country Park, given its status as a key recreational and environmental resource.

3.1.4. The signing of the Glasgow and Clyde Valley City Deal in August 2014 has additional and significant implications for the enhancement of Dams to Darnley. The City Deal has enabled the Council to secure £44M funding to support major infrastructure projects. This will include funding to facilitate visitor, community and transportation infrastructure associated with the Country Park, which to date has been beyond available resources.

3.2. Objectives and Content

3.2.1. The Supplementary Planning Guidance aims to identify the priority enhancements that the Council wishes to support in order for Dams to Darnley to realise its full potential as a visitor and community facility. The guidance provides further detail in relation to how access, biodiversity, landscape and management improvements identified within the Barrhead South Supplementary Planning Guidance integrate with the Country Park and how they contribute to its development and management. Additionally the guidance identifies priority Country Park enhancements which the Council

wishes to see supported by development contributions and other secured and future funding, in particular the City Deal. Finally, the guidance supports the rationale behind identified priorities, details preferred locations for facilities and provides outline design principles.

3.2.2. The priority Country Park enhancements are listed within the guidance under four elements, each focusing upon a number of key proposals:

1. Access
 - Road realignment and car parking
 - Public transport
 - Path projects
2. Facilities
 - Dams to Darnley Wake Park
 - Dams to Darnley Visitor Centre
 - Dams to Darnley Environmental Education Base
3. Natural and Built Heritage
 - Biodiversity and geodiversity
 - Landscape
 - Built heritage
4. Promotion and management

3.2.3. The Council has compiled the guidance in co-operation with Glasgow City Council, reflecting the partnership arrangements associated with Dams to Darnley. The proposals contained within the guidance only relate to the portion of Dams to Darnley within East Renfrewshire, but the guidance will recognise that a number will potentially impact across the Country Park and beyond.

3.3. Influencing Plans, Strategies and Documents

3.3.1. As noted above the Supplementary Planning Guidance is directed primarily by the Country Park Plan. A series of previous studies and associated consultations influenced the plan, including:

- A landscape character assessment¹ quantified key Country Park landscape features and areas and identified opportunities for improvements;
- A recreation study² that aimed to define a clear vision for recreation provision within the Country Park and provide outline proposals for the facilities and infrastructure needed to achieve it;
- A historic and cultural heritage audit and strategy³ identified key Country Park historical themes and made recommendations to improve the understanding and appreciation of its built heritage;

¹Land Use Consultants (2006) Dams to Darnley Country Park Landscape Character Assessment

²Moffat Centre for Travel and Tourism Business Development (2008) Dams to Darnley Recreation Study

³Graham Barrow Research and Consulting/Glasgow University Archaeological Research Division/Christopher Palmer Associates (2008) Dams to Darnley Country Park Historic and Cultural Heritage Audit and Strategy

- A feasibility study⁴ sought to establish business cases for four viable commercial or not-for-profit opportunities within the Country Park, including the delivery of facilities.

3.3.2. In addition to the Country Park Plan, the guidance has been influenced by a wide range of international, European, national, regional and local plans, policies and strategies, including those containing established environmental protection objectives. Appendix 2 provides a list of plans, policies and strategies, relevant to the guidance, summarising how they have been taken into account during its preparation.

⁴Dunira Strategy (2014) Dams to Darnley Country Park Feasibility Study

4. CURRENT STATE OF THE COUNTRY PARK ENVIRONMENT

4.1.1. It is important to understand the current condition of the Country Park environment in order that the impact of the Supplementary Planning Guidance can be evaluated and monitored. A State of the Country Park Environment Report is presented in appendix 3. Much of the available data contained within the State of the Environment Report focuses upon the East Renfrewshire side of the Country Park. Other data, including some biodiversity records, extend across the entire Country Park, recognising that potential environmental impacts will not be constrained by administrative boundaries. The State of the Environment Report is structured around the nine Environmental Issues that were scoped in to the assessment, as identified in table 1.

4.1.2. The information contained within the State of the Environment Report is also presented as Strategic Environmental Assessment Baseline Data Tables in appendix 4.

4.2. The Likely Evolution of the Country Park Environment without the Supplementary Planning Guidance

4.2.1. In addition to assessing the impact of the Supplementary Planning Guidance, the Strategic Environmental Assessment process also requires to determine the evolution of the Country Park’s environment in its absence.

4.2.2. Given the proposals for Barrhead South and the future availability of development contributions and City Deal funding, it is critical that proposals to improve access to the Country Park, and establish facilities within it, are set out at this point in time. Without the guidance there would be no clear, structured planning in relation to how these three key elements impact upon and potentially benefit the Country Park and its visitors. As noted above, the priority enhancements identified within the guidance are critical if the vision behind Dams to Darnley is to be fully realised and its potential as a regional visitor attraction and valued community resource achieved. Facilities are also central in terms of generating income to support the Country Park’s enhancement and long-term sustainability.

4.2.3. Specifically, the guidance identifies new path routes to and within Dams to Darnley and promotes sustainable Country Park transport options. Without these proposals, there would inadequate access provision and management against a backdrop of anticipated higher Country Park visitor numbers.

4.2.4. In addition, without the guidance there would be a lack of clarity over the location of vital new visitor facilities and how they relate to and potentially impact upon the Country Park’s environment. There would also be uncertainty over required mitigation and monitoring measures.

5. ASSESSMENT OF THE ENVIRONMENTAL IMPACTS ARISING FROM THE SUPPLEMENTARY PLANNING GUIDANCE – METHODOLOGY

5.1.1. Under the Act an Environmental Report is required to identify, describe and evaluate the likely effects on the environment of implementing:

(a) the plan or programme; and

(b) reasonable alternatives

taking into account the objectives and the geographical scope of the plan or programme.

5.1.2. The Supplementary Planning Guidance identifies a series of main proposals, listed under two themes: access and facilities. Each of the proposals contained within these themes has been assessed in detail against the set of 17 Environmental Objectives, outlined in table 1. The guidance also contains broad proposals based upon two further themes: natural and built heritage and promotion and management. These proposals are also assessed against the same set of 17 Environmental Objectives, but not in any detail, given their broad nature. As required under the Act, a small number of reasonable alternative proposals (in relation to location), considered during the preparation of the guidance, including options contained within the Country Park Plan, were also assessed.

5.1.3. The data used in undertaking the assessment is contained within the State of the Environment Report (appendix 3) and the Baseline Environmental Data (appendix 4).

5.1.4. The method of assessment is based on advice and guidance issued by the Scottish Government. A recognised approach was utilised using negative, positive and neutral rankings. This approach also assisted to identify any required mitigation measures. The process of assessment was undertaken rigorously and consistently. The findings of the assessment, including proposed mitigation measures, are detailed in the Section 6 and summarised in appendix 5.

5.1.5. In addition to assessing the impact of the guidance in relation to relevant environmental issues, as required by the Act, this Environmental Report also assesses the impact of the proposals contained within it in terms of:

- Short, medium, long term effects;
- Permanent, temporary effects;
- Secondary, cumulative and synergistic effects.

5.1.6. In summary, the indications used in appendix 5 are as follows:

+	The proposal has a positive environmental impact
-	The proposal has a negative environmental impact
0	The Proposal has a neutral impact i.e. both positive and negative environmental impacts relatively equal
?	The effect of the proposal on the environment is unknown or unclear
S	The proposal has short-term environmental impacts
M	The proposal has medium-term environmental impacts
L	The proposal has long-term environmental impacts
T	The proposal has temporary environmental impacts
P	The proposal has permanent environmental impacts
✓	The proposal has secondary, cumulative or synergistic effects
Y	Mitigation required

5.1.7. A number of major proposals, highlighted within the Supplementary Planning Guidance, have already been subject to Strategic Environmental Assessment and are not as a result part of this Environmental Report. The realignment of Aurs Road, west of Newton Mearns, was assessed as part of the East Renfrewshire Local Plan, which was adopted in 2011. The Barrhead South Strategic Development Opportunity (including the Lyoncross area within the Country Park), Barrhead South Rail Station and the Balgray Link Road formed part of the East Renfrewshire Local Development Plan Strategic Environmental Assessment.

6. ASSESSMENT OF THE ENVIRONMENTAL IMPACTS ARISING FROM THE SUPPLEMENTARY PLANNING GUIDANCE – FINDINGS

6.1.1. As noted above the priority Country Park enhancements are identified within the Supplementary Planning Guidance as a series of proposals, listed under four elements: access, facilities, natural and built heritage and promotion and management. The environmental impact of these proposals is assessed in detail below. The findings of the assessment are summarised in appendix 5.

6.2. Access: Realignment of Aurs Road, South of Barrhead

6.2.1. The realignment of a section of Aurs Road, south of Barrhead, is the most significant access proposal identified within the guidance (figure 2). As noted above, the environmental impact of the realignment of Aurs Road west of Newton Mearns, was assessed as part of the East Renfrewshire Local Plan. This noted negative environmental impacts associated with a number of issues including biodiversity, landscape and sustainable transport modes.

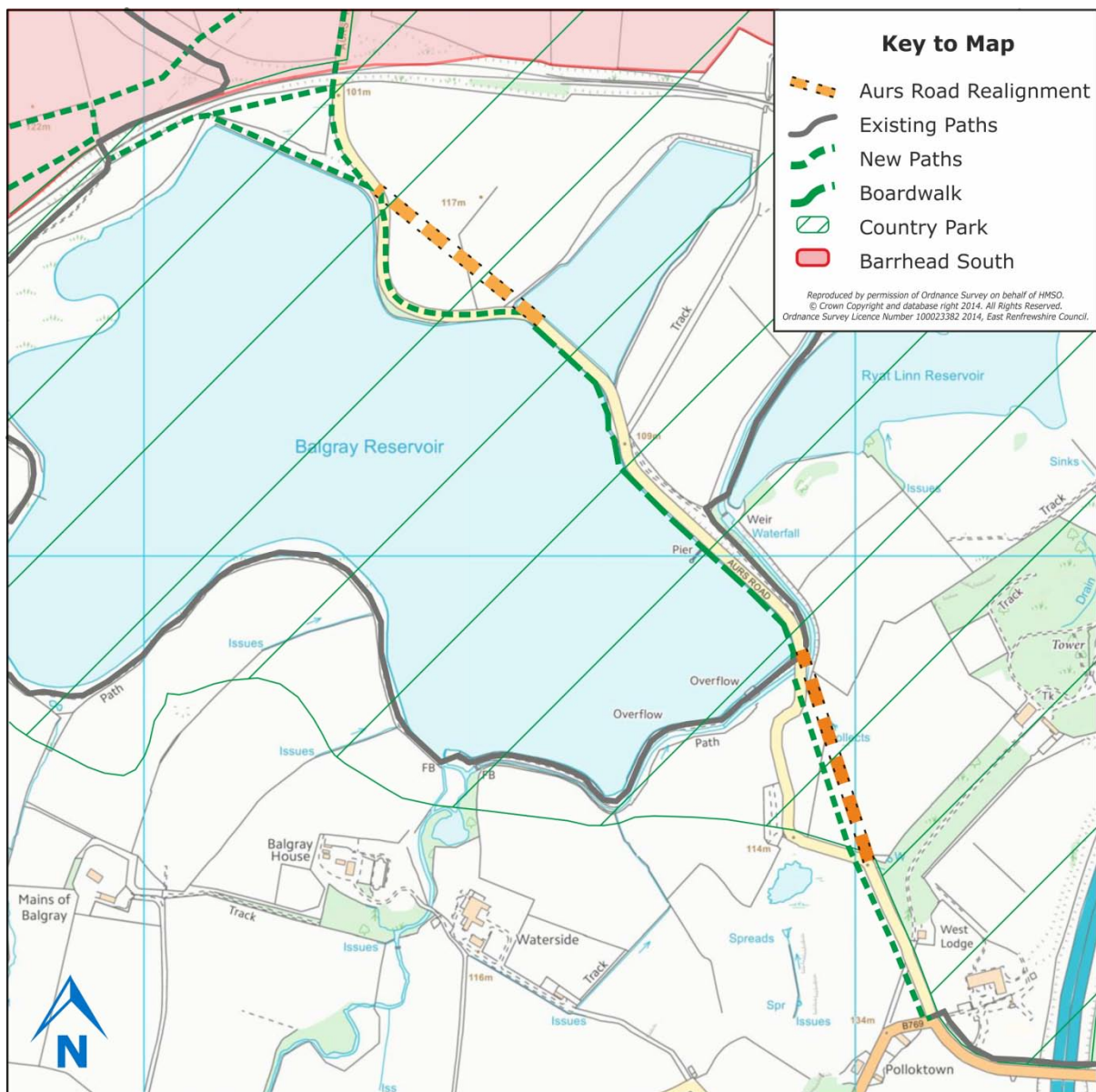
6.2.2. The realigned section of road will primarily go through agricultural land, currently used as commercial turf fields, which have little ecological value. As a result, it is not anticipated that the proposal will have a significant impact upon biodiversity across the majority of the site.

6.2.3. The southern end of the route is likely to require to cut across the south-west tip of Coalhill Reservoir, which is part of the Balgray Reservoir Local Biodiversity Site. Biodiversity records point to wetland birds nesting at Coalhill Reservoir. The State of the Environment Report also highlights that standing open water is a priority habitat listed within Local Biodiversity Action Plans. The impact of this proposal upon relevant priority habitats and species must be taken into consideration. Construction and vegetation clearance should also take place outwith the breeding season for wild birds as far as possible, to avoid the potential for disturbance. If works were to take place during the season it would have to be confirmed that no nesting birds were present.

6.2.4. The State of the Environment Report highlights the protection afforded to wild birds under the Wildlife and Countryside Act 1981. It also notes that a number of species found within the Country Park have additional or specific protection (appendix 3). Appropriate ecological surveys will be required to determine whether this proposal will impact upon protected species and if mitigation measures are appropriate or required. The presence of otters and bats within the Country Park, European protected species, is of particular significance. Otters and pipistrelle bats are also identified as priority species within Local Biodiversity Action Plans (appendix 3). A survey will be required to establish whether this proposal has the potential to affect otters and bats.

- 6.2.5. The realigned section of road will require a corridor of farmland to be taken out of production and thus will have a minor impact upon the sustainability of the local agricultural resource.
- 6.2.6. The road realignment proposal will help to facilitate much needed safe walking and cycling routes associated with Balgray Reservoir. It will as a result have a positive secondary environmental impact in terms of promoting health and well-being. Additionally, whilst the proposal in itself does not present benefits in terms of reducing the need to travel and promoting sustainable transport modes, the integration of a new safe walking and cycle route as part of the proposal will provide a significant positive secondary environmental benefit.

Figure 2: Access Enhancements – Aurs Road Realignment and New Paths



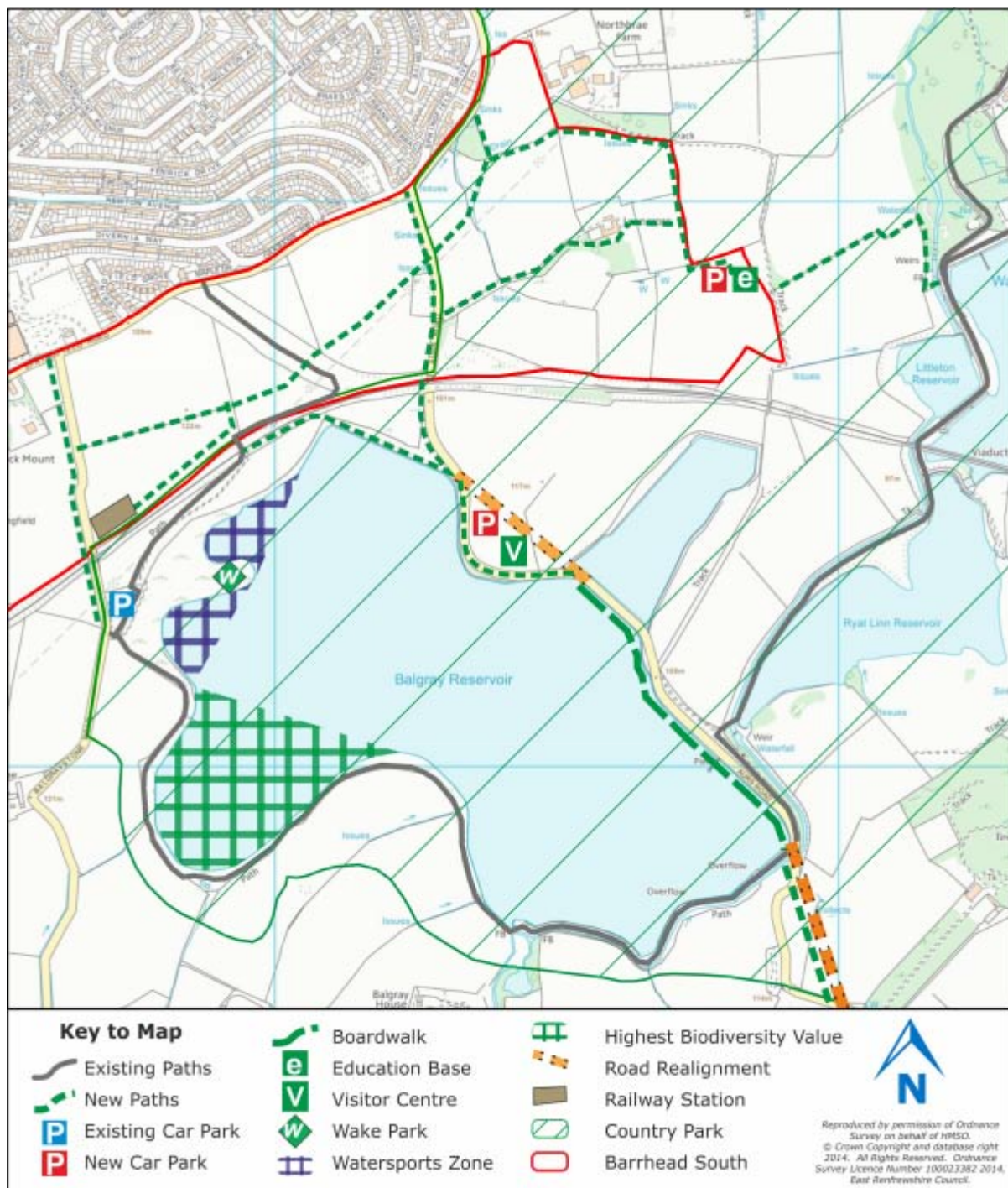
- 6.2.7. Although the proposal does not create a new road, the extent to which it increases or decreases noise and vibration, air pollution, greenhouse gas emissions and energy use will depend upon future traffic levels. As a result, it is difficult to ascertain the impact of this proposal once built upon these environmental issues at this stage. Its construction will nevertheless lead to short-term localised increases in noise and vibration and energy use in particular. The realigned route, away from Balgray Reservoir, will provide some small positive environmental impacts in terms of reducing traffic noise levels, vibration and air pollution at the water's edge.
- 6.2.8. There are no geological features or archaeological sites of interest associated with the proposal.
- 6.2.9. The realigned section of road will have an impact upon the local built environment and landscape associated with Balgray Reservoir. Given the local topography, it is particularly important to consider the landscape setting of the realigned road when viewed from the opposite shore of Balgray Reservoir. A comprehensive landscaping plan will require to be part of the new route. Utilising a planting scheme based upon existing woodland types will help to screen and set the realigned section of road within its landscape setting. Much of Aurs Road is fringed by stone walls on the reservoir side and this association will be lost along the realigned section. It will be important to incorporate new hedgerows within landscaping plans, enhancing the remaining boundary feature associated with Balgray Reservoir. Boundary features are noted as a priority habitat within the Glasgow Local Biodiversity Action Plan (appendix 3).
- 6.2.10. In summary, this proposal is likely to have permanent environmental impacts, primarily associated with the Country Park's landscape. These impacts will be more significant in nature than the path projects assessed below, given the scale and setting of the proposal. The implementation of a strong landscaping plan will help to mitigate the environmental impacts, but this will take time to mature. The landscape impact as a result will be most significant in the short and medium term. The positive secondary benefits of path proposals associated with the realigned road are of great significance, without these the Country Park and planned future facilities will remain inaccessible for many local residents without the use of a car.

6.3. Access: New Country Park Car Park associated with the Realignment of Aurs Road

- 6.3.1. The realignment of Aurs Road, south of Barrhead, will provide sufficient space and access for a new car park associated with a visitor centre overlooking the east shore of Balgray Reservoir (figure 3). The environmental impact of the visitor centre proposal is assessed in detail below.
- 6.3.2. As with the road realignment, the proposed site of the car park is agricultural land, currently used as commercial turf fields. These have little ecological value, and as a result it is not anticipated that this proposal will have a significant impact upon biodiversity across much of the site. As highlighted in

relation to the proposal to realign Aurs Road, the 1981 Act affords protection to wild birds, whilst a number of specifically protected species are also found within the Country Park. Appropriate ecological surveys will be required to determine whether this proposal will impact upon protected and priority species, including otters and bats, and if mitigation measures are appropriate or required.

Figure 3: Access Enhancements –New Visitor Facilities and Car Parks



- 6.3.3. Of greatest significance is how the detailed design of the car park, and the resultant visitor numbers, impact upon the edge of Balgray Reservoir Local Biodiversity Site. The increased activity may have a negative impact upon the biodiversity of the reservoir, in particular in the short-term, prior to any potential acclimatisation by wildlife. There is an important fringe of birch woodland, which records show is popular with terrestrial birds, between the reservoir edge and Aurs Road. There will be pressure to clear elements of this woodland to open up views across the reservoir, but this option must be considered carefully given its impact upon biodiversity. The car park proposal will offer opportunities to enhance the woodland strip for the benefit of biodiversity.
- 6.3.4. The car park will require an area of farmland to be taken out of production and thus will have a minor impact upon the sustainability of the local agricultural resource.
- 6.3.5. The creation of the car park will generate an increase in car borne journeys. The Country Park Recreation Study, undertaken in 2008, estimated that with the development of recreational and educational activities and the completion of visitor facilities, the Country Park could easily attract 250,000 visitors annually. This is a significant increase beyond the estimated current annual visitor numbers of 90,000. Such an increase would lead to an additional 32,000 car borne journeys approximately every year⁵. The car park proposal will contribute towards an element of this increase and thus to secondary environmental impacts associated with increases in noise and vibration, air pollution, greenhouse gas emissions and energy use. Construction will also lead to short-term localised increases in noise and vibration and energy use. By way of mitigation, it is important to note that the guidance contains a number of proposals that significantly enhance sustainable transport options associated with Dams to Darnley.
- 6.3.6. Run off from the car park has the potential to increase localised water pollution and flooding. The detailed design of the car park will require to ensure that its use does not impact upon the water quality of Balgray Reservoir, nor increase the risk of flooding to the adjacent visitor centre.
- 6.3.7. There are no geological features or archaeological sites of interest associated with the proposal.
- 6.3.8. The car park will have an impact upon the local built environment and landscape associated with Balgray Reservoir. Given topography, it is particularly important to consider the landscape setting of the car park when viewed from the opposite shore of Balgray Reservoir. A comprehensive landscape plan will require to be part of proposals for the new car park and visitor centre. Utilising a planting scheme based upon existing woodland types will also help to screen the car park and set it within its landscape setting. It will be important to incorporate new stone walls and hedgerows

⁵Based upon: SNH (2013) Scottish Recreation Study. Annual Summary Report 2012 and Transport Scotland and the Scottish Government (2013) Scottish Household Survey: Travel Diary 2012.

within landscaping plans, enhancing the important boundary features associated with Balgray Reservoir.

- 6.3.9. The birch woodland fringe that stretches along the reservoir's edge at this location, as noted above, will be of significant importance in screening the car park from the opposite shore of Balgray Reservoir. With careful design, it will also help to set the car park within its landscape setting. Whilst it is recognised that there will be pressure to open up vegetation to provide views across the reservoir, the potential role of the woodland in screening the car park is of greater importance and its enhancement should be embraced. Scrub woodland is identified as a priority habitat within Local Biodiversity Action Plans (appendix 3).
- 6.3.10. In summary, this proposal is likely to have permanent environmental impacts, associated with the Country Park's landscape and secondary environmental impacts associated with increases in noise and vibration, air pollution, greenhouse gas emissions and energy use. The implementation of a strong landscaping plan will help to mitigate the environmental impacts, but this will take time to mature. The landscape impact as a result will be most significant in the short and medium term.

6.4. Access: New Country Park Car Park at Lyoncross

- 6.4.1. The Barrhead South Supplementary Planning Guidance identifies an indicative location for a potential Country Park car park on the eastern edge of Lyoncross. The Country Park guidance has looked at locations in more detail and identifies a potential alternative site slightly further north (figure 3). This location also provides one possible site for an Environmental Education Base, the assessment of which is undertaken below.
- 6.4.2. The proposed site of the car park, together with its access road, are within poor semi-improved grassland of limited biodiversity value. As a result, it is not anticipated that the proposal will have an impact upon biodiversity. Nevertheless, the State of the Environment Report highlights the protection afforded to wild birds under the 1981 Act. It also notes that a number of species found within the Country Park have additional or specific protection (appendix 3). Appropriate ecological surveys will be required to determine whether this proposal will impact upon protected species and if mitigation measures are appropriate or required. Appendix 3 also highlights that the Country Park has a number of priority habitats and species listed within Local Biodiversity Action Plans. The impact of this proposal upon broadleaved and mixed woodland and boundary features, two priority habitats within Local Biodiversity Action Plans, must be given particular consideration.
- 6.4.3. The environmental education base site is associated with farmland, although it is not thought that this proposal will impact significantly upon the sustainability of the local agricultural resource.
- 6.4.4. The creation of the car park and associated environmental education base will contribute to the increase in car borne journeys noted above. Coaches would

also use the car park in relation to school visits. As a result, the car park proposal will contribute towards secondary environmental impacts associated with increases in noise and vibration and air pollution within the Country Park, as well as additional greenhouse gas emissions and energy use. These impacts will be magnified given there is currently no vehicular access to this Country Park location, although this rural setting will change to a degree as a result of the development of Barrhead South. Construction will also lead to short-term localised increases in noise and vibration and energy use. By way of mitigation, it is important to note that the Barrhead South guidance contains new path proposals which provide sustainable transport alternatives to this proposal.

- 6.4.5. There are no geological features or archaeological sites of interest associated with the proposal.
- 6.4.6. The car park and associated access road will have an impact upon the Country Park landscape associated with Lyoncross. Given the local topography, this is of particular importance in considering the landscape setting of the car park and access road when viewed from the main spinal path that runs through the heart of the Country Park. The Barrhead South guidance details a green space and landscape framework that aims to integrate the development within the wider countryside, including the Country Park. The framework will be key in mitigating the landscape impact of the proposed car park and access road.
- 6.4.7. The green space and landscape framework will combine strong boundaries to provide screening, with more open edges to allow visual and physical integration between the development and the surrounding countryside. Enhanced planting will provide screening along the outer development boundaries within Lyoncross to help maintain the existing landscape character, when viewed from within the Country Park. The screening of the car park will benefit from the existing broadleaved woodland associated with the proposed site. It will be important to expand this landscape element further, as supported by the green space and landscape framework. This will in turn support the enhancement of broadleaved and mixed woodland, a priority habitat contained within Local Biodiversity Action Plans (appendix 3).
- 6.4.8. The framework aims to prevent an abrupt change from the built form to rural surroundings by integrating rural features into the development where possible and allowing some urban features to integrate with the surrounding rural character. The transition from rural to urban character will be supported in part through the retention of existing landscape elements where possible, including hedgerows, tree belts and changes in topography. Additional woodland and hedgerow planting, based upon existing woodland types, will improve biodiversity value and help to establish these areas as green corridors. Where there are breaks in vegetation through the site, new planting will be established to further support the integration of the existing rural character into the development.

- 6.4.9. In summary, this proposal is likely to have permanent environmental impacts, associated with the Country Park's landscape. There will also be secondary environmental impacts associated with increases in noise and vibration and air pollution within the Country Park, as well as additional greenhouse gas emissions and energy use. The implementation of the green space and landscape framework within Barrhead South will help to mitigate the environmental impacts, but this will take time to mature. The landscape impact as a result will be most significant in the short and medium term.

6.5. Access: New Path from Newton Mearns to Balgray Reservoir, adjacent to Aurs Road

- 6.5.1. It is envisaged that a proposed new path between Newton Mearns and Balgray Reservoir will be delivered through a series of elements, detailed in figure 2 and below:

- A new safe path link from Newton Mearns to Balgray Reservoir, integrated with the realignment of Aurs Road (west of Newton Mearns);
- The construction of 650 linear metres of new path/boardwalk adjacent to Aurs Road alongside Balgray Reservoir;
- New Balgray Reservoir paths associated with a visitor centre, integrated with the realignment of Aurs Road (south of Barrhead);
- A new path link from the visitor centre to connect to the existing Balgray Reservoir path, completing a 4km circular loop.

- 6.5.2. The majority of the proposed path route will run along the eastern edge of Balgray Reservoir Local Biodiversity Site. As such, it has the potential to impact negatively upon the biodiversity of the reservoir. The high biodiversity value of the reservoir in terms of ornithology is highlighted in appendix 3. There is also a pond to the south east of Balgray Reservoir that is well used by birds, which the proposed path route would pass close to. Yet the impact of the route once in place is not anticipated to be significant. There is no evidence that the existing path around the western and southern shore of the reservoir has had a significant negative impact upon wetland and terrestrial birds since its opening in 2008, once regular visitor use was established along it. The eastern shore of the reservoir is not generally a favoured location for nest sites because of the steeply sloping stone face of the reservoir embankment.

- 6.5.3. Nevertheless, the State of the Environment Report highlights the protection afforded to wild birds under the Wildlife and Countryside Act 1981. It also notes that a number of species found within the Country Park have additional or specific protection (appendix 3). Appropriate ecological surveys will be required to determine whether this proposal will impact upon protected species and if mitigation measures are appropriate or required. The presence of otters and bats within the Country Park, European protected species, is of particular significance in relation to this proposal. A survey will be required to establish whether this proposal has the potential to affect otters and bats. An initial ecological survey is to form part of a feasibility study commissioned by the Council to look at the boardwalk element of this proposal. Appendix 3 also highlights that the Country Park has a number of priority habitats and

species, including standing open water, otters and pipistrelle bats, listed within Local Biodiversity Action Plans. The impact of this proposal upon relevant priority habitats must also be taken into consideration. Construction and vegetation clearance should take place outwith the breeding season for wild birds as far as possible, to avoid the potential for disturbance. If works were to take place during the season it would have to be confirmed that no nesting birds were present.

- 6.5.4. As noted above, there is also an important fringe of birch woodland, which records show is popular with terrestrial birds, between the reservoir edge and Aurs Road. Scrub woodland is also a priority habitat contained within Local Biodiversity Action Plans (appendix 3). The proposal to realign Aurs Road at this point offers the potential opportunity to use the old carriageway as part of the link, this would offer an alternative to routing the path through the woodland, which would require extensive clearance works.
- 6.5.5. The southern section of the path will require a narrow corridor of agricultural land. The resultant safe access improvement is seen as a sustainable use of agricultural resources. Whilst there is potential for impacts upon farm management, the route will follow field margins and gates and fencing will be installed as appropriate. Ultimately, the route will aim to promote and manage responsible access to the Country Park in line with the Scottish Outdoor Access Code.
- 6.5.6. Construction will lead to short-term localised increases in noise and vibration and energy use.
- 6.5.7. The proposed new path will deliver significant benefits in terms of promoting health and well-being. The path is a high Country Park access priority; it will provide a safe route connecting the south side of Newton Mearns to Dams to Darnley, avoiding the temptation to use the verges of Aurs Road. It will also enable the completion of a circular route around Balgray Reservoir.
- 6.5.8. In delivering a sustainable transport option, the new path has potential to contribute to a reduction in noise and vibration, air pollution, greenhouse gas emissions and energy use, by providing an alternative to car use. The route is particularly important in this regard as it will provide a walking and cycling link to the proposed Dams to Darnley Visitor Centre, overlooking Balgray Reservoir.
- 6.5.9. The new path will have an impact upon the Victorian built environment associated with Balgray Reservoir, in particular the boardwalk element proposed to be constructed along the dam embankment. Unlike Waulkmill Glen Reservoir, only the draw-down tower at Balgray is listed by Historic Scotland. The boardwalk proposal is still likely to require Listed Building Consent. Mitigating the impact of the boardwalk upon the built environment setting associated with the Victorian infrastructure, and in particular the draw-down tower, will be an essential element of any design process, should the proposal prove feasible following discussions with Scottish Water.

- 6.5.10. The path will impact upon the landscape setting associated with Balgray Reservoir. It will have a positive impact in terms of creating an important recreation route, but its design will also have to take careful consideration of how the proposal will sit in the landscape. Utilising existing woodland and hedgerow species will assist to screen and sympathetically set the path into its surrounding landscape. Ensuring that the existing agricultural landscape elements, in particular hedgerows and stone walls, are retained, enhanced or created will be essential. Potential exists to retain the existing stone wall on the west side of the Aurs Road carriageway and to integrate it within designs for the proposed path. Missing sections of stone wall could also be reinstated. Boundary features are a priority habitat within the Glasgow Local Biodiversity Action Plan (appendix 3).
- 6.5.11. On balance, it is anticipated that this proposal will have positive long-term, permanent environmental benefits, primarily associated with promoting health and well-being. The path will play a positive role in managing the cumulative environmental impacts that will result from the anticipated significant increases in visitor numbers associated with the development of facilities and activities. This proposal will also have an environmental impact upon the Country Park's built heritage, in terms of the boardwalk element of the proposal. Good design will be key in terms of mitigating this impact.
- 6.5.12. There are comprehensive biological records associated with Balgray Reservoir; BTO (WeBS) data goes back as far as to 1968. These records will provide an invaluable resource for monitoring the impact of the proposed new access route and the management of increased visitor numbers, assisting to highlight potential problems if they arise. The guidance contains a proposal to increase the capacity of the countryside ranger service. Such a move would contribute greatly to ongoing monitoring.

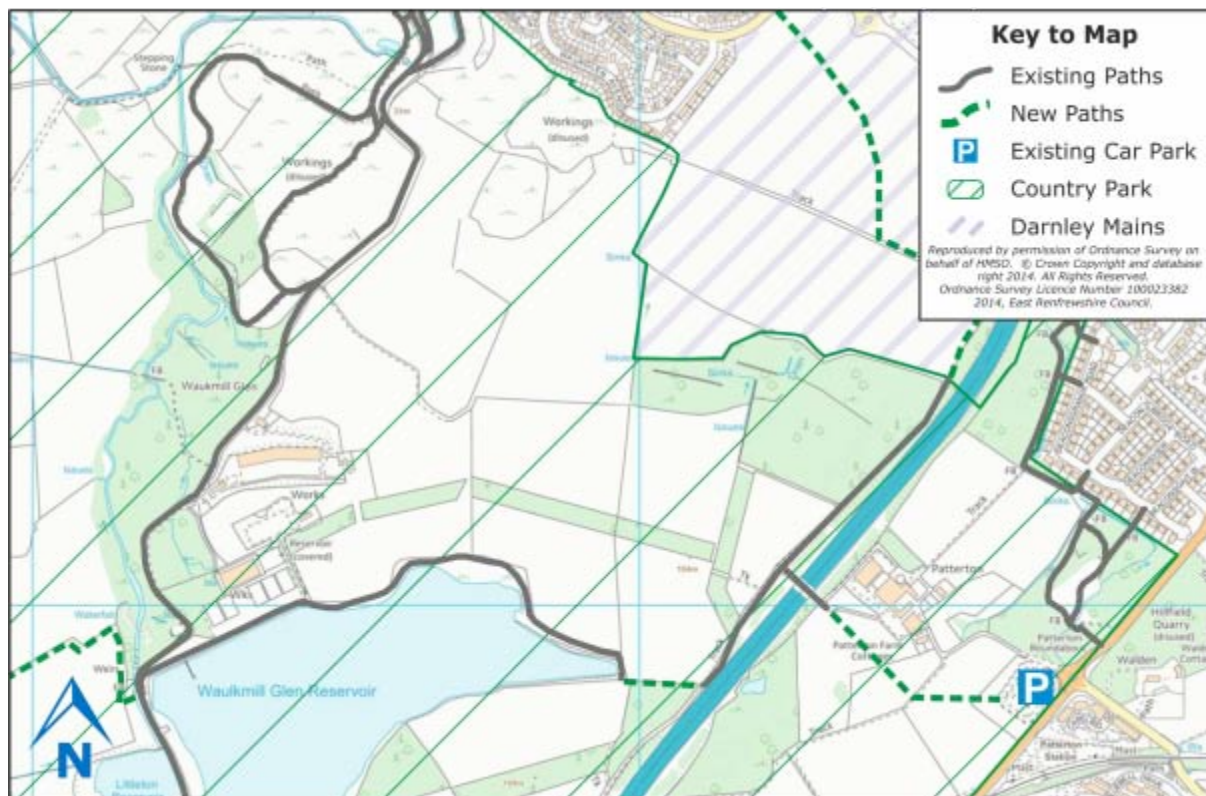
6.6. Access: New Path from Patterton Station to Waulkmill Glen Reservoir

- 6.6.1. It is envisaged that the proposed new path from Patterton Station to Waulkmill Glen Reservoir will be delivered through a series of elements, detailed in figure 4 and below:
- A new path link between the overflow Patterton Station car park across the M77 accommodation bridge;
 - A new link between the farm track parallel to the M77 and the existing path along the north shore of Waulkmill Glen Reservoir;
 - A connection between the Darnley Mains development site and the M77 farm track.
- 6.6.2. The proposed path is not anticipated to have any significant impact upon biodiversity. Its route would be restricted to improved grassland. Its western point would connect with the existing path along the north shore of Waulkmill Glen Reservoir, as a result no new construction would take place within the Local Biodiversity Site. Nevertheless, the State of the Environment Report highlights the protection afforded to wild birds under the 1981 Act. It also

notes that a number of species found within the Country Park have additional or specific protection (appendix 3). Appropriate ecological surveys will be required to determine whether this proposal will impact upon protected species and if mitigation measures are appropriate or required. Construction and vegetation clearance should take place outwith the breeding season for wild birds as far as possible, to avoid the potential for disturbance. If works were to take place during the season it would have to be confirmed that no nesting birds were present.

- 6.6.3. Construction will lead to short-term localised increases in noise and vibration and energy use.
- 6.6.4. Sections of the path will be within agricultural land and as a result there is potential for impacts upon farm management. The route will follow field margins where possible. Gates and fencing will be installed as appropriate. Ultimately, the route will aim to promote and manage responsible access to the Country Park in line with the Scottish Outdoor Access Code.

Figure 4: Access Enhancements – Patterton Station to Waulkmill Glen Reservoir



- 6.6.5. The path will have a positive impact in terms of creating an important recreation route, delivering significant benefits in terms of promoting health and well-being. The path is a high access priority given that it will provide a much needed route from the north side of Newton Mearns to the heart of the Country Park.

- 6.6.6. In delivering a sustainable transport option, the new path has potential to contribute to a reduction in noise and vibration, air pollution, greenhouse gas emissions and energy use, by providing an alternative to car use. The route will be particularly important in this regard as it will also provide a link to the Country Park from Patterton Rail Station.
- 6.6.7. In contrast, given topography the path may have negative impacts upon the landscape setting associated with the location, in particular given that it is a key eastern gateway to the Country Park. Careful design will be essential to ensure that the proposal sits sensitively within the landscape. Using standard entrance design elements and signage already present within Dams to Darnley will help to set the new path within the Country Park landscape. Ensuring that existing agricultural landscape elements found within the Country Park, in particular hedgerows, are retained, enhanced or created will be essential in terms of mitigation. Utilising a planting scheme based upon existing woodland types will also help to set the new path and the entrance sympathetically within its landscape setting.
- 6.6.8. On balance, it is anticipated that this proposal is likely to have positive long-term and permanent environmental impacts, primarily associated with promoting health and well-being. The path will also play a positive role in managing the cumulative impacts upon the Country Park's environment as a result of anticipated significant increases in visitor numbers. Nevertheless, ongoing monitoring of the use of the path will be important given its agricultural setting. The countryside ranger service will have a role to play in promoting responsible access in line with the Scottish Outdoor Access Code and assisting to address irresponsible behaviour should it arise.

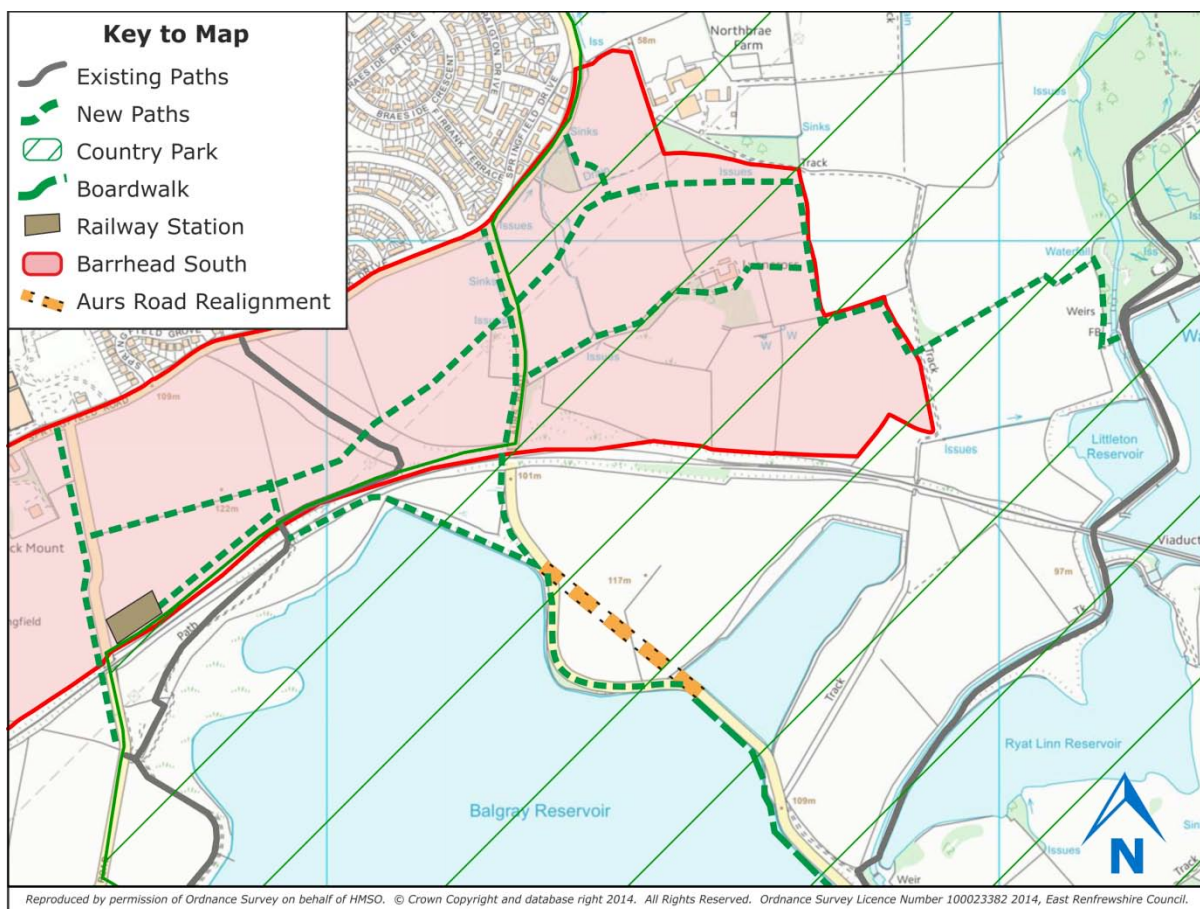
6.7. Access: New Path from Barrhead to Balgray Reservoir, adjacent to Aurs Road

- 6.7.1. The Barrhead South guidance establishes an opportunity to create a new path to the Country Park adjacent to Aurs Road, linking to the Balgray Reservoir circular path (figure 5).
- 6.7.2. The proposed path has the potential to impact negatively upon the biodiversity associated with a small area of surrounding grassland habitat. The path route would run along the edge of an area of unimproved/neutral grassland, priority habitats within Local Biodiversity Action Plans (appendix 3). The impact of this proposal upon relevant priority habitats and species must be taken into consideration. The site is also an important territory for terrestrial birds, including grasshopper warbler, which is a red list species and reed bunting, a priority species within the Glasgow Local Biodiversity Action Plan (appendix 3). The presence of otters and bats within the Country Park, European protected species, is additionally of relevance in relation to this proposal. Appropriate ecological surveys will be required to determine whether this proposal will impact upon protected species and if mitigation measures are appropriate or required. Construction and vegetation clearance should take place outwith the breeding season for wild birds as far as possible, to avoid the potential for disturbance. If works were to take place

during the season it would have to be confirmed that no nesting birds were present.

- 6.7.3. Construction will lead to short-term localised increases in noise and vibration and energy use.
- 6.7.4. The path will have a positive impact in terms of creating an important recreation route, delivering significant benefits promoting health and well-being. The path is a high access priority given that it will provide an important connection from Barrhead South to Balgray Reservoir and the proposed Dams to Darnley Visitor Centre.

Figure 5: Access Enhancements – Barrhead South



- 6.7.5. In delivering a sustainable transport option, the new path has potential to contribute to a reduction in noise and vibration, air pollution, greenhouse gas emissions and energy use, by providing an alternative to car use.
- 6.7.6. It is not thought that the path will have an impact upon the Country Park landscape as its route is restricted to a limited area of grassland. The path's landscape setting adjacent to the Barrhead dams may benefit from new hedgerow planting. Boundary features such as hedgerows are a priority habitat within the Glasgow Local Biodiversity Action Plan (appendix 3).

Utilising a planting scheme based upon existing woodland types will help to set the new path sympathetically within its landscape setting.

- 6.7.7. On balance, it is anticipated that this proposal is likely to have positive long-term and permanent environmental impacts, primarily associated with promoting health and well-being. The path will play a positive role in managing the cumulative environmental impacts that will result from the anticipated significant increases in visitor numbers associated with the development of facilities and activities.
- 6.7.8. The proposal may have some impact upon the Country Park's biodiversity, although as noted above, there is no evidence that the existing path around the western and southern shore of the Balgray Reservoir has had a significant negative effect upon wetland and terrestrial birds since its opening in 2008, once regular visitor use was established along it. The path will also play a positive role in managing the cumulative environmental impacts that will result from the anticipated significant increases in visitor numbers associated with the development of facilities and activities. The biological records associated with Balgray Reservoir will assist to monitor the impact of the proposed new path and the management of increased visitor numbers, assisting to highlight potential problems if they arise.

6.8. Access: New paths through the Barrhead South Green Network to Waulkmill Glen Reservoir

- 6.8.1. The development of the Barrhead South Green Network establishes an opportunity to complete a circular four reservoirs path through a new link from Lyoncross to Waulkmill Glen Reservoir (figure 5).
- 6.8.2. The Barrhead South guidance, which sets indicative path routes within the green network, has been assisted by an ecological survey of the site. Elements of these routes have the potential to impact negatively upon biodiversity. This in particular relates to sections of path within or adjacent to the northern Lyoncross Local Biodiversity Site; associated with un-grazed neutral grassland and fringing woodland along a small burn. The path route within the Country Park guidance aims to avoid or reduce such impact by running along the edge of the Local Biodiversity Site. The Country park guidance also locates paths within Lyoncross along field margins where appropriate, reducing their impact in terms of landscape and potentially benefiting land management operations. The final route of paths will require to be directed by careful consideration of both topography and biodiversity interests.
- 6.8.3. The paths will largely follow field margins associated with poor semi-improved grassland, of limited biodiversity value. The eastern section of the proposed link between Barrhead South and the existing Country Park path network at Waulkmill Glen Reservoir will also follow field margins along the edge of commercial turf fields, which have little biodiversity value. The route remains outwith the boundary of the Waulkmill Glen Site of Special Scientific Interest. Nevertheless, the State of the Environment Report highlights the protection

afforded to wild birds under the 1981 Act. It also notes that a number of species found within the Country Park have additional or specific protection (appendix 3). Appropriate ecological surveys will be required to determine whether this proposal will impact upon protected species and if mitigation measures are appropriate or required. Appendix 3 also highlights that the Country Park has a number of priority habitats and species, including broadleaved and mixed woodland, listed within Local Biodiversity Action Plans. The impact of this proposal upon relevant priority habitats must also be taken into consideration. Construction and vegetation clearance should take place outwith the breeding season for wild birds as far as possible, to avoid the potential for disturbance. If works were to take place during the season it would have to be confirmed that no nesting birds were present.

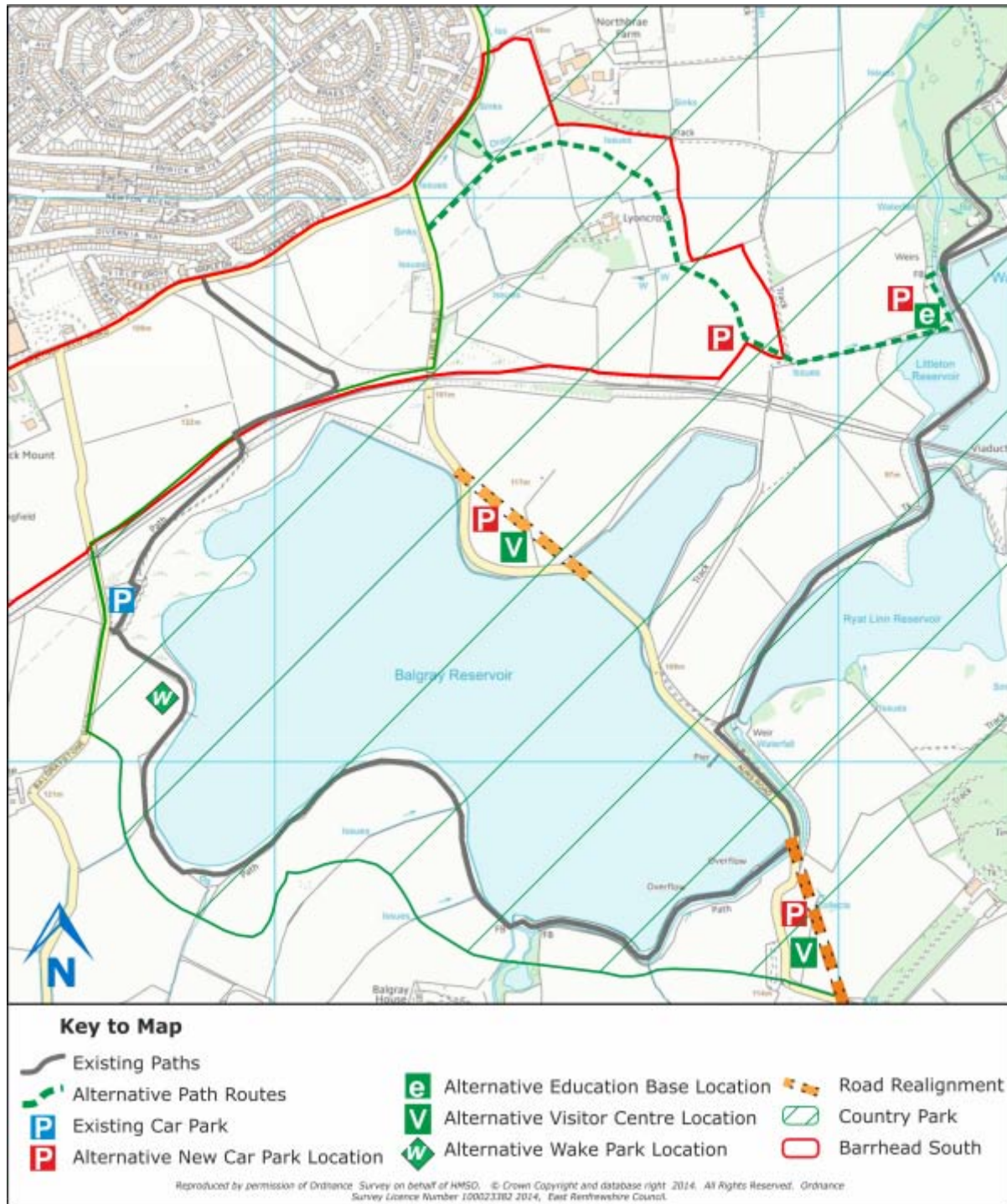
- 6.8.4. This eastern path element will utilise a narrow corridor of agricultural land. Whilst there is potential for impact upon farm management, the route will follow field margins. Gates and fencing will be installed as appropriate. Ultimately, the route will aim to promote and manage responsible access to the Country Park in line with the Scottish Outdoor Access Code.
- 6.8.5. The paths will have a positive impact as a result of creating an important recreation routes, delivering significant benefits in terms of promoting health and well-being. The routes are high access priorities given that they will connect Barrhead South to the Country Park and create a circular route connecting four reservoirs.
- 6.8.6. In delivering a sustainable transport option, the new paths have potential to contribute to a reduction in noise and vibration, air pollution, greenhouse gas emissions and energy use, by providing an alternative to car use. The routes will be particularly important in this regard, as they will provide a walking and cycling link to a potential site for the Dams to Darnley Environmental Education Base. Construction will lead to short-term localised increases in noise and vibration and energy use.
- 6.8.7. The proposed path routes within Lyoncross will be located within the vicinity of two built heritage features; Lyoncross Farmhouse which is a Category C listed building and a Lyoncross Windpump, which is recorded as a site of archaeological interest (appendix 3). Detailed consideration of the path routes will ensure that they do not impact upon these features. Although the new path route will connect to Waulkmill Glen Reservoir it will not impact upon its A listed structures.
- 6.8.8. Path design will have to take careful consideration of how the proposal sits in the landscape. Utilising existing woodland and hedgerow species will assist to sympathetically set the path into its surrounding landscape. Ensuring that the existing agricultural landscape elements, in particular hedgerows, are retained or enhanced will be essential. Boundary features such as hedgerows are a priority habitat within the Glasgow Local Biodiversity Action Plan (appendix 3).

- 6.8.9. On balance, it is anticipated that this proposal is likely to have positive long-term and permanent environmental impacts, primarily associated with promoting health and well-being. The paths will also play a positive role in managing the cumulative environmental impacts that will result from the anticipated significant increases in visitor numbers associated with the development of facilities and activities. Nevertheless, ongoing monitoring of the use of the eastern section of the path will be important given its agricultural setting. The countryside ranger service will have a role to play in promoting responsible access in line with the Scottish Outdoor Access Code and assisting to address irresponsible behaviour should it arise.

6.9. Access: Alternative Proposals

- 6.9.1. A small number of alternative access proposals were identified within the Country Park Plan relating to car park locations (figure 6). These locations were primarily associated with alternative options for visitor facilities and are examined below as part of their assessment.
- 6.9.2. Feasible path routes within the Country Park are significantly limited because of existing restrictions associated with Aurs Road and by landownership. The key path enhancements which aim to improve access from Barrhead and Patterton Station to the Barrhead dams are long standing aspirations. They are identified within the Country Park Plan, but broadly mirror proposals first identified and approved following consultation within the Dams to Darnley Master Plan (2004). They represent the most feasible and deliverable routes. The Strategic Environmental Assessment identified that that these routes were not anticipated to have significant environmental impact, whilst also identifying potential mitigation measures.
- 6.9.3. The proposed path from Newton Mearns to Balgray Reservoir identified within the guidance is also identified within the Country Park Plan. It represents the safest walking and cycling option, providing a direct link from Newton Mearns to Balgray Reservoir and the proposed visitor centre.
- 6.9.4. One alternative path route was assessed within the preparation of the guidance and associated site visits, relating to the path through Barrhead South to Waulkmill Glen Reservoir (figure 6).
- 6.9.5. The Strategic Environmental Assessment process enabled the indicative path routes identified within the Barrhead South Green Network at Lyoncross, to be examined in more detail. This resulted in minor but important changes to the indicative routes included within the Country Park guidance, compared to those identified within the Barrhead South guidance (figure 6). As noted above, these aim to avoid or reduce the impact upon biodiversity and landscape setting by routing a section of path along the edge of the Local Biodiversity Site and the field margins to the east.

Figure 6: Alternative Proposals



6.9.6. The assessment process also led to further consideration of the proposed path link from Barrhead South and Waulkmill Glen Reservoir. The Country Park Master Plan proposed a route along the north side of Littleton Reservoir. This route would have provided a path link from an alternative car park proposal, the indicative location of which was identified within the Barrhead South guidance (figure 6). It would also have connected to an alternative location for the environmental education base and associated car park adjacent to Littleton Reservoir to the east, the potential for which was

identified within the Country Park Plan (figure 6). The assessment process identified that this route would have had potentially more significant environmental impact upon wetland bird species associated with the fringes of the reservoir. As such, it would also impact upon a number priority habitats within the Local Biodiversity Action Plans, including standing open water and unimproved grassland. An alternative route to the north was assessed as likely to have less impact. This route would also connect to the potential location for an environmental education base and car park, included within the Country Park guidance (figure 5).

6.10. Facilities: Dams to Darnley Wake Park

- 6.10.1. The Country Park Supplementary Planning Guidance recognised the potential for non-motorised watersports activities at the Barrhead dams, based around the establishment of cable wakeboarding (figure 3). Cable wakeboarding uses an overhead cable to pull participants over the surface of the water. Participants are attached to a wakeboard, so it is similar to snowboarding, except on water. The cable is run between two A-frame supports, approximately 9m in height, producing minimum noise. Cables pull a single rider at any one time at approximate speeds of between 5km per hour for beginners and 22km per hour for advanced participants. The gently sloping shore topography of the western half of Balgray Reservoir and existing road access makes it the Council's favoured location for a watersports facility. It provides the best location for accessing the water and also benefits from a number of sheltered bays which could accommodate cable wakeboarding.
- 6.10.2. Of the proposals promoted by the guidance, the development of non-motorised watersports activities at Balgray Reservoir is recognised as having the greatest potential environmental impact. Balgray Reservoir is a Local Biodiversity Site. It is also recognised as a regionally important location as a result of its breeding and wintering wetland and terrestrial bird populations. As noted in the State of the Environment Report, the reservoir is one of the best inland ornithological sites in East Renfrewshire, Renfrewshire and Inverclyde, having over 180 recorded species. Of the breeding species that use the water's edge, many are red list species (appendix 3). Balgray and Waulkmill Glen Reservoirs also hold the largest local population of breeding great crested grebes, whilst in spring and autumn Balgray Reservoir is a magnet for migrants.
- 6.10.3. Whilst topography and access point to the western fringes of Balgray Reservoir as being the most appropriate location for a facility, this side is also broadly of greatest biodiversity significance. This primarily relates to the availability of good quality habitat around parts of the western edge of the reservoir. The data identified within the State of the Environment Report has assisted to highlight those locations of the reservoir that tend to have the highest levels of use by birds. Specifically a survey of Balgray Reservoir, commissioned by the Council in 2014, provided up-to-date bird records. The Strategic Environmental Assessment data enabled a preferred location for a facility to be identified, adjacent to two small sheltered bays on the western shore of Balgray Reservoir. This site would enable activities to be focused

within these relatively small locations and away from the large sheltered bay in the south-west corner of the reservoir, identified within the State of the Environment Report as being of greatest biodiversity value, in terms of habitat and levels of use (figure 3). This larger bay is favoured by wetland birds and could be zoned off to ensure that no activities take place within it.

- 6.10.4. Even with the zoning of activities, the impact that watersports could have upon birdlife across the wider reservoir cannot be accurately predicted. In addition to its importance for breeding birds, data also highlights the regional importance of Balgray Reservoir for wintering species. As a result, this assessment recognises the potential environmental impact of watersports activities, whilst noting uncertainties surrounding any accurate judgements made prior to opportunities being developed.
- 6.10.5. Whilst watersports activities will be more limited in the winter months, given the above uncertainty an opinion should be sought on the requirement to carry out an Environmental Impact Assessment. This would provide a detailed examination of proposed activities and their likely impact upon all aspects of the ecology of Balgray Reservoir. Such an assessment would ultimately accompany a subsequent planning application and assist to inform the decision making process.
- 6.10.6. An Environmental Impact Assessment would also help to identify potential enhancement and mitigation measures. Biodiversity improvements associated with Balgray Reservoir and beyond, including new floating islands, measures to sustain fish populations and healthy aquatic life, improved scrub vegetation and grassland habitat enhancement and creation at key locations away from the focus of watersports activity, will be essential. This will help to compensate for any loss in the value of localised habitats at Balgray Reservoir associated with their use for watersports activities. This is of particular importance given that whilst the large bay identified above is of greatest value in terms of birdlife, the two smaller bays around which the facility is proposed are nevertheless also frequently used. These bays are additionally important as nurseries for fish, as noted in the State of the Environment Report. The potential impact of the wake park upon fish populations and aquatic ecology needs considered.
- 6.10.7. Whilst there are two existing 132KV and 33KV overhead power lines in close proximity to the preferred wake park site, the wakeboarding cables present an additional potential hazard to flying birds. Specific mitigation measures associated with the design, operation and management of the facility need examined in order to reduce the potential hazard resulting from the wakeboarding cables.
- 6.10.8. Critically a management plan will require to be put in place as part of the development and operation of the wake park. The plan would detail all appropriate enhancement and mitigation measures, based upon identified potential environmental impacts.

- 6.10.9. The State of the Environment Report highlights the protection afforded to wild birds under the 1981 Act. It also notes that a number of species found within the Country Park have additional or specific protection (appendix 3). The seasonal potential for nest sites to be established associated with areas of watersports activity must be considered. The site is also an important territory for terrestrial birds, including grasshopper warbler, which is a red list species and reed bunting, a priority species within the Glasgow Local Biodiversity Action Plan (appendix 3). Appropriate ecological surveys will be required to determine whether this proposal will impact upon protected species and if mitigation measures are appropriate or required.
- 6.10.10. The presence of otters and bats within the Country Park, European protected species, is of particular significance in relation to this proposal. A survey will be required to establish whether this proposal has the potential to affect otters and bats. Appendix 3 also highlights that the Country Park has a number of priority habitats and species, including standing open water, otters and pipistrelle bats, listed within Local Biodiversity Action Plans. The impact of this proposal upon relevant priority habitats and species must also be taken into consideration. Construction and vegetation clearance should take place outwith the breeding season for wild birds as far as possible, to avoid the potential for disturbance. If works were to take place during the season it would have to be confirmed that no nesting birds were present.
- 6.10.11. The development of a wake park represents a significant proposal that will greatly enhance the recreational opportunities offered by the country Park landscape. The development of watersports activities at Balgray Reservoir will provide significant benefits in terms of health and well-being through the promotion of recreational activities.
- 6.10.12. The development of watersports activities at Balgray Reservoir is likely to lead to some increases in noise levels and disturbance. There is no evidence that the existing path around the western and southern shore of Balgray Reservoir has had a significant negative impact upon wetland and terrestrial birds since its opening in 2008, once regular visitor use was established along it. Nevertheless, proposed watersports activities such as wakeboarding, will by their nature lead to higher noise levels and disturbance across the water. The zoning of watersports activities to a relatively small area will offer a potential mitigation measure. Construction will also lead to short-term localised increases in noise and vibration and energy use.
- 6.10.13. Although motorised watersports are not being proposed at Balgray Reservoir it is likely that a powered rescue craft may require to be positioned on stand-by. The potential for water pollution is likely to increase as a result, although alternative fuels to petrol, such as LPG may offer a solution. The increased risk of water pollution as a result of a facility at the water's edge would also need to be addressed in its design and operation.
- 6.10.14. The design and operation of the wake park will need to meet high standards of energy efficiency, ensuring that it minimises energy use and greenhouse gas emissions, in line with Supplementary Planning Guidance associated with

Energy Efficient Design. There will be opportunities to offset carbon emissions. There will also be opportunities to address and adopt environmental mitigation and sustainability measures from the outset.

- 6.10.15. The design and setting of the facility also requires careful consideration in order that it does not detract from the sensitive landscape character associated with the Barrhead dams. This is especially true given the visibility of the preferred location, when viewed from across the reservoir and Aurs Road. How the wake park interacts with the reservoir edge is an additional and critical consideration. Key design criteria and issues, identified within the Supplementary Planning Guidance on Rural Development, will require to be taken into account. Yet a well designed facility can also contribute to the landscape through a building that is distinctive and responsive to its setting. Utilising a planting scheme based upon existing woodland and hedgerow species as part of landscaping proposals associated with the facility will help to sympathetically set it into its surrounding landscape setting.
- 6.10.16. The location of the wake park will benefit from sustainable transport links as a result of the proposed Barrhead South Rail Station and by its integration with the Country Park's path network.
- 6.10.17. In summary, whilst it is anticipated that the wakeboarding facility and the activities undertaken from it are likely to have environmental impacts, primarily associated with the Country Park's biodiversity, at this stage it is impossible to accurately determine their extent and whether they will be temporary or permanent. Whilst evidence suggests that there has not been a significant impact upon wetland and terrestrial bird populations at Balgray Reservoir since access was improved, the level of increased activity proposed is much higher. The existing comprehensive biological records will provide an invaluable resource for monitoring the impact of the proposals going forward and reacting to potential problems. The guidance contains a proposal to increase the capacity of the countryside ranger service. Such a move would contribute greatly to ongoing monitoring.
- 6.10.18. A management plan will be a critical component of the development and management of the wake park. Habitat enhancements associated with Balgray Reservoir and beyond will also be essential in mitigating the impact of the development of watersports activities upon the biodiversity value of the Barrhead dams, when taken as a whole. The success of such measures may go a long way in determining the permanency of the environmental impact of watersports activities across the reservoir.
- 6.10.19. The positive environmental impacts associated with the promotion of health and well-being and recreational activities within the Country Park also need to be stressed and taken into account, in particular given the anticipated increases in the surrounding population as a result of the Strategic Development Opportunity areas, promoted within the East Renfrewshire Local Development Plan.

6.11. Facilities: Dams to Darnley Visitor Centre

- 6.11.1. The opportunity to establish a Dams to Darnley Visitor Centre overlooking the east shore of Balgray Reservoir, is identified within the Country Park Supplementary Planning Guidance (figure 3). As noted above the realignment of Aurs Road, south of Barrhead, would provide sufficient space and access for the visitor centre and associated new car park. Many of the potential environmental impacts associated with the visitor centre proposal mirror those noted above in relation to the adjoining car park.
- 6.11.2. The proposed site of the visitor centre is agricultural land, currently used as commercial turf fields. These have little ecological value, as a result it is not anticipated that the proposal will have a significant impact upon biodiversity across much of the site.
- 6.11.3. Of greatest significance is how the detailed design of the visitor centre and the resultant visitor numbers impact upon the edge of Balgray Reservoir Local Biodiversity Site. As noted above in relation to the car park, the greatly increased activity associated with the visitor centre may have a negative impact upon the biodiversity of the reservoir, in particular in the short-term, prior to any potential acclimatisation by wildlife. The eastern shore of the reservoir is not generally a favoured location for nest sites because of the steep stone face of the embankment. Nevertheless, the State of the Environment Report highlights the protection afforded to wild birds under the 1981 Act. It also notes that a number of species found within the Country Park have additional or specific protection (appendix 3). Appropriate ecological surveys will be required to determine whether this proposal will impact upon protected species and if mitigation measures are appropriate or required. The presence of otters and bats within the Country Park, European protected species, is of particular significance in relation to this proposal. A survey will be required to establish whether this proposal has the potential to affect otters and bats. Appendix 3 also highlights that the Country Park has a number of priority habitats and species, including standing open water, otters and pipistrelle bats, listed within Local Biodiversity Action Plans. The impact of this proposal upon relevant priority habitats must also be considered. Construction and vegetation clearance should take place outwith the breeding season for wild birds as far as possible, to avoid the potential for disturbance. If works were to take place during the season it would have to be confirmed that no nesting birds were present.
- 6.11.4. The preferred location of the visitor centre on the edge of the reservoir will provide fantastic views across the water and towards watersports activities. These views will clearly be a significant attraction for visitors and the orientation and design of the facility will wish to make the most of them. A key environmental issue relates to the important fringe of birch woodland, which records show is popular with terrestrial birds, between the reservoir edge and Aurs Road. Scrub woodland is also a priority habitat within Local Biodiversity Action Plans (appendix 3). As noted above this woodland will provide an important screen for the car park and its enhancement at this location will benefit wildlife. The detailed design and setting of the adjacent

visitor centre in contrast will consider how best to avoid the need for significant scrub woodland clearance, whilst still offering views that will add to its popularity and hence sustainability.

- 6.11.5. The visitor centre will require an area of farmland to be taken out of production and thus will have a minor impact upon the sustainability of the local agricultural resource.
- 6.11.6. The creation of a visitor centre at Balgray Reservoir and its links to an integrated Country Park path network will provide significant benefits in terms of health and well-being through the promotion of recreational activities.
- 6.11.7. The visitor centre is likely to lead to some increases in noise levels and disturbance. As noted above, there is no evidence to suggest that the existing path around the southern shore of the reservoir has had a significant impact upon wetland and terrestrial birds, once regular visitor activity was established along it. Nevertheless, increased activity associated with the visitor centre will lead to some increases in noise levels and disturbance across the water. Construction will also lead to short-term localised increases in noise and vibration and energy use.
- 6.11.8. The increased risk of water pollution and flooding as a result of the location of the visitor centre at the water's edge will need to be addressed in its design and operation.
- 6.11.9. There are no geological features or archaeological sites of interest associated with the proposal.
- 6.11.10. As noted above the creation of the visitor centre will lead to an increase in car borne journeys. As a result, the proposal will contribute towards secondary environmental impacts associated with increases in noise and vibration and air pollution within the Country Park, as well as additional greenhouse gas emissions and energy use. By way of mitigation, it is important to note that access enhancements detailed within the guidance will ensure that the visitor centre is linked to surrounding communities and the Barrhead South Rail Station through path networks, offering sustainable transport alternatives.
- 6.11.11. The visitor centre will have a potentially impact upon the local built environment and landscape associated with Balgray Reservoir. Given the local topography, this is of particular importance in considering the landscape setting of the visitor centre when viewed from the opposite shore of Balgray Reservoir. As noted above, unlike the car park, which can be screened, the visitor centre will wish to make best use of the views across the reservoir, and will as a result be much more visible. A comprehensive landscape plan, based upon existing woodland and hedgerow species, will require to be part of proposals for the new visitor centre. Designing the visitor centre around the woodland fringe that stretches along the reservoir's edge at this location will be an important element.

- 6.11.12. As with the wake park facility, design criteria and issues identified within the Supplementary Planning Guidance on Rural Development will require to be taken into account to ensure that the visitor centre contributes to the landscape through a building that is distinctive and responsive to its setting.
- 6.11.13. In summary, it is anticipated that there will be long-term and permanent environmental impacts associated with the promotion of health and well-being through outdoor recreation, supported by a visitor centre integrated within the Country Park path network. It is also anticipated that the visitor centre proposal will have environmental impacts associated with the Country Park's landscape and secondary environmental impacts associated with increases in noise and activity. The implementation of a strong landscaping plan will help to mitigate the environmental impacts, but this will take time to mature. The landscape impact as a result will be most significant in the short and medium term.

6.12. Facilities: Dams to Darnley Environmental Education Base

- 6.12.1. The opportunity to establish a Dams to Darnley Environmental Education Base within Lyoncross is identified within the Supplementary Planning Guidance (figure 3). Many of the potential environmental impacts associated with the environmental education base proposal mirror those noted above in relation to the adjoining car park at Lyoncross.
- 6.12.2. The proposed site of the environmental education base is within poor semi-improved grassland of limited biodiversity value. As a result, it is not anticipated that the proposal will have a significant impact upon the biodiversity of the site. Nevertheless, the State of the Environment Report highlights the protection afforded to wild birds under the 1981 Act. It also notes that a number of species found within the Country Park have additional or specific protection (appendix 3). Appropriate ecological surveys will be required to determine whether this proposal will impact upon protected species and if mitigation measures are appropriate or required. Appendix 3 also highlights that the Country Park has a number of priority habitats and species listed within Local Biodiversity Action Plans. The impact of this proposal upon broadleaved and mixed woodland and boundary features, two priority habitats within Local Biodiversity Action Plans, must be given particular consideration. Construction and vegetation clearance should take place outwith the breeding season for wild birds as far as possible, to avoid the potential for disturbance. If works were to take place during the season it would have to be confirmed that no nesting birds were present.
- 6.12.3. Biodiversity improvements linked to the creation of new wildflower, woodland and wetland habitats will be progressed, these will be essential to enhance the suitability of the site as an environmental education and outdoor learning resource. These enhancements will focus upon priority Local Biodiversity Action Plan habitats.
- 6.12.4. The environmental education base site is associated with farmland, although it is not thought that this proposal will impact significantly upon the sustainability of the local agricultural resource.

- 6.12.5. An environmental education base would deliver significant educational, health and well-being benefits, providing basic facilities promoting outdoor learning and recreation, supporting school visits, health walks, events and volunteer opportunities.
- 6.12.6. The creation of the environmental education base will contribute to the increase in car and coach borne journeys noted above. As a result, the proposal will contribute towards secondary environmental impacts associated with increases in noise and vibration and air pollution within the Country Park, as well as additional greenhouse gas emissions and energy use. As noted above, these impacts will be magnified given that there is currently no vehicular access to this Country Park location, although this rural setting will change to a degree as a result of the development of Barrhead South. As with the assessment of the car park proposal, it is important to note that the Barrhead South guidance contains new path proposals that provide sustainable transport alternatives, although the site is some distance from existing bus stops and train stations. The new Barrhead South Rail Station will improve this situation to a degree.
- 6.12.7. Construction will also lead to short-term localised increases in noise and vibration and energy use.
- 6.12.8. The increased risk of water pollution and flooding as a result of the location of the environmental education base will need to be addressed in its design and operation.
- 6.12.9. There are no geological features or archaeological sites of interest associated with the proposal.
- 6.12.10. The environmental education base will have an impact upon the Country Park landscape associated with Lyoncross. Given the local topography, this is of particular importance in considering the landscape setting of the proposal when viewed from the main spinal path that runs through the heart of the Country Park. As noted above, the Barrhead South guidance details a green space and landscape framework that aims to integrate the development within the wider countryside, including the Country Park. The framework will be key in mitigating the landscape impact of the proposed environmental education base. The screening of the environmental education base will benefit from the existing woodland block associated with the proposed site. It will be important to enhance this landscape element further, as supported by the green space and landscape framework. This will in turn support the enhancement of broadleaved and mixed woodland, a priority habitat contained within Local Biodiversity Action Plans (appendix 3). It will also contribute towards off-setting increased carbon emissions.
- 6.12.11. On balance, there are significant long-term and permanent learning, health and well-being benefits associated with this proposal. It is anticipated that the proposal is also likely to have environmental impacts associated with the Country Park's landscape. The implementation of the Barrhead South Green Space and Landscape Framework will help to mitigate the environmental

impacts, but this will take time to mature. The landscape impact as a result will be most significant in the short and medium term.

6.13. Facilities: Alternative Proposals

- 6.13.1. The Country Park Plan identified a number of locational options for Country Park visitor facilities and associated car parks. Since the completion of the plan, and as part of this assessment, these options have been considered in more detail. The result of these assessments are summarised in appendix 5.
- 6.13.2. One alternative watersports facility location was considered within the Country Park Plan, immediately south of the preferred Balgray Reservoir location, identified within the guidance (figure 6). An initial needs assessment, undertaken on behalf of the Council around the wake park proposal, determined that the feasibility of this site would rely upon using the large sheltered bay in the south-west corner of the reservoir for wakeboarding activities. As noted in this Environmental Report this bay is recorded as being of greatest biodiversity value, in terms of habitat and levels of use. There is also a greater likelihood that these impacts will be longer-term and hence more permanent in nature than those associated with the preferred location. As a result, this site was assessed as having the potential to have considerably greater environmental impact upon biodiversity and was not as a result taken forward for inclusion within the Supplementary Planning Guidance.
- 6.13.3. An alternative visitor centre location and car park was also identified within the Country Park Plan, associated with the realignment of Aurs Road, west of Barrhead (figure 6). The site overlooks the south-east corner of Balgray Reservoir, but separated from the water's edge by a spillway. Following further consideration the site was not taken forward as the Council's preferred location site, primarily in relation to suitability and feasibility.
- 6.13.4. The location would potentially have had less impact upon the reservoir's biodiversity in terms of short-term disturbance, as it would have required to be set back from the reservoir edge given the spillway. A visitor centre at this site would nevertheless benefit to the same degree from sustainable transport options, being considerably more distant from the proposed Barrhead South Rail Station.
- 6.13.5. Finally, the County Park Plan identified three potential alternative locations for an environmental education base (figure 6). As noted in the guidance, Darnley Mill and Waulkmill Glen provide the greatest opportunities for environmental education and volunteering within the Country Park. Two of the proposed locations are within Darnley Mill and Waulkmill Glen, associated with sites in Glasgow City. As a result, these sites have not been included within the guidance, nor do they form part of this assessment. East Renfrewshire and Glasgow City Councils will continue to discuss options around suitable locations within Darnley Mill and Waulkmill Glen. The potential for future Supplementary Planning Guidance to be drafted covering the entire Country Park has been identified within the guidance.

- 6.13.6. The remaining potential location for an environmental education base and associated car park adjacent to Littleton Reservoir, was identified within the Country Park Plan and considered as part of the development of the guidance. As with the proposed path, a visitor facility at this location would have had the potential for considerably more environmental impact upon the biodiversity associated with the fringes of Littleton Reservoir. A facility, and in particular its required access road and car park, would also have had a considerable impact upon the landscape setting of the site. The potential location identified within the guidance to the north within Lyoncross, would not impact upon the biodiversity associated with the reservoir. It will also benefit from screening provided by an existing tree belt and from opportunities to enhance it.

6.14. Natural and Built Heritage: Biodiversity and Geodiversity

- 6.14.1. The Supplementary Planning Guidance promotes a set of broad objectives to enhance and promote biodiversity and geodiversity within Dams to Darnley, based upon those contained within the Country Park Plan:

- Implement habitat enhancements, including working with land managers, schools, volunteers and conservation groups;
- Carry out surveys and maintain records of the Country Park's biodiversity and geodiversity assets;
- Manage other Country Park uses in relation to safeguarding its natural heritage.

- 6.14.2. These objectives will be delivered through the more detailed actions contained within the Country Park Plan. Given the limited scale of the individual actions that will deliver the above objectives, this Environmental Report does not assess each one in detail. Rather, appendix 5 provides a summary of the cumulative environmental impact of the broad biodiversity and geodiversity objectives noted above.

6.15. Natural and Built Heritage: Landscape

- 6.15.1. The guidance also establishes a set of broad objectives to enhance the Country Park's landscape, based upon measures contained within the Country Park Landscape Character Assessment:

- Utilise a planting 'design palette' based upon existing woodland types to highlight Country Park entrances and sympathetically set new paths and facilities into the landscape;
- Reinforce the Country Park's agricultural landscape patterns and network of stone walls, hedgerows and tree belts and groups;
- Create open viewpoints, to provide visual links across the Country Park and provide a contrast in experience from the more enclosed Waulkmill Glen woodland.

- 6.15.2. These objectives will similarly be delivered through more detailed actions contained within the Country Park Plan. Given the limited scale of the

individual actions that will deliver the above objectives, appendix 5 again provides a summary of the cumulative environmental impact of each one.

6.16. Natural and Built Heritage: Built Heritage

6.16.1. Finally, the guidance establishes a set of broad objectives to enhance and promote built heritage within the Country Park, again based upon those contained within the Country Park Plan:

- Protect and enhance the sites of historical importance within the Country Park;
- Work with, and contribute to, the work of local history groups;
- Manage other Country Park uses in relation to safeguarding its built heritage.

6.16.2. These objectives will also be delivered through more detailed actions contained within the Country Park Plan. Appendix 5 provides a summary of the cumulative environmental impact of each objective.

6.17. Promotion and Management

6.17.1. The guidance establishes a set of broad objectives to enhance the promotion and management of Dams to Darnley. These objectives will be delivered through the more detailed actions contained within the Country Park Plan:

- New directional signage to support an expanded Country Park path network;
- Interpretation and promotional material to increase awareness of the Country Park and its natural and built heritage;
- Expansion of the successful countryside ranger led environmental education programme for schools;
- Expansion of the existing programme of countryside ranger led volunteer opportunities, health walks and community events and activities;
- Improved management of habitats across the Country Park, including those within the Barrhead South Green Network;
- Practical measures to combat community safety and antisocial issues across the Country Park.

6.17.2. As with natural and built heritage proposals, given the limited scale of the individual actions that will deliver the above objectives, this Environmental Report does not assess each in detail. Rather, appendix 5 provides a summary of the cumulative environmental impact of each broad promotion and management objective, noted above.

7. ENHANCEMENT AND MITIGATION

- 7.1.1. The assessment of the environmental impacts of the access and facilities proposals contained within the Supplementary Planning Guidance has assisted in identifying potential natural and built heritage enhancement and mitigation measures, noted below. These measures aim to mitigate against the potential negative environmental impacts that have been identified within this Environmental Report.
- 7.1.2. Biodiversity and geodiversity enhancement and mitigation measure will focus upon relevant priority habitats and species contained within the East Renfrewshire, Renfrewshire and Inverclyde Local Biodiversity Action Plan, together with objectives and key themes, habitats and species identified within the Country Park Plan. The significance of Waulkmill Glen SSSI, and the benefits that its national designation can bring, should provide a specific focus. Geodiversity enhancements will focus upon the management objectives contained within the Geodiversity Audit of the City of Glasgow (2013), together with the previous report by Scottish Natural Heritage (2009) noted in appendix 3. Landscape enhancement and mitigation will focus upon measures contained within the Country Park Landscape Character Assessment. Built heritage measures will also focus upon key themes and objectives contained within the plan (appendix 3).
- 7.1.3. The Supplementary Planning Guidance sets out additional relevant design guidance principles.
- 7.1.4. Enhancement and mitigation measures will be delivered through a number of mechanisms, including:
- Monitoring activities undertaken by the Country Park countryside ranger service;
 - Design and construction of facility/access proposals, led by the Council's developments/development plans teams, to ensure that the impact of proposals upon natural and built heritage is minimised;
 - Specific mitigation measures associated with watersports activities at Balgray Reservoir (including anticipated Environmental Assessment) to be led by the Council's development plans team, in consultation with key partners including future operator/s;
 - Individual natural and built heritage enhancement projects delivered by the Council's development plans team through the Country Park project, in consultation with partners;
 - Implementation of the Barrhead South Green Space and Landscape Framework led by the Council's developments/development plans teams, working in partnership with developers;
 - Country Park volunteer activities led by the countryside ranger service.

POTENTIAL ENHANCEMENT AND MITIGATION: ACCESS

- Minimise the impact of access proposals upon biodiversity and built heritage, through careful planning and design.
- Undertake appropriate and comprehensive ecological survey/s to inform the detailed design process.
- Identify and implement specific measures to ensure that access proposals do not impact upon protected species.
- The impact of proposals upon relevant Local Biodiversity Action Plan priority habitats and species must be taken into consideration.
- Undertake relevant habitat enhancements associated with proposals.
- Plan construction works in order to avoid the breeding season for wild birds.
- Undertake required vegetation clearance outwith the breeding season for wild birds.
- Utilise recycled stone in the construction of paths and car parks where appropriate. There will also be opportunities to offset carbon emissions.
- Ensure that local agricultural landscape elements, in particular hedgerows and stone walls, are retained, enhanced or created.
- Utilise a planting 'design palette' based upon existing woodland and hedgerow species to sympathetically set all new access proposals into their surrounding landscape setting, whilst also delivering habitat enhancements.
- Ensure that a comprehensive landscaping plan is part of the proposal to realign Aurs Road.
- The implementation of the Barrhead South Green Space and Landscape Framework will assist to integrate access proposals within Lyoncross with the wider Country Park.
- Monitor the impact of new paths and their role in managing increased visitor numbers upon biodiversity and land management.
- Continue to promote responsible access through the Scottish Outdoor Access Code.

POTENTIAL ENHANCEMENT AND MITIGATION: FACILITIES

- Minimise the impact of facility proposals upon biodiversity and built heritage, through careful planning, design, operation and management.
- Undertake appropriate and comprehensive ecological survey/s to inform the detailed design process.
- Identify and implement specific operational and management measures to ensure that facility proposals do not impact upon protected species.
- The impact of facility proposals upon relevant Local Biodiversity Action Plan priority habitats and species must be taken into consideration.
- Undertake an Environmental Impact Assessment in relation to the development of watersports activities at Balgray Reservoir.
- Zone watersports activities at Balgray Reservoir to avoid areas of highest biodiversity interest, restricting their use to defined locations.
- Undertake biodiversity improvements associated with Balgray Reservoir together with the remaining Barrhead dams, including new floating islands, measures to sustain healthy fish populations and aquatic life, improved scrub vegetation and grassland habitat enhancement and creation at key locations away from the focus of watersports activity.
- Restricting the timing and/or duration of watersports activities at Balgray Reservoir.
- Undertake data recording to warn of potential impacts upon biodiversity of watersports activities at Balgray Reservoir.
- The seasonal potential for nest sites to be established associated with areas of activity must be considered as part of the routine operation of a watersports facility at Balgray Reservoir.
- Progress habitat enhancements adjacent to all Country Park facilities, including projects involving volunteers and school groups through the work of the countryside ranger service.
- Plan construction works in order to avoid the breeding season for wild birds.
- Undertake required vegetation clearance out with the breeding season for wild birds.
- Ensure that local agricultural landscape elements, in particular hedgerows and stone walls, are retained, enhanced or reinstated.
- Utilise a planting 'design palette' based upon existing woodland and hedgerow species to screen and sympathetically set all Country Park facilities into their surrounding landscape setting, whilst also delivering habitat enhancements.
- Key design criteria and issues, identified within the Proposed Supplementary Planning Guidance on Rural Development, will be taken into account in relation to all new Country Park facilities.
- Environmental mitigation and sustainability measures will be addressed in the design and operation of all Country Park facilities. There will be opportunities to offset carbon emissions.
- The design and operation of all new Country Park facilities will ensure high standards of energy efficiency, in line with Proposed Supplementary Planning Guidance on Energy Efficient Design.
- Ensure that all new Country Park facilities are connected to surrounding local communities and each other by inclusive path networks.
- Include measures to reduce waste and promote recycling as part of the design and operation of all Country Park facilities.

8. INFLUENCE OF THE STRATEGIC ENVIRONMENTAL ASSESSMENT PROCESS ON THE SUPPLEMENTARY PLANNING GUIDANCE

8.1.1. Work undertaken around drafting the Country Park Plan established a number of options based upon the development of access and visitor facilities within Dams to Darnley. These options sought to contribute to the delivery of two key aims of the Dams to Darnley initiative, mirrored within the plan, to:

- Develop a range of inclusive land and water based recreation opportunities within the Country Park, suitable for all ages and abilities, and manage their impact upon heritage and land management interests;
- Provide good quality, appropriate, sustainable and inclusive facilities for visitors, in keeping with the landscape of the Country Park.

8.1.2. In particular, the plan noted a number of options around potential locations for Country Park car parks and visitor facilities, in addition to priorities associated with the development of the Country Park’s path network.

8.1.3. Additional Country Park aims, again mirrored within the plan, focus upon Dams to Darnley’s natural and built heritage, seeking to:

- Conserve and enhance the biodiversity, geodiversity and landscape of the Country Park;
- Conserve, protect and enhance the built heritage of the Country Park.

8.1.4. The plan noted a number of priority path projects aimed at addressing deficiencies in relation to access to and within the Country Park.

8.1.5. The drafting of the Supplementary Planning Guidance examined the options and priorities contained within the Country Park Plan. The guidance sets out the proposals that the Council wishes to support in order for the Country Park to realise its full potential as a visitor and community facility. These proposals are based upon four themes: access, facilities, natural and built heritage and promotion and management. The guidance has sought to provide balance between these themes and in turn the Country Park aims noted above.

8.1.6. The Strategic Environmental Assessment process has played a key role in the aspiration to achieve a balance between promoting new access and visitor facility proposals and conserving, protecting and enhancing the Country Park’s natural and built heritage. the assessment has influenced the guidance in two main ways, by:

- Examining location options associated with access and visitor facility enhancements, assisting to inform the final proposals contained within the guidance;
- Identifying mitigation measures relating to access and visitor facility proposals.

- 8.1.7. Most significantly, the Strategic Environmental Assessment process has assisted to establish the Council's preferred location for the Dams to Darnley Wake Park and Environmental Education Base. In addition, the assessment has led to changes being proposed in relation to indicative path routes within Barrhead South. Finally, it has also resulted in changes to the proposed path route from Barrhead South to Waulkmill Glen Reservoir.

9. MONITORING

9.1. Regular Monitoring

- 9.1.1. Under the Strategic Environmental Assessment legislation, as the Responsible Authority the Council is obliged to monitor the significant environmental effects of the implementation of the Supplementary Planning Guidance. The monitoring arrangements must identify any unforeseen adverse effects at an early stage and undertake appropriate remedial action.
- 9.1.2. Monitoring will use the same nine Environmental Issues and 17 Environmental Objectives contained within this assessment. It will focus upon reporting upon the Environmental Indicators that are identified within the baseline data contained within appendix 4. Monitoring will also involve updating the State of the Environment Report. This will include the addition of new data if and when available, which will in turn be added to baseline data and Environmental Indicators. Mitigation measures will also be monitored and evaluated as implemented. Any new mitigation measures will be identified.
- 9.1.3. Depending upon progress in relation to the implementation of proposals contained within the guidance it is anticipated that monitoring will be undertaken on an annual basis. The one exception relates to the potential environmental impact upon the biodiversity of Balgray Reservoir resulting from non-motorised watersports activities. This would be monitored on an ongoing basis.

Environmental Objective	Implications for the Proposed Supplementary Planning Guidance	Identified Issues from Existing Baseline Data and Information	Data/Data Source
Biodiversity, Flora and Fauna			
<p>Protect, enhance and where necessary restore (specified) species and habitats</p>	<p>Is the guidance likely to significantly assist to protect species within the Country Park, especially those protected by law or identified in European, national or local policies, plans and strategies plan, or is it likely to have significant adverse effects on them?</p> <p>Is the guidance likely to protect, enhance or restore designated nature conservation sites and/or habitats within the Country Park, which are identified in European, national or local policies, plans and strategies plan, or is it likely to have significant adverse effects on them?</p>	<p>The need to protect, enhance and conserve designated species.</p> <p>The need to protect, enhance and conserve designated nature conservation sites within the Country Park.</p> <p>The need to promote and enhance biodiversity.</p> <p>Focus is required in relation to the potential impact of watersports activities at Balgray Reservoir on its biodiversity, in particular in relation to its nesting and wintering bird populations.</p> <p>The need to give further consideration to the protection, enhancement and management of woodland and the green network in the interests of promoting and enhancing landscape and improving biodiversity.</p>	<ul style="list-style-type: none"> • Waulkmill Glen SSSI www.snh.gov.uk • LBSs – 9 sites eastrenfrewshire.gov.uk • Dams to Darnley LNR www.snh.gov.uk • Dams to Darnley Country Park Plan damstodarnley.org.uk • SPG Green Network and Environmental Management eastrenfrewshire.gov.uk • Ancient Woodland Inventory (Scotland) www.snh.gov.uk • Survey of Local Biodiversity Sites (2012) eastrenfrewshire.gov.uk • BRISC biological.records@glasgowlife.org.uk
<p>Ensure sustainable use of agricultural and forestry resources</p>	<p>Is the guidance likely to significantly affect prime agricultural land or impact on deciduous woodlands within the Country Park?</p>	<p>The need to reduce the loss of land in the green belt.</p>	<ul style="list-style-type: none"> • Dams to Darnley Country Park Countryside Ranger Service damstodarnley.org.uk • Balgray Reservoir Bird Survey (2014) damstodarnley.org.uk • BTO WeBS www.bto.org
Population and Human Health			
<p>Provide environmental conditions promoting health and well-being (including increasing opportunities for indoor and outdoor recreation)</p>	<p>Is the guidance likely to promote health, well-being, and increased opportunities for outdoor access within the Country Park?</p>	<p>The need to promote healthy lifestyles and physical well-being through the delivery of Country Park health walks, events and activities.</p> <p>The need to promote healthy lifestyles and physical well-being through inclusive and safe outdoor access opportunities as part of the green network.</p> <p>The need to ensure that potential increases in noise levels associated with the construction of new Country Park paths and facilities is minimised and mitigated.</p>	<ul style="list-style-type: none"> • Proposed Supplementary Planning Guidance on Green Network and Environmental Management eastrenfrewshire.gov.uk • Dams to Darnley Country Park Plan damstodarnley.org.uk • Scottish Health Survey (2012) www.scotland.gov.uk • Scotland's Census 2011 www.scotlandcensus.gov.uk • Country Park path network damstodarnley.org.uk

Minimise noise and vibration	Is the guidance likely to introduce both increased construction and human activity into within the Country Park?	The need to ensure that increases in noise levels associated with proposals contained within the guidance are fully examined as part of their development, in particular the potential promotion of watersports activities at Balgray Reservoir and their impact upon wintering and nesting bird populations. This should include measures associated with minimisation and mitigation.	<ul style="list-style-type: none"> • Country Park activities and events damstodarnley.org.uk • Noise Complaints www.audit-scotland.gov.uk
Water			
Minimise water pollution	Is the guidance likely to significantly help to protect or enhance the Country Park's water environment or is it likely to have significant adverse effects upon it?	<p>The need to improve water quality and reduce pollution.</p> <p>The need to reduce development in the flood plain.</p> <p>The need to reduce the number of flooding events and the number of properties affected by flooding.</p>	<ul style="list-style-type: none"> • Proposed Supplementary Planning Guidance on Green Network and Environmental Management eastrenfrewshire.gov.uk • Proposed Supplementary Planning Guidance on Rural Development eastrenfrewshire.gov.uk
Ensure sustainable use of water resources	Is the guidance likely to significantly help conserve or protect water resources or will it have an adverse impact?	Particular focus is required in relation to the potential impact of watersports activities at Balgray Reservoir on its water quality, in particular the potential requirement for a motorised rescue boat.	<ul style="list-style-type: none"> • BRISC biological_records@glasgowlife.org.uk • Dams to Darnley Country Park Countryside Ranger Service damstodarnley.org.uk
Ensure development does not increase the risk of flooding	Is the guidance likely to increase the likelihood of flooding or the requirement for flood defence works?	The construction and operation of any Country Park facilities built adjacent to the Barrhead dams also needs to be considered in terms of any significant impact upon water quality.	<ul style="list-style-type: none"> • Survey of Local Biodiversity Sites (2012) eastrenfrewshire.gov.uk • Clyde River Foundation Brock Burn reports damstodarnley.org.uk • SEPA Current Classification Status (River) www.sepa.org.uk • Scottish Water Household Consumptions www.scottishwater.co.uk • SEPA Flood Maps 2014 www.sepa.org.uk • Corporate Address Gazetteer cag@eastrenfrewshire.gov.uk • Biennial Flooding Report • ERC Roads
Soil and Geology			
Minimise and reduce soil contamination and ensure a high level of	Is the guidance likely to significantly help protect soils or encourage the sustainable use of soils, or to have	<p>The need to improve water and soil quality.</p> <p>The need to protect geological features of merit.</p>	<ul style="list-style-type: none"> • Waulkmill Glen SSSI www.snh.gov.uk • Dams to Darnley Country Park Plan

soil quality	adverse effects on soils within the Country Park?	Given the limited scale of the proposals contained within the guidance, even when considered cumulatively, it is not thought that it will result in significant environmental impact in relation to soil quality and contamination.	damstodarnley.org.uk
Protect, enhance and where necessary restore geological features	Does the guidance take into account the influence of the Country Park's landform, geomorphology and geology? Is the guidance likely to protect, enhance or restore geological features within the Country Park, or is it likely to have significant adverse effects on them?	No proposals are being supported that would impact upon the Waulkmill Glen SSSI.	
Air			
Minimise air pollution and ensure a high level of air quality	Is the guidance likely to significantly help protect the environment from pollution, including by avoiding potentially polluting developments in sensitive locations, or is it likely to increase the risk of pollution?	The need to reduce air pollution.	<ul style="list-style-type: none"> National Atmospheric Emissions Inventory www.naei.org.uk Air Quality progress report ERC, Environmental Health
Climatic Factors			
Reduce greenhouse gas emissions	Is the guidance likely to significantly help reduce greenhouse gases and/or energy consumption or increase it?	The need to reduce air pollution and energy use associated with new development.	<ul style="list-style-type: none"> Proposed Supplementary Planning Guidance on Energy Efficient Design eastrenfrewshire.gov.uk Proposed Supplementary Planning Guidance on Renewable Energy eastrenfrewshire.gov.uk National Atmospheric Emissions Inventory www.naei.org.uk
Reduce energy use and ensure sustainable use of energy	Is the guidance likely to significantly help facilitate renewable energy in appropriate locations within the Country Park or deter its development?	<p>The need to increase the percentage of journeys made by sustainable transport.</p> <p>The need to encourage the use of renewable energy, within the context of protecting and enhancing the character and amenity of the rural environment.</p> <p>Ensuring that proposed new Country Park facilities are designed, built and operated to meet high standards of energy efficiency.</p> <p>Ensure that renewable energy options are considered when designing potential Country Park facilities.</p>	
Cultural Heritage			
Protect, enhance and where appropriate restore	Is the guidance likely to have a significant effect upon the integrity of designated sites within the Country	The need to protect areas of high conservation and landscape value.	<ul style="list-style-type: none"> Country Park Historic and Cultural Heritage Audit and Strategy (2008) damstodarnley.org.uk

<p>archaeological sites and the historic environment</p>	<p>Park?</p>	<p>The need to conserve the built environment and reduce the number of listed buildings at risk.</p>	<ul style="list-style-type: none"> • Dams to Darnley Country Park Plan damstodarnley.org.uk • Proposed Supplementary Planning Guidance on Management and Protection of the Built Heritage eastrenfrewshire.gov.uk • Listed buildings www.historic-scotland.gov.uk
<p>Protect, enhance and where appropriate restore the built environment and regenerate degraded environments</p>	<p>Is the guidance likely to make a significant contribution to the protection, enhancement or restoration of the built environment or will it contribute to its degradation?</p>	<p>Particular focus is required in relation to listed buildings within the Country Park associated with the Barrhead dams.</p> <p>The need to protect, restore and enhance areas of high conservation value and to ensure that development does not adversely affect such areas.</p>	
Landscape			
<p>Protect, enhance and create green spaces important for recreation and biodiversity</p>	<p>Is the guidance likely to significantly help protect, enhance or create, or is it likely to significantly destroy green spaces important for recreation and biodiversity or diminish their enjoyment?</p> <p>The need to reduce the loss of green space and land in the green belt.</p>	<p>The need to protect and enhance green space and promote its importance for outdoor recreation and biodiversity as part of the green network.</p> <p>The need to protect and enhance areas and sites of natural landscape and conservation value.</p> <p>The need to protect and enhance areas of green belt under pressure from residential development and promote its importance for outdoor recreation and biodiversity as part of the green network.</p>	<ul style="list-style-type: none"> • Country Park Landscape Assessment (2006) damstodarnley.org.uk • Dams to Darnley Country Park Plan damstodarnley.org.uk • Proposed Supplementary Planning Guidance on Rural Development eastrenfrewshire.gov.uk • Proposed Supplementary Planning Guidance on Green Network and Environmental Management eastrenfrewshire.gov.uk • Green Space Strategy eastrenfrewshire.gov.uk • Corporate Address Gazetteer cag@eastrenfrewshire.gov.uk
<p>Protect, enhance and where necessary restore the natural landscape</p>	<p>Is the guidance likely to significantly help protect, enhance or restore, or is it likely to significantly damage or diminish landscape character, local distinctiveness or scenic value or the enjoyment and understanding of the landscape?</p>	<p>It will be particularly important to ensure that designs for proposed new Country Park facilities are distinctive and responsive to their setting whilst respecting traditional proportions, scale and massing.</p>	
Material Assets			
<p>Promote adequate protection of infrastructure, property, material resources and land</p>	<p>Is the guidance likely to significantly affect property or land?</p>	<p>The need to conserve, enhance and protect the value of the countryside within and surrounding the Country Park.</p> <p>Proposed new Country Park facilities must be designed, built and operated to meet high sustainability standards.</p>	<ul style="list-style-type: none"> • Proposed Supplementary Planning Guidance on Rural Development eastrenfrewshire.gov.uk • Proposed Supplementary Planning Guidance on Energy Efficient Design eastrenfrewshire.gov.uk

Promote sustainable use of material resources	Is the guidance likely to result in the significant use material resources that cannot be replaced or sustainably sourced?	The need to promote the use of green space and green belt land under pressure from development as part of the multi functional green network.	
Promote sustainable use of land including re-use of brown field land	Is the guidance likely to encourage the sustainable use of land within the Country Park?	Given the limited scale of the proposals contained within the proposed guidance, even when considered cumulatively, it is not thought that it will result in significant environmental impact on property, land or material resources that cannot be replaced or sustainably sourced.	
Transport			
Reduce the need to travel	Is the guidance likely to significantly help reduce the need to travel or reduce journey length or is it likely to significantly increase travel?	The need to reduce travel by private car and encourage travel by more sustainable modes including walking, cycling and public transport.	<ul style="list-style-type: none"> • <i>Scotland's Census 2011</i> www.scotlandcensus.gov.uk • Scottish Recreation Survey www.snh.gov.uk • Department for Transport www.scotland.gov.uk • Scottish Household Survey www.scotland.gov.uk • Sustrans National Hands up Survey www.sustrans.org.uk • Dams to Darnley Country Park Plan damstodarnley.org.uk
Promote sustainable transport modes	Is the guidance likely to significantly help to encourage walking, cycling or the use of public transport or is it likely to deter them?		
Waste			
Reduce waste and promote the sustainable use of waste including recycling and composting	Is the guidance likely to significantly help reduce waste or is it likely to increase waste arising?	<p>There is a need to reduce high levels of waste production and the demand for landfill.</p> <p>Ensuring that proposed new Country Park facilities are operated to meet high standards of sustainability and recycling.</p> <p>Given the limited scale of the proposals contained within the proposed guidance, even when considering potential visitor facilities, it is not thought that it will result in significant environmental impact because of increased waste.</p>	<ul style="list-style-type: none"> • ERC Waste Team

Relevant plans, programmes and strategies	Main requirements	How it affects, or is affected by the Supplementary Planning Guidance in terms of Strategic Environmental Assessment issues referred to in Schedule 3 of the Act
International		
The Kyoto Protocol (1997)	The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its parties by setting internationally binding emission reduction targets. In 2012, the Doha Amendment to the Kyoto Protocol was adopted. The amendment includes new commitments associated with a second commitment period from 2013 to 2020.	The guidance has a role in contributing to the objectives of the Protocol through developing sustainable transport networks and ensuring that new Country Park facilities are designed, built and operated to meet high standards of sustainability and energy efficiency.
The Rio Declaration on Environment and Development (1992)	The 1992 declaration set the founding principles on sustainable development that were adopted by the international community.	The guidance has a duty to contribute to sustainable development.
The Johannesburg Declaration on Sustainable Development (2002)	The Johannesburg Declaration built upon the principles established through the Rio Declaration and further developed principles of sustainable development and sought international commitment to these sustainable development principles.	As above.
UN Strategic Plan for Biodiversity 2011-20 including 'Aichi' targets	The rationale for the new plan is that biological diversity underpins ecosystem functioning and the provision of ecosystem services essential for human well-being. It includes the 'Aichi' targets, which establish five strategic goals, together with implementation targets.	The guidance has a role in contributing to the Plan through as part of Scotland's Biodiversity Strategy. The guidance is also required to ensure that biodiversity and ecosystems are protected.
European		
EU Habitats Directive (1992)	The main aim of the Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those habitats and species of European importance. In applying these measures, Member States are required to take account of economic, social and cultural requirements, as well as regional and local characteristics.	The guidance is required to protect listed natural habitats and wild species from loss or damage by development. The potential impact of the development of non-motorised watersports activities within the Country Park, including related facilities, upon wild species will require particular attention.
EU Water Framework Directive (2000)	The Directive is a broad strategy for the management of water and includes a requirement for all Member States to ensure that they achieve good ecological status for all surface and ground water by 2015 and to limit the quantity of groundwater extraction in order to protect ecology.	The guidance should ensure that there is no degradation of water bodies or adverse impacts on the water environment and should support sustainable water management practices. The potential impact of the development of non-motorised watersports activities, including related facilities, upon the Country Park's water bodies will require particular attention.
EU Birds Directive (1979)	The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. The main provisions of the	The guidance is required to protect wild bird populations from loss or damage by development. The potential impact of the development of non-motorised

	Directive include the maintenance of the populations of all wild bird species across their natural range.	watersports activities within the Country Park, including related facilities, upon wild bird species will require particular attention.
EU Landfill Directive (2001)	The Directive sets a reduction of target of 75% of the 1995 levels and 35% of the 1995 levels of waste sent to landfill by 2013 and 2020 respectively.	The guidance should contribute to the targets set by the Directive in the context of land use planning.
EU 2020 Climate and Energy Package (2009)	The climate and energy package is a set of binding legislation which aims to ensure the EU meets its ambitious climate and energy targets for 2020: <ul style="list-style-type: none"> • A 20% reduction in EU greenhouse gas emissions from 1990 levels; • Raising the share of EU energy consumption produced from renewable resources to 20%; • A 20% improvement in the EU's energy efficiency. 	The guidance should contribute to the overall reduction in greenhouse gas emissions through developing sustainable transport networks and ensuring that new Country Park facilities are designed, built and operated to meet high standards of sustainability and energy efficiency.
Our life insurance, our natural capital: an EU biodiversity strategy to 2020	The strategy aims to halt the loss of biodiversity and ecosystems in the EU by 2020. There are six main targets, and 20 actions to help Europe reach its goal. The targets include: <ul style="list-style-type: none"> • Full implementation of EU nature legislation to protect biodiversity; • Better protection for ecosystems, and more use of green infrastructure. 	The guidance will contribute to the Strategy through the biodiversity enhancements and the development of the East Renfrewshire Green Network. The guidance is also required to ensure that biodiversity and ecosystems are protected.
National		
The Planning etc. (Scotland) Act 2006	The Act introduced substantial changes to the Scottish planning system, with an emphasis on the need for sustainable economic development. It provides a framework for preparation of the Local Development Plan and supporting Supplementary Planning Guidance.	The guidance will aim to reflect the key issues and objectives of the Act.
Choosing Our Future: Scotland's Sustainable Development Strategy (2005)	The Strategy outlines a framework for the Scottish Government's strategies on climate change, transport, renewable energy, energy efficiency, green jobs and biodiversity. It also notes the need for urgent action in response to growing problems and pressures.	The guidance should contribute to the Strategy through developing sustainable transport networks, enhancing biodiversity and ensuring that new Country Park facilities are designed, built and operated to meet high standards of sustainability and energy efficiency.
Scotland's National Transport Strategy (2006)	Key aims include improving journey times and connections to tackle congestion and improve integration, reducing transport sector emissions and protecting the environment, and improving quality, accessibility and affordability, particularly in relation to public transport as a viable alternative to the car.	The guidance should contribute to the Strategy through developing sustainable transport networks and enhancing public transport options.
National Planning Framework 3 (Scotland) (2014)	The Framework establishes a long-term vision for the development of Scotland. It details the Scottish Government's ambition for the country, providing a framework for the spatial development of Scotland as a whole. The Central Scotland Green Network is one of fourteen national developments identified to deliver the framework's spatial strategy. The green network will	The guidance will contribute to the implementation of the Central Scotland Green Network.

	seek to improve quality of place, address environmental inequalities and enhance health and well-being.	
The Equality Act 2010	The Act legally protects people from discrimination in the workplace and in wider society. It replaced previous anti-discrimination laws with a single Act, making the law easier to understand and strengthening protection in some situations. It sets out the different ways in which it is unlawful to treat someone.	The key proposals detailed within the guidance, must comply with the Act. The Country Park Plan has been used to establish the key priorities that the Council wishes to see supported in the guidance. The Draft Country Park Plan was subject to an Equality Impact Assessment, as the Council considered that it had significant relevance for equalities.
Scottish Government Economic Strategy (2009)	Aims to achieve more balanced sustainable economic growth in all parts of Scotland. Notes the Government's strategic objectives, including 'greener': improvement of the natural and built environment and the sustainable use and enjoyment of it.	The guidance will aim to reflect the key issues and objectives of the Strategy.
2020 Challenge for Scotland's Biodiversity - A Strategy for the conservation and enhancement of biodiversity in Scotland.	The 2020 Challenge document focuses desired outcomes for 2020 and is Scotland's response to the European Biodiversity Strategy for 2020 and the UN 'Aichi' targets. It shows how the Scottish Government, its public agencies, Scottish business and others can contribute to the Strategy's aims as well as supporting sustainable economic growth.	The guidance will contribute to the aims and outcomes contained within the Strategy. The guidance is also required to ensure that biodiversity and ecosystems are protected.
Nature Conservation (Scotland) Act 2004	Places duties on public bodies for conserving biodiversity, increase protection for Sites of Special Scientific Interest (SSSI) and associated land, and strengthens wildlife enforcement legislation.	The guidance requires to protect biodiversity in accordance with the Act including avoidance of adverse impacts on sites, habitats and species of value as defined within the Scottish Biodiversity Strategy and associated priority lists. The potential impact of the development of non-motorised watersports activities within the Country Park, including related facilities, upon biodiversity will require particular attention.
Scottish Historic Environment Policy (SHEP) (2011)	The SHEP, the combined Scottish Planning Policy and Historic Scotland's Managing Change in the Historic Environment guidance note series are the documents to which planning authorities are directed in their consideration of applications for conservation area consent, listed building consent for buildings of all three categories and their consideration of planning applications affecting the historic environment and the setting of individual elements of the historic environment. Planning authorities are also directed to these documents to assist them in development planning. The 2011 revision of SHEP takes account of policy and legislative changes that have been introduced since the document was last updated in 2009.	The guidance will aim to reflect the key issues and objectives of the Policy.

National Waste Plan (2003)	The plan brings together Area Waste Plans and sets out an action plan to reduce landfill waste in line EU targets and to increase recycling, composting and the energy from waste.	The guidance should contribute to waste management targets, in particular in relation to potential Country Park facilities.
Zero Waste Plan (2010)	The Zero Waste Plan is intended to create a stable framework that will provide confidence for the investment necessary to deliver a zero waste Scotland over 10 years.	As above.
Choosing our Future: Scotland's Sustainable Development Strategy (2005)	This document supports the UK Sustainable Development Strategy, focusing on Scotland's efforts and policies.	The guidance should contribute to sustainable development.
Scottish Planning Policy (SPP) (2014)	<p>The SPP sets out national planning policies which reflect Scottish Ministers' priorities for operation of the planning system and for the development and use of land. The SPP promotes consistency in the application of policy across Scotland whilst allowing sufficient flexibility to reflect local circumstances. It directly relates to:</p> <ul style="list-style-type: none"> • The preparation of development plans; • The design of development, from initial concept through to delivery; • The determination of planning applications and appeals. 	The guidance should take account of the statutory guidance on sustainable development contained within the Policy, in addition to key subject policies contained within it, including those relating to the historic environment, landscape and natural heritage, open space and physical activity, green belts and transport.
Flood Risk Management (Scotland) Act 2009	<p>Emphasises a sustainable approach to flood risk management and considers the impact on climate change. It also promotes a coordinated process to manage flood risk at a national and local level. Specific measures include:</p> <ul style="list-style-type: none"> • Assessment of flood risk and preparation of flood risk management plans; • New responsibilities for SEPA, Scottish Water and local authorities in relation to flood risk management; • A single enforcement authority for the safe operation of Scotland's reservoirs. 	The guidance must take into account the provisions of the Act, in particular the assessment of flood risk.
Water Environment and Water Services (Scotland) Act 2003	<p>The Act requires authorities to secure compliance with the requirements of the Water Framework Directive. In particular it requires authorities to:</p> <ul style="list-style-type: none"> • Have regard to the desirability of protecting the water environment; • Promote sustainable flood management, and act to contribute to the achievement of sustainable development; • Adopt an integrated approach by co-operating with each other with a view to co-ordinating the exercise of their respective functions. 	The guidance must take into account of the potential effect of its implementation on the ecological status of the water environment.
Climate Change (Scotland) Act 2009	The Act creates the statutory framework for greenhouse gas emissions reductions in Scotland by setting an interim 42% reduction target	The guidance should contribute to the Act through developing sustainable transport networks and ensuring that new Country Park facilities are designed,

	<p>for 2020 and an 80% reduction target for 2050. The Act places duties on public bodies, which requires them in exercising their functions to act in a way:</p> <ul style="list-style-type: none"> • Best calculated to contribute to delivery of the Act's emissions reduction targets; • Best calculated to deliver any statutory adaptation programme; • That it considers most sustainable. 	<p>built and operated to meet high standards of sustainability and energy efficiency.</p>
A Low Carbon Economic Strategy for Scotland (2010)	<p>The Low Carbon Economic Strategy is an integral part of the Government's Economic Strategy to secure sustainable economic growth, and a key component of the broader approach to meet Scotland's climate change targets and secure the transition to a low carbon economy in Scotland.</p>	<p>As above.</p>
Cycling Action Plan for Scotland (2010)	<p>The Action Plan establishes a vision that by 2020, 10% of all journeys taken in Scotland will be by bike. It presents a shared vision for cycling in Scotland and sets a challenge for central and local governments, businesses, employers and stakeholders working on active travel and individuals.</p>	<p>The guidance will contribute to the delivery of the Action Plan through promoting and developing the multiuse path network to and within the Country Park, ensuring that new facilities are connected to local communities by accessible routes and by supporting the enhancement of the countryside ranger service and in turn its programme of events, including annual cycling activities.</p>
Let's Get Scotland Walking – The National Walking Strategy (2014)	<p>The Strategy establishes a vision of Scotland where everyone benefits from walking as part of their everyday journeys, enjoys walking in the outdoors and where places are well designed to encourage walking. It has three strategic aims, to:</p> <ul style="list-style-type: none"> • Create a culture of walking where everyone walks more often as part of their everyday travel and for recreation and well-being; • Better quality walking environments with attractive, well designed and managed built and natural spaces for everyone; • Enable easy, convenient and safe independent mobility for everyone. 	<p>The guidance will contribute to the delivery of the Strategy through promoting and developing the path network to and within the Country Park, ensuring that proposed new facilities are connected to local communities by accessible routes and by supporting the enhancement of the countryside ranger service and in turn its programme of health walks and events.</p>
Curriculum for Excellence	<p>Curriculum for Excellence aims to achieve a transformation in education in Scotland by providing a coherent, more flexible and enriched curriculum from 3 to 18. The curriculum includes the totality of experiences that are planned for children and young people through their education, wherever they are being educated.</p>	<p>The guidance will contribute to the delivery of the Curriculum by supporting the enhancement of the countryside ranger service and in turn, its environmental education and outdoor learning programme.</p>
A More Active Scotland – Building a Legacy from the Commonwealth Games (2014)	<p>The National Physical Activity Implementation Plan seeks to adapt the key elements of the Toronto Charter to the Scottish setting and link it directly to the Government's active legacy ambitions for the Commonwealth Games.</p>	<p>The guidance will support the implementation of the Plan through contributing to its delivery themes. In particular it will assist through promoting and developing the path network to and within the Country Park, ensuring that new facilities are connected to local communities by accessible</p>

		routes and by supporting the enhancement of the countryside ranger service and in turn its programme of health walks and events.
Regional		
Glasgow and the Clyde Valley Strategic Development Plan (2012)	The Glasgow and Clyde Valley Strategic Development Plan aims to create a long-term sustainable future for the city region. It comprises a bold and ambitious Spatial Vision of the city region to 2035 along with a Spatial Development Strategy to deliver it. The Glasgow and Clyde Valley Green Network is a component of the spatial strategy. It seeks to support economic competitiveness, tourism and day visitor attractions, renewable energy, health and well-being, play and recreation provision, sustainable access, biodiversity, landscape quality, climate change adaptation and soft infrastructure solutions to flooding. The Glasgow and Clyde Valley Green Network is a large scale, long-term transformational programme of action, which is an integral part of the Central Scotland Green Network.	The guidance will contribute to the implementation of the Glasgow and Clyde Valley Green Network.
Local		
East Renfrewshire Corporate Statement 2013-17. Your Council Your Future	The Statement affirms the Council's commitment to improve the lives of local people, promoting equality and fairness and enhancing the area now, and in the future. The Council sets out what the Council is doing to influence positive change for all residents and achieve its vision for the area.	The guidance will contribute to the Council's commitment contained within the Statement.
Single Outcome Agreement 2014-15	The Single Outcome Agreement (SOA) is a core document for the East Renfrewshire Community Planning Partnership, setting out the long-term vision and strategic outcomes that the Council are working with our partners to achieve. The SOA has eleven outcomes, including ones promoting health and active lifestyles and the natural and built environment.	The guidance will contribute to outcomes contained within the SOA, in particular those relating to promoting health and active lifestyles and the natural and built environment.
Outcome Delivery Plan 2012-2015	The Outcome Delivery Plan focuses on key activities carried out by the Council that will help to deliver SOA outcomes.	The guidance will contribute to the activities contained within the Outcome Delivery Plan, in particular in relation to delivering health promoting activities, environmental education opportunities and the expansion and maintenance of the Country Park's path network.
East Renfrewshire Local Development Plan (2015)	The plan establishes a framework for the growth and development of East Renfrewshire up to 2025. It focuses upon the economic, social and environmental future of the area and for implementing the Council's broader aims and objectives.	The Council proposes to support the development and management of the Country Park through policies contained within the plan. The guidance provides further detail in relation to the key enhancements that the Council wish to support in order for the Country Park to realise its full potential as a visitor and community facility.

		The guidance will contribute to, and take account of, a number of wider Plan policies, including those relating to green belt and countryside around towns, green network and the natural environment, outdoor access, community, management and protection of the built heritage and leisure and educational facilities.
Dams to Darnley Country Park Plan (2014)	<p>The plan draws together a number of integrated strands with the aim of establishing a clear and sustainable path for Dams to Darnley. It updates the previous Country Park Development and Management Plan and looks to progress Dams to Darnley by examining funding and income generation opportunities and visitor facility options, as well as alternative delivery and asset management mechanisms.</p> <p>The plan sets out a series of broad objectives for each of the Country Park's key aims. In addition, it establishes specific actions associated with each objective.</p>	The Country Park Plan has been used to establish the key priorities that the Council wishes to see supported, as defined within the guidance.
Dams to Darnley Country Park Plan Master Plan (2004)	The master plan identified broad access, biodiversity and infrastructure proposals. It was arrived at following widespread consultation.	The master plan has assisted to establish the key priorities that the Council wishes to see supported, as defined within the guidance.
Local Biodiversity Action Plan for East Renfrewshire, Renfrewshire and Inverclyde (2004) and Glasgow (2001)	The action plans identifies key habitats and species of value in the area and identifies objectives, targets and actions associated with each.	The guidance will contribute to, and take account of, the protection and enhancement of the key habitats and species identified within the Action Plans.
East Renfrewshire Core Path Plan (2012)	The plan identifies a network of paths that connect communities and gives everyone the opportunity to enjoy the outdoors.	The guidance will contribute to the delivery of the plan through the development of a key aspirational route identified within it; connecting Newton Mearns to the Country Park.

1. BIODIVERSITY, FLORA AND FAUNA

1.1.1. The Country Park is made up of a variety of habitat areas. It encompasses the reservoirs of the Barrhead dams, the Brock and Aurs burns, wetland, semi-natural and plantation woodland blocks and shelter belts, scrub and grassland.

1.1.2. Communicating the value of the Country Park's natural heritage is clearly important. The Country Park Plan established ten priority themes, identified through the work of a short-term biodiversity working group:

- The **story of water and life**, how water management, developed for social and economic purposes, has also enhanced biodiversity;
- Industrial devastation and **post-industrial reclamation** and the incidental benefits for wildlife;
- **Butterfly beauties**;
- **Pond life**;
- **Habitat creation works**;
- Contrasting human transport mechanisms with **natural travellers**;
- **Wildlife on the verge**, looking at localised extinctions and declining species;
- An appreciation of **grassland habitats**;
- **Balgray Reservoir**, a bird watchers' paradise;
- **Waulkmill Glen** as a source for geological history.

1.2. Country Park Habitats

1.2.1. The Barrhead dams consist of five inter-connecting reservoirs, collectively making up a body of **open water** covering approximately 90 hectares. The Barrhead dams, especially Balgray and Waulkmill Glen reservoirs, are of high ornithological interest. As a result are popular with ornithologists.

1.2.2. At the heart of the Country Park's natural heritage lies a small, north flowing **watercourse**, the Brock Burn. The burn was dammed in the mid-nineteenth century to create the Barrhead dams. North of the Barrhead dams the Brock Burn bisects Waulkmill Glen and Darnley Mill woodlands, eventually joining the Levern Water. The Aurs Burn flows eastwards from Barrhead through the Country Park, before joining the Brock Burn at Darnley Mill. Brown trout, three-spined stickleback, stone loach, minnow and eel are present at sites within the Country Park, but salmon do not appear to pass upstream of Darnley⁶. Despite minor problems associated with litter in the burns, the presence of freshwater shrimps and various species of mayfly nymphs are indicators of good water quality.

1.2.3. **Marsh and swamp** vegetation is limited within the Country Park. Rush dominated mires are restricted to several small sites. Swamp areas are also rare and restricted to the reservoir edges. The Brock and Aurs burns, along with several associated ponds, create a wetland environment that is home to many species of plant and animal. Rich birdlife includes regular sighting of dipper, kingfisher, grey wagtail, moorhen, coot and mallard. During the

⁶Clyde River Foundation (2004-6) Fish Populations of the Brock Burn System

summer months several species of damselflies and dragonflies can also be seen including large red, emerald, azure, common blue, blue tailed and common darter, especially around the pond at Darnley Mill.

- 1.2.4. The largest semi-natural **woodlands** are within Waukmill Glen and Darnley Mill; these support a good range of species within a mosaic of grassland, marsh and scrub. There are also remnants of long established plantations that were bisected by the M77 at Patterton Farm and Comerach Lodge. Other less diverse woodland compartments include shelter belts to the west of the M77, which provide shelter for livestock, and the policy woodlands at Tower Rais. Waukmill Glen and Darnley Mill woodlands in particular have been found to contain good numbers of invertebrates, which will in turn support many birds, mammals and amphibians⁷.
- 1.2.5. **Scrub** is a local feature within the Country Park. Areas of mature scrub have developed at Darnley Mill, offering a valuable resource for wildlife, providing homes and food sources. Gorse and hawthorn are common on drier ground such as farm ridges, embankments and waste ground. Willow is common on the reservoir edges.
- 1.2.6. Dams to Darnley has many miles of **hedgerows**, mainly hawthorn and blackthorn, which provide homes to a variety of wildlife and act as corridors, joining up habitats within the Country Park and linking them to the wider countryside. Some hedgerows are species poor or open and gappy, having been cut back on a regular basis.
- 1.2.7. The **grassland** around Darnley Mill is particular rich for wildflowers, including species such as common spotted and butterfly orchid and greater birds foot trefoil. These areas attract wildlife including common blue, meadow brown and ringlet butterflies in summer, whilst seed eating birds such as goldfinch are often found feeding on the grasslands. The majority of remaining grassland within the Country Park is managed as improved agricultural pasture and has limited diversity. A small number of areas have been identified as semi-natural, with the abandoned pastures around the former Darnley House site having greater diversity. Neutral and coarse grasslands are found along the reservoir margins and spillway embankments. The mixture of recently cut and long grass, open patches and areas prone to flooding provide a great range of micro habitats for invertebrates⁷.

1.3. Designated Sites

- 1.3.1. Within the East Renfrewshire portion of the Country Park a number of sites are designated for their biodiversity, flora and fauna:

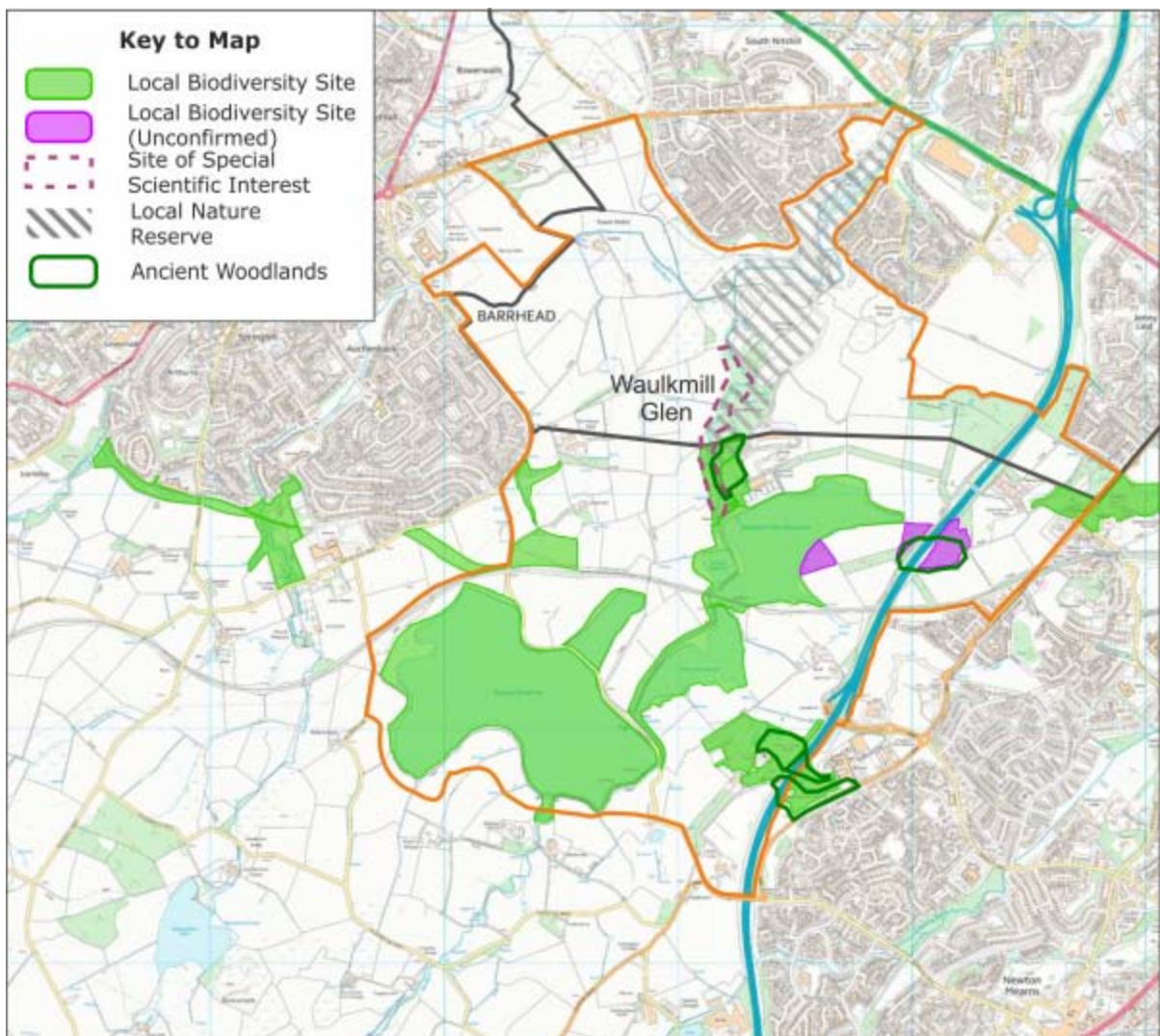
- Nine Local Biodiversity Sites;
- One Local Nature Reserve (primarily within Glasgow City);
- Five Ancient Woodland Sites.

⁷Rutherford M. (2009) Spider and Mollusc Survey of Dams to Darnley Country Park

1.4. Local Biodiversity Sites

1.4.1. East Renfrewshire Council has identified a number of Local Biodiversity Sites (LBS) which it considers are of local interest. A survey of LBS took place in 2012, informing the preparation of the East Renfrewshire Local Development Plan and the identification of the East Renfrewshire Green Network. This survey identified nine⁸ LBS within the Country Park (figure 1). The information collated below is partly taken from the LBS survey, together with other key data sources, including records collated from the Glasgow Museums Local Biological Records Centre and wetland and terrestrial species counts (BTO WeBS).

Figure 1: Country Park Designated Sites



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1.5. Balgray Reservoir LBS (66.7 ha)

1.5.1. Balgray Reservoir is the largest body of open water forming part of the man-made complex of reservoirs making up the Barrhead dams. The reservoir has generally open and exposed sides. The marginal vegetation around some of its southern periphery is nevertheless characterised as rich, although in other

⁸Patterton Farm Wood is categorised as an unconfirmed LBS. It was previously designated as a Site of Importance for Nature Conservation but was not re-surveyed in 2012

places, such as the stonier eastern shore, it is limited⁹. The reservoir has a well-used path around its western and southern edge.

- 1.5.2. Balgray Reservoir is one of the best inland ornithological sites in East Renfrewshire, Renfrewshire and Inverclyde, with over 180 recorded species, of which at least 45 are known to have bred or have been suspected of breeding. Of the breeding species that use the water's edges and the island that occasionally appears, there are many red and amber list species of conservation concern¹⁰. Its grassland and bushes also hold good populations of reed bunting and grasshopper warbler.
- 1.5.3. Balgray and Waulkmill Glen Reservoirs also hold the largest population of breeding great crested grebes (10-12 pairs) within Renfrewshire, Renfrewshire and Inverclyde. In spring and autumn Balgray Reservoir is a magnet for migrants, especially if the water levels are low. In late summer one of the largest moulting flocks of tufted ducks (up to 300+) in the Clyde recording area also builds up on the reservoir. The site has been regularly counted for wetland and terrestrial species bird species (BTO WeBS) since 1968. The results for 2013-14 are presented in table 1.

Main habitats

- Open water with marginal wetlands
- Neutral grassland

Notable habitats

- Open water
- Neutral grassland
- Roosting and wintering area for birds

Notable species

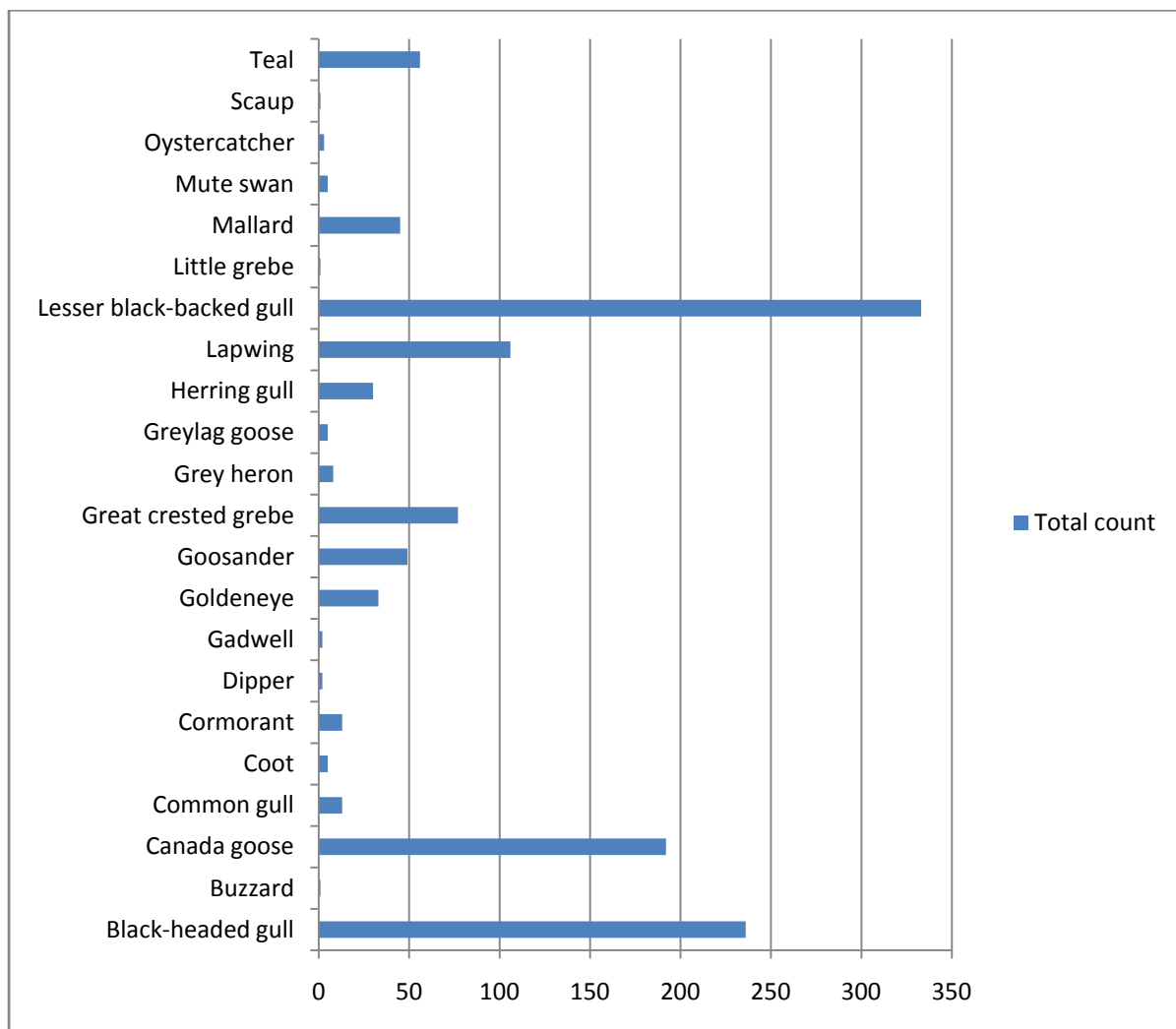
- Greater butterfly orchid (*Platanthera chlorantha*)
- Trifid bur-marigold (*Bidens tripartita*)
- Daubenton's bat (*Myotis daubentonii*)
- Pipistrelle bats (*Pipistrellus pipistrellus* and *Pipistrellus pygmaeus*)

- 1.5.4. A survey of wetland and terrestrial birds at Balgray Reservoir was carried out in 2014 to provide additional detailed information to support this Environmental Report. This highlighted that the west side of Balgray Reservoir was of greatest importance for wetland and terrestrial birds, confirming existing records. The largest sheltered bay on the south-west side of the reservoir was noted as being of particular importance for wetland species (figure 2). Records do point to the variable use of the east side of the reservoir as a nesting site, for example by great crested grebes, but its steep, stone faced dam embankment does not generally make it a favoured location.
- 1.5.5. The sheltered bays of Balgray Reservoir are also important as nurseries for fish. A large population of small fish is essential for the reservoir to retain a number of the bird species which breed there and support the many winter visitors.

⁹Brown L., Strain E., Buckle L. (1991) Eastwood Habitat Survey 1991

¹⁰Birds of Conservation Concern 3 (2009)

Table 1: Balgray Reservoir 2013-14 BTO WeBS (10 Counts)



1.6. Brock Burn Wood LBS (4.8 ha)

1.6.1. A small beech wood between Barrhead and Newton Mearns on the northern boundary of East Renfrewshire. The LBS contains many native trees and a range of woodland plants. The site includes part of the Waulkmill Glen Site of Special Scientific Interest (SSSI). A Country Park path runs through the site. Waulkmill Glen woodland is classed as semi-ancient, meaning that it is at least 250 years old.

Main habitats

- Woodland
- Running water

Notable habitats

- Woodland

Notable species

- Pipistelle bats (*Pipistrellus pipistrellus* and *Pipistrellus pygmaeus*)

1.7. Lyoncross LBS (5.2 ha)

1.7.1. Lyoncross LBS is made up of two fields to the south-west of Barrhead. The northern field is made up of neutral grassland with fringing woodland along a burn and the southern one has scrub developing on the steeper slopes.

Main habitats

- Neutral grassland
- Marshy grassland
- Scrub
- Woodland
- Tall weedy vegetation
- Running water

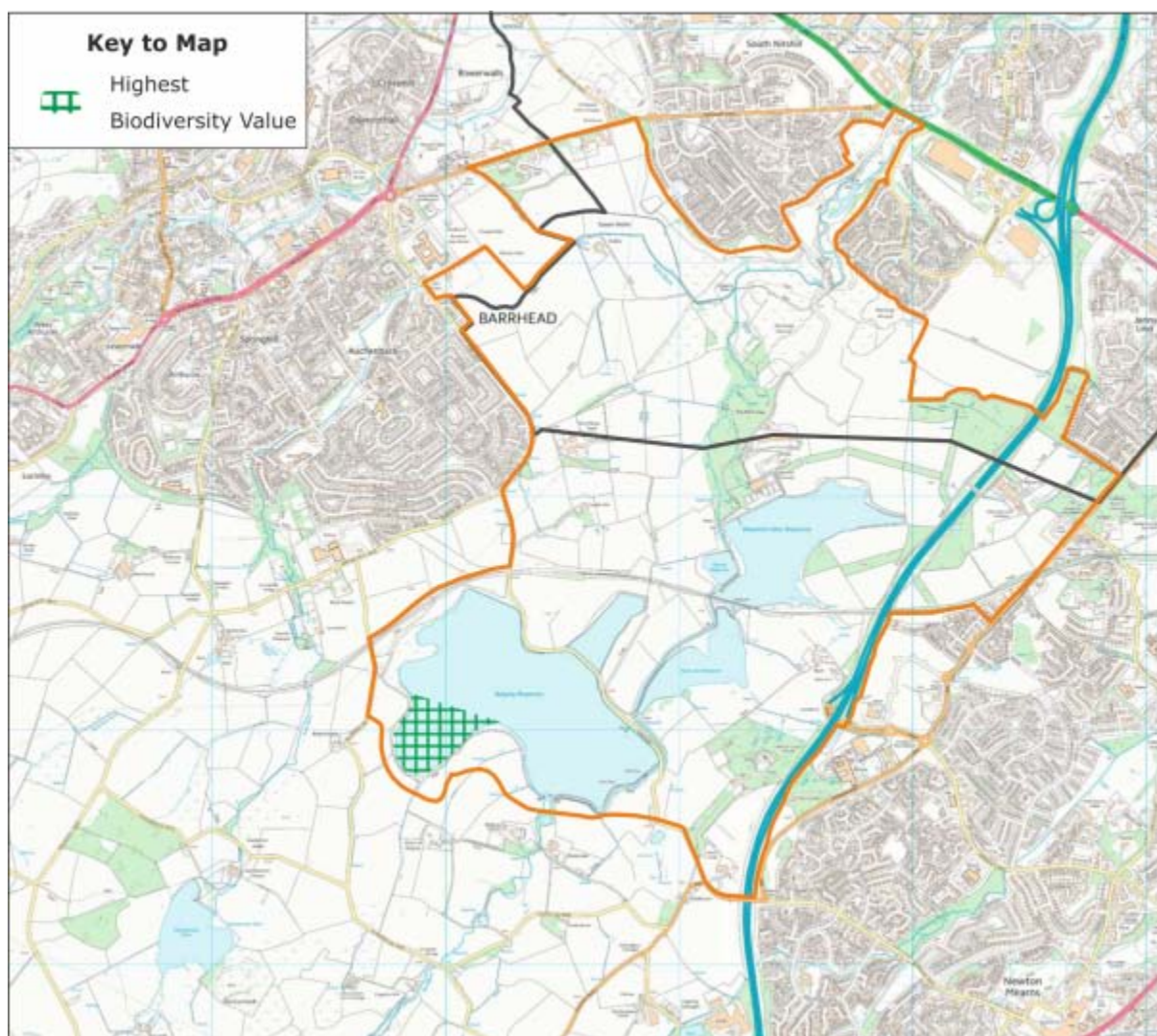
Notable habitats

- Neutral grassland

Notable species

- Slender sedge (*Carex lasiocarpa*)
- Greater butterfly orchid (*Platanthera chlorantha*)

Figure 2: Balgray Reservoir Area of Highest Biodiversity Value



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1.8. Patterton Farm Wood LBS (3.3 ha)

1.8.1. A mature beech plantation, with typically poor ground flora.

Main habitats

- Woodland

Main species

- Beech (*Fagus sylvatica*)
- Oak (*Quercus robur*)
- Sycamore (*Acer pseudoplatanus*)
- Lime (*Tilia vulgaris*)
- Horse chestnut (*Aesculus hippocastanum*)
- Rowan (*Sorbus aucuparia*)
- Scot's pine (*Pinus sylvestris*)
- Yew (*Taxus baccata*)
- Wood sorrel (*Oxalis acetosella*)
- Tufted hair-grass (*Deschampsia cespitosa*)
- Wood horsetail (*Equisetum sylvatica*)
- Broad buckler fern (*Dryopteris dilatata*)

1.9. Ryat Linn Reservoir LBS (12.4 ha)

1.9.1. A small area of open water with narrow fringing wetland vegetation and grassland, forming part of the man-made complex of reservoirs making up the Barrhead dams. The reservoir has a well-used path on its western side. The east side of the reservoir is secluded and supports valuable grassland and relic woodlands along some of its margins. The site has been regularly counted for wetland and terrestrial species bird species (BTO WeBS) since 1986. The results for 2013-14 are presented in table 2.

Main habitats

- Open water
- Running water
- Woodland and scrub
- Neutral grassland
- Swamp
- Fringing wetland vegetation

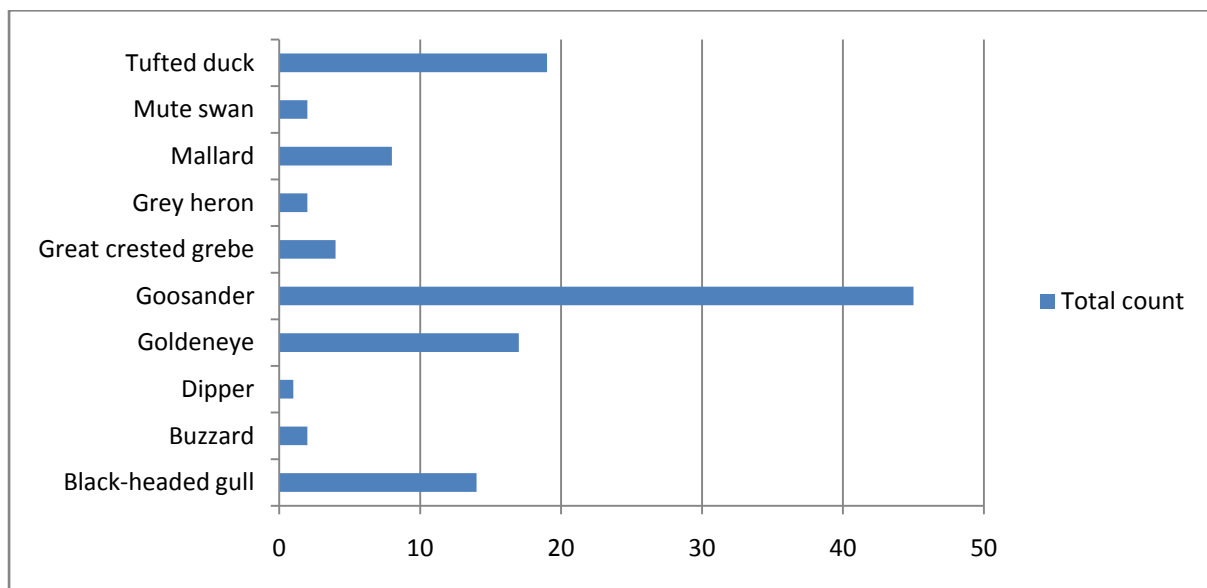
Notable habitats

- Open water

Notable species

- Daubenton's bat (*Myotis daubentonii*)
- Pipistelle bats (*Pipistrellus pipistrellus* and *Pipistrellus pygmaeus*)

Table 2: Ryat Linn Reservoir BTO WeBS 2013-14 (9 Counts)



1.10. Walden Woods LBS (6.4 ha)

1.10.1. Two adjacent areas of woodland on either side of the B769, just to the north of Newton Mearns on the East Renfrewshire border. Trees are mature sycamore, beech, ash and elm and support a wide range of woodland and other plants, including one local rarity.

Main habitats

- Woodland
- Neutral grassland
- Running water

Notable habitats

- Woodland

Notable species

- Green Figwort (*Scrophularia umbrosa*)
- Pipistelle bats (*Pipistrellus pipistrellus* and *Pipistrellus pygmaeus*)

1.11. Waulkmill Glen Reservoir LBS (26.3 ha)

1.11.1. A large area of open water, forming part of the man-made complex of reservoirs making up the Barrhead dams. The reservoir has a well-used path on its western and northern sides. The reservoir is mostly standing water, but with small amounts of several other habitats. It is moderately rich in plants including two local rarities. The south-east corner of Waulkmill Glen Reservoir is of note because of its large inlet with swamp vegetation. The generally steep sides of the reservoir support a fringe of scrub. The reservoir is of high ornithological interest and as a result is popular with ornithologists. The site has been regularly counted for wetland and terrestrial species bird species (BTO WeBS) since 1988. The results for 2013-14 are presented in table 3.

Main habitats

- Standing water
- Neutral grassland
- Marshy grassland
- Fringing wetland vegetation

- Scrub
- Woodland

Notable habitats

- Neutral grassland
- Fringing wetland vegetation
- Standing water

Notable species

- Water-plantain (*Alisma plantago-aquatica*)
- Greater butterfly orchid (*Platanthera chlorantha*)
- Daubenton's bat (*Myotis daubentonii*)
- Pipistelle bats (*Pipistrellus pipistrellus* and *Pipistrellus pygmaeus*)

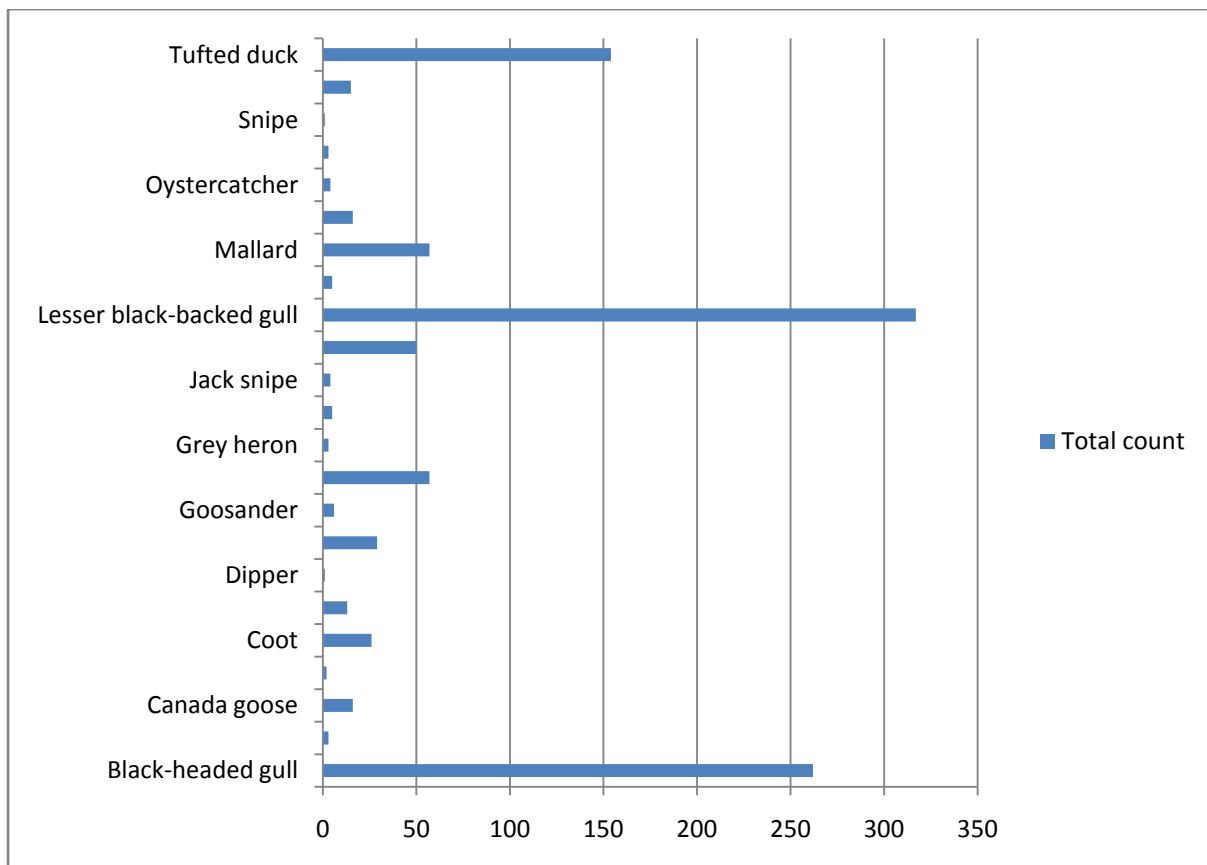
1.12. West Lodge Woods LBS (10.4 ha)

1.12.1. Two small woods on the north-west edge of Newton Mearns either side of the M77. Originally one wood of sycamore, ash, birch, elm and oak with several other planted species. Low numbers of associated plants and no rare species.

Main habitats

- Deciduous woodland

Table 3: Waulkmill Glen and Littleton Reservoirs BTO WeBS 2013-14 (9 Counts)



1.13. Dams to Darnley Local Nature Reserve (36 ha)

1.13.1. Local Nature Reserves (LNRs) are places to enjoy and learn more about local wildlife or geology. They are found in a range of locations and associated with a variety of habitats. LNRs provide wild spaces where plants and animals, both common and rare, can thrive. They offer a more natural environment

than parks and gardens, but are still readily accessible for a wide range of people. LNRs are of local natural heritage importance, designated and managed by local authorities to give people better opportunities to learn about and enjoy nature close to home. For this reason, LNRs are generally found close to towns and cities.

- 1.13.2. Dams to Darnley LNR was designated in 2013, following a joint declaration by East Renfrewshire and Glasgow City Councils. It was the first such joint declaration in Scotland. The reserve encompasses the 36 hectares of Glasgow City Council land within Darnley Mill and Waulkmill Glen (figure 1). A small proportion of the Waulkmill Glen element of the reserve is within East Renfrewshire, with its declaration supported through the Local Development Plan (Policy D8.1: Declaration of Local Nature Reserve). The reserve is made up of a variety of habitats, each of which is beneficial for biodiversity. The wetlands are important for amphibians and a host of small invertebrates such as dragonflies and damselflies, whilst the grasslands contain abundant wildflowers, including orchid species. Waulkmill Glen contains an area of ancient woodland, surrounding a steeply incised gorge through which the Brock Burn flows. Waulkmill Glen is of primary importance for its geology and is designated a Site of Special Scientific Interest (SSSI).

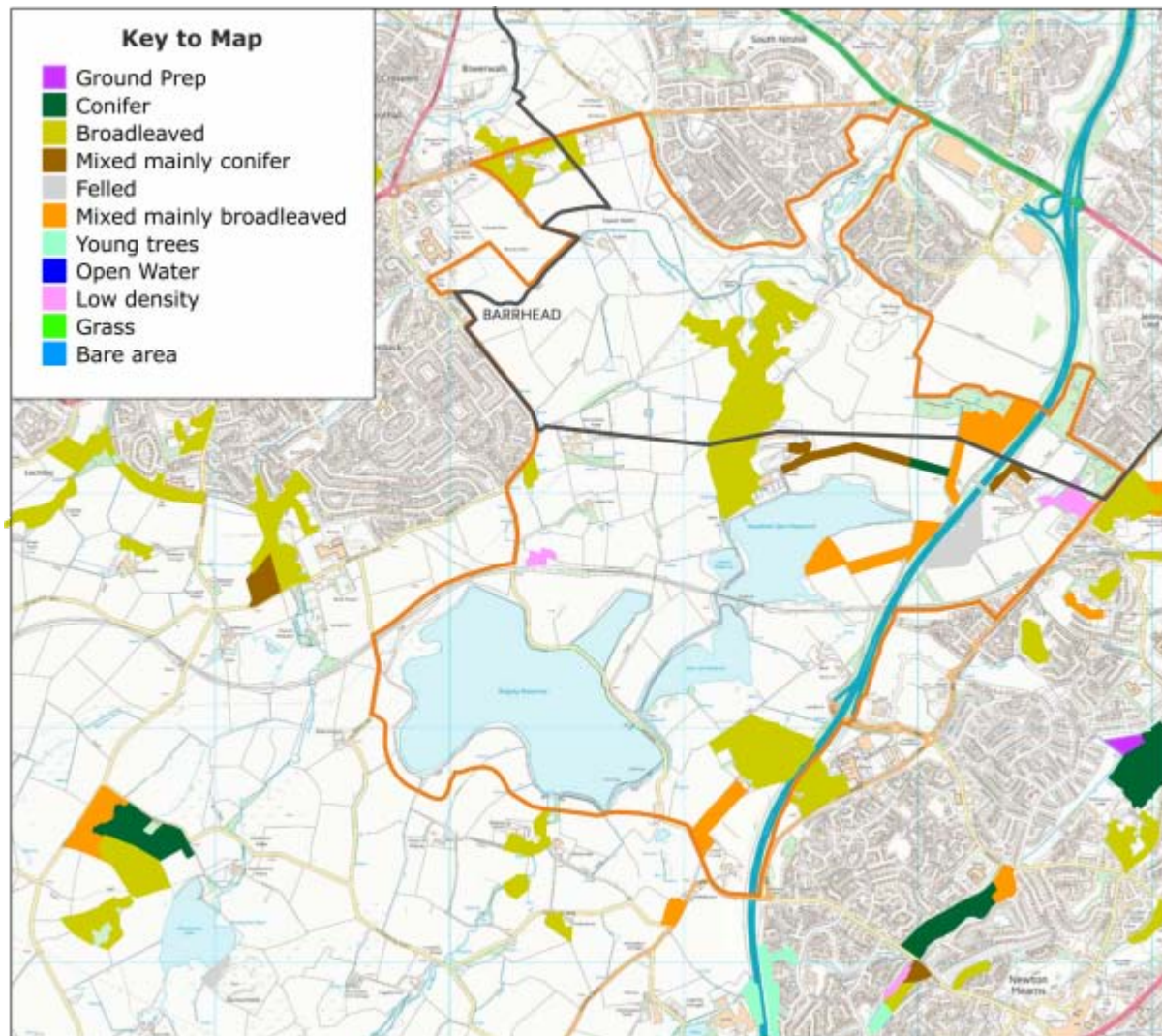
1.14. Ancient Woodland

- 1.14.1. There are pockets of ancient woodland scattered across the Country Park identified in the Scottish Ancient Woodland Inventory (figure 1). There is no legislation specifically protecting ancient woodland; however Scottish Planning Policy identifies it as an important and irreplaceable national resource that should be protected and enhanced. Some areas of ancient woodland fall within LBS and the Waulkmill Glen SSSI.

1.15. National Forest Inventory

- 1.15.1. The Forestry Commission undertook a desktop exercise in 2012 to identify all areas of Great Britain that have map features classed as woodland. All woodland which is 0.5ha or greater in extent, with the exception of assumed woodland or low density areas that can be 0.1Ha or greater in extent, was mapped. These areas are broken down into the type of woodland present within the Country Park, as illustrated in figure 4.

Figure 4: Country Park Forested Areas from the National Forest Inventory



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1.16. Local Biodiversity Action Plans

- 1.16.1. Local Biodiversity Action Plans aim to influence the policy of local authorities and partners. They seek to ensure that nature conservation is taken into account in the decisions of all partners. Local Biodiversity Action Plans identify targets set out in specific Species and Habitat Action Plans. East Renfrewshire is one of three Councils forming a Local Biodiversity Action Plan partnership. The partnership produced a Local Biodiversity Action Plan in 2004 that identifies priorities to deliver projects designed to maintain the diversity of wildlife across all three Councils. The Glasgow Local Biodiversity Action Plan was launched in 2001. A number of Action Plans contain habitats and species found within the Country Park (table 4).

Table 4: Local Biodiversity Action Plans - Habitat and Species Action Plans relevant to the Country Park

	East Renfrewshire, Renfrewshire and Inverclyde	Glasgow
Habitat Action Plans		
Boundary features		✓
Broadleaved and mixed woodland	✓	✓
Marsh		✓
Mires	✓	
Neutral grassland		✓
Rivers and streams	✓	✓
Scrub	✓	
Standing open water	✓	✓
Swamp		✓
Unimproved grassland	✓	
Species Action Plans		
Badger		✓
Bluebell		✓
Common frog		✓
Common toad		✓
Dragonflies and damselflies		✓
Greater and lesser butterfly orchids	✓	
Jack snipe		✓
Otter	✓	✓
Palmate newt		✓
Pipistrelle bat	✓	
Reed bunting		✓
Skylark		✓
Swift		✓
Tree sparrow		✓
Water vole		✓

1.17. Protected and Red List Species

1.17.1 All wild birds in the UK are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally or recklessly:

- Kill, injure or take a wild bird;
- Take, damage, destroy or interfere with a nest of any wild bird whilst it is in use or being built;
- Obstruct or prevent any wild bird from using its nest;
- Take or destroy an egg of any wild bird;
- Disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young, or whilst lekking;
- Disturb the dependent young of any wild bird listed on Schedule 1.

1.17.2. Schedule 1 Part I birds are protected by special penalties at all times, whilst Part II birds are protected during the closed season.

- 1.17.3. The 1981 Act also affords protection to certain species of animals (Schedule 5 and 6) and plants (Schedule 8).
- 1.17.4. Scottish devolution has meant that changes to the 1981 Act (through the Nature Conservation (Scotland) Act 2004) and the Habitats Regulations have been made differently in Scotland than in England and Wales.
- 1.17.5. In addition to the 1981 Act the EU Habitats Regulations afford protection to certain species identified in the Habitats Directive, including those requiring additional strict protection (European protected species).
- 1.17.6. Table 5 identifies species found within the Country Park afforded additional protection through Schedule 1 of the 1981 Act. It additionally identifies red list species found within the Country Park, as recorded in the most recent Birds of Conservation Concern publication. These are species that meet a number of criteria, including those that have shown a substantial decline in the UK between 1800 and 1995, without substantial recent recovery. Table 5 also identifies that the Country Park contains otters and bats, which are European protected species, and badgers, which have additional protection to the 1981 Act under the Protection of Badgers Act 1992.
- 1.17.7. Under the Habitats Regulations it is an offence to deliberately or recklessly:
- Capture, injure or kill an otter/wild bat;
 - Harass an otter/bat or group of otters/bats;
 - Disturb an otter in a holt/wild bat in a roost or any other structure or place it uses for shelter or protection;
 - Disturb an otter/wild bat while it is rearing or otherwise caring for its young;
 - Obstruct access to a holt/wild bat roost or other structure or place otters use for shelter or protection or to otherwise deny the animal use of that place;
 - Disturb an otter/wild bat in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of the species;
 - Disturb an otter/wild bat in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young;
 - Damage or destroy a breeding site or resting place of such an animal (note that this does not need to be deliberate or reckless to constitute an offence).

Table 5: Country Park Species (Schedules 1, 5, 6 and 8 and Red List)

Species	Protection	Red List	Last record
Badger	WCA 1981 (Schedule 6)		2009
Black-tailed godwit	WCA 1981 (Schedule 1, Part I)	✓	2004
Black-throated diver	WCA 1981 (Schedule 1, Part I)		1987
Bluebell	WCA 1981 (Schedule 8)		2014
Bittern		✓	2002
Brambling	WCA 1981 (Schedule 1, Part I)		1981
Common frog	WCA 1981 (Schedule 5)		2014
Common pipistrelle bat	WCA 1981 (Schedule 6), Habitats Regulations 1994 (as amended in Scotland) European protected species (Schedule 2)		2014
Common scoter	WCA 1981 (Schedule 1, Part I)	✓	1982
Common shrew	WCA 1981 (Schedule 6)		2004
Common toad	WCA 1981 (Schedule 5)		2014
Daubenton's bat	WCA 1981 (Schedule 6), Habitats Regulations 1994 (as amended in Scotland) European protected species (Schedule 2)		2014
Dunlin		✓	2012
Fieldfare	WCA 1981 (Schedule 1, Part I)	✓	2004
Garganey	WCA 1981 (Schedule 1, Part I)		1982
Goldeneye	WCA 1981 (Schedule 1, Part I and II)		2014
Grasshopper warbler		✓	2014
Great northern diver	WCA 1981 (Schedule 1, Part I)		2014
Green sandpiper	WCA 1981 (Schedule 1, Part I)		2013
Greenshank	WCA 1981 (Schedule 1, Part I)		2012
Grey partridge		✓	1993
Kingfisher	WCA 1981 (Schedule 1, Part I)		2014
Lapwing		✓	2014
Linnet		✓	2009
Little gull	WCA 1981 (Schedule 1, Part I)		1986
Long-tailed duck	WCA 1981 (Schedule 1, Part I)		2014
Marsh harrier	WCA 1981 (Schedule 1, Part I)		2001
Mediterranean gull	WCA 1981 (Schedule 1, Part I)		1980
Merlin	WCA 1981 (Schedule 1, Part I)		2004
Osprey	WCA 1981 (Schedule 1, Part I)		2013
Otter	WCA 1981 (Schedule 6), Habitats Regulations 1994 (as amended in Scotland) European protected species (Schedule 2)		2012
Palmate newt	WCA 1981 (Schedule 5)		2013
Pintail	WCA 1981 (Schedule 1, Part I)		2009
Purple sandpiper	WCA 1981 (Schedule 1, Part I)		1940
Red-throated diver	WCA 1981 (Schedule 1, Part I)		1986
Redwing	WCA 1981 (Schedule 1, Part I)	✓	2004
Ruff	WCA 1981 (Schedule 1, Part I)	✓	2005
Scaup	WCA 1981 (Schedule 1, Part I)	✓	2013
Skylark		✓	2004
Smooth newt	WCA 1981 (Schedule 5)		2010

Song thrush		✓	2004
Soprano pipistrelle bat	WCA 1981 (Schedule 6), Habitats Regulations 1994 (as amended in Scotland) European protected species (Schedule 2)		2014
Spotted flycatcher		✓	1991
Starling		✓	2004
Tree pipit		✓	1992
Tree sparrow		✓	1985
Water vole	WCA 1981 (Schedule 5)		2013
Whimbrel	WCA 1981 (Schedule 1, Part I)	✓	1987
Whooper swan	WCA 1981 (Schedule 1, Part I)		2014
Wood sandpiper	WCA 1981 (Schedule 1, Part I)		1955
Wood warbler		✓	1993
Yellowhammer		✓	2004

2. POPULATION AND HEALTH

2.1. Population Surrounding the Country Park

2.1.1. Dams to Darnley has communities on three sides, over 127,000 people live within 3.5km of its boundary, the majority in Glasgow South and Eastwood (table 6).

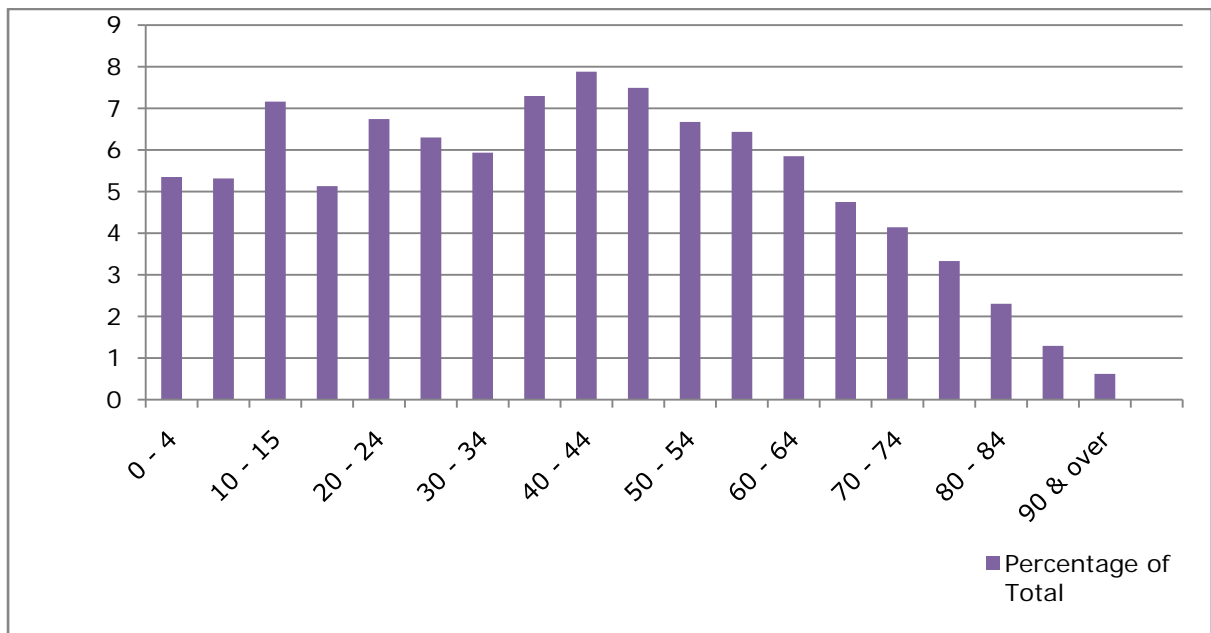
Table 6: Local Population (within a 3.5km buffer of the Country Park)¹¹

Area	Population
Glasgow South (south Nitshill, Darnley, Parkhouse, Jenny Lind, Mearns Grove)	55,517
Levern Valley (Barrhead, Neilston)	19,178
Eastwood (Newton Mearns, Thornliebank)	52,624

2.1.2. Figure 5 details the age distribution of the local community living close to the Country Park, it highlights a focus within the 10-15 and 35-49 age groups.

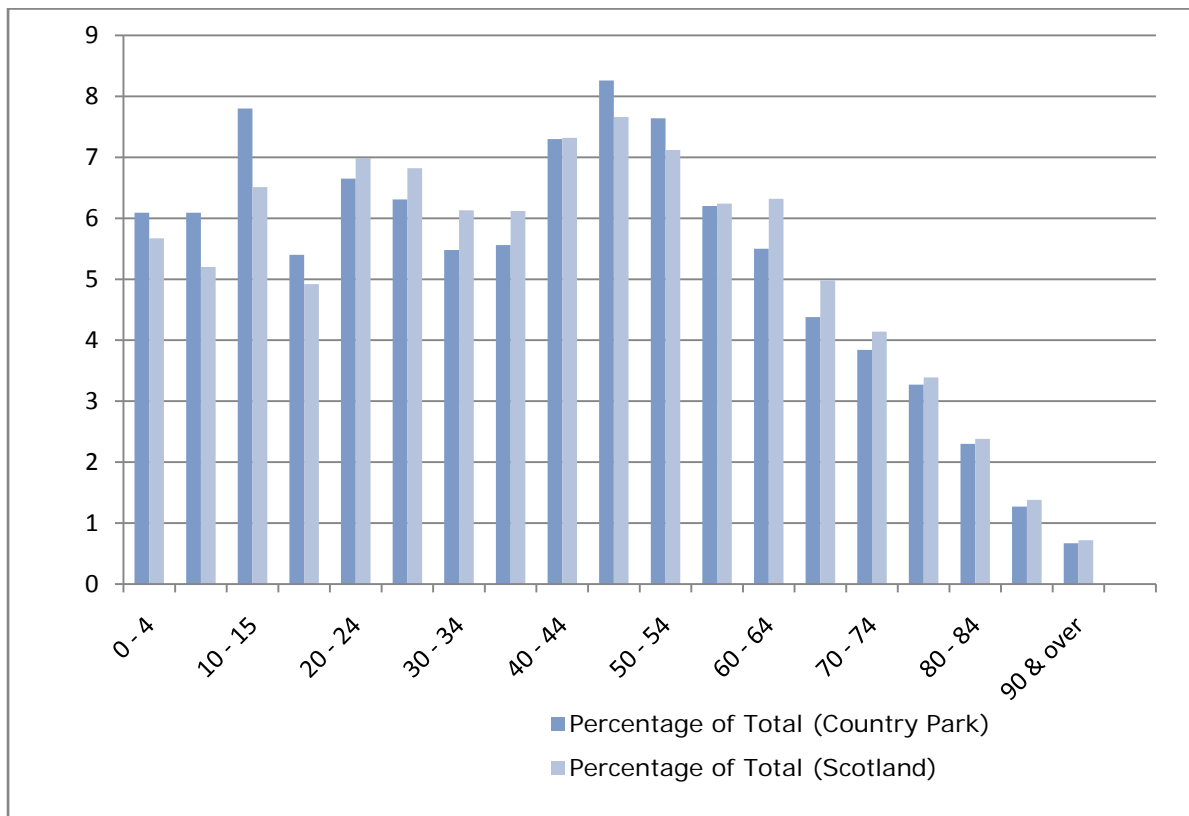
¹¹General Register for Scotland. Small Area Population Estimates (2011) Mid Year Estimates

Figure 5: Local Population (within a 3.5km Buffer of the Country Park) by Age



2.1.3. Figure 6 also reflects an over representation within the 0-19 age groups living close to the Country Park when compared to national statistics.

Figure 6: Local Population (within a 3.5km Buffer of the Country Park) by Age Compared to Scotland Population



3. WATER

3.1. Catchments

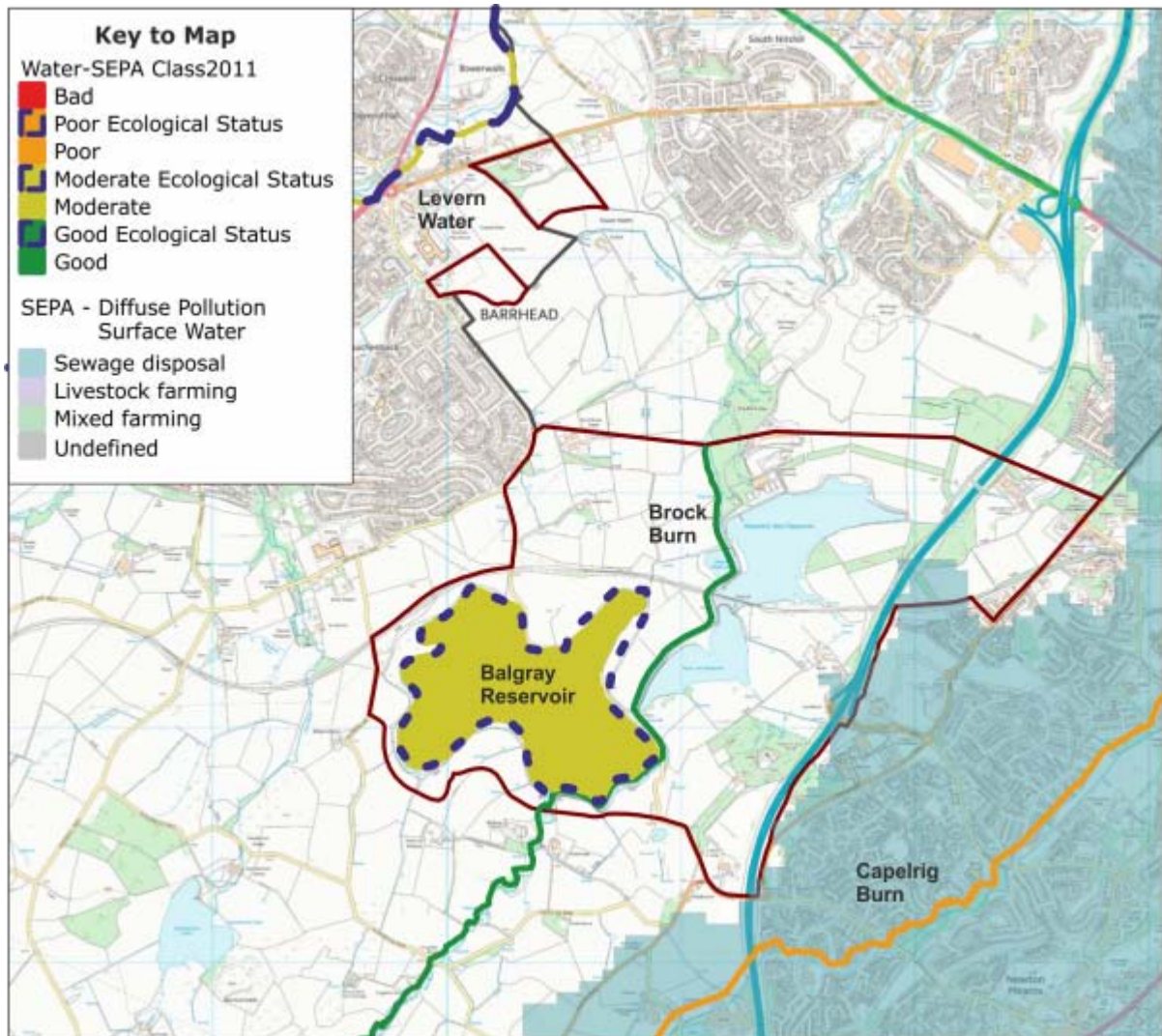
3.1.1. There are approximately 6.1km of water courses (including small burns) within the East Renfrewshire side of Dams to Darnley. The Country Park falls within the White Cart Water catchment area. Eleven rivers and lochs within the catchment have undergone water classification by SEPA as part of the 2011 river classification. Within the Country Park this includes the Brock Burn and Balgray Reservoir (table 7).

Table 7: White Cart Water SEPA 2011 River Classification

Ref	Name	Length in ERC	Catchment	Class	Change
10000	White Cart Water (Kittoch water to A726)	2.49	White Cart Water	Poor	No Change
10001	White Cart Water (above Kittoch confluence)	16.17	White Cart Water	Poor	No Change
10002	Kittoch Water	2.57	White Cart Water	Poor	No Change
10003	Capelrig/Auldhouse Burn	10.15	White Cart Water	Poor	No Change
10007	Levern Water	15.23	White Cart Water	Moderate	Improved
10009	Dunwan Burn/ Polnoon Water (d/s Dunwan Dam)	6.89	White Cart Water	Moderate	No Change
10010	Dunwan Burn (u/s Dunwan Dam)	0.76	White Cart Water	Good	No Change
10011	Earn Water	11.66	White Cart Water	Good	No Change
10921	Brock Burn	8.81	White Cart Water	Good	No Change
100299	Balgray Reservoir	58.4ha	White Cart Water	Moderate	No Change
100304	Dunwan Dam	50.6ha	White Cart Water	Good	No Change

3.1.2. Figure 7 shows the classification relating to the Brock Burn and Balgray Reservoir, according to the 2011 results.

Figure 7: Country Park SEPA 2011 River Classifications



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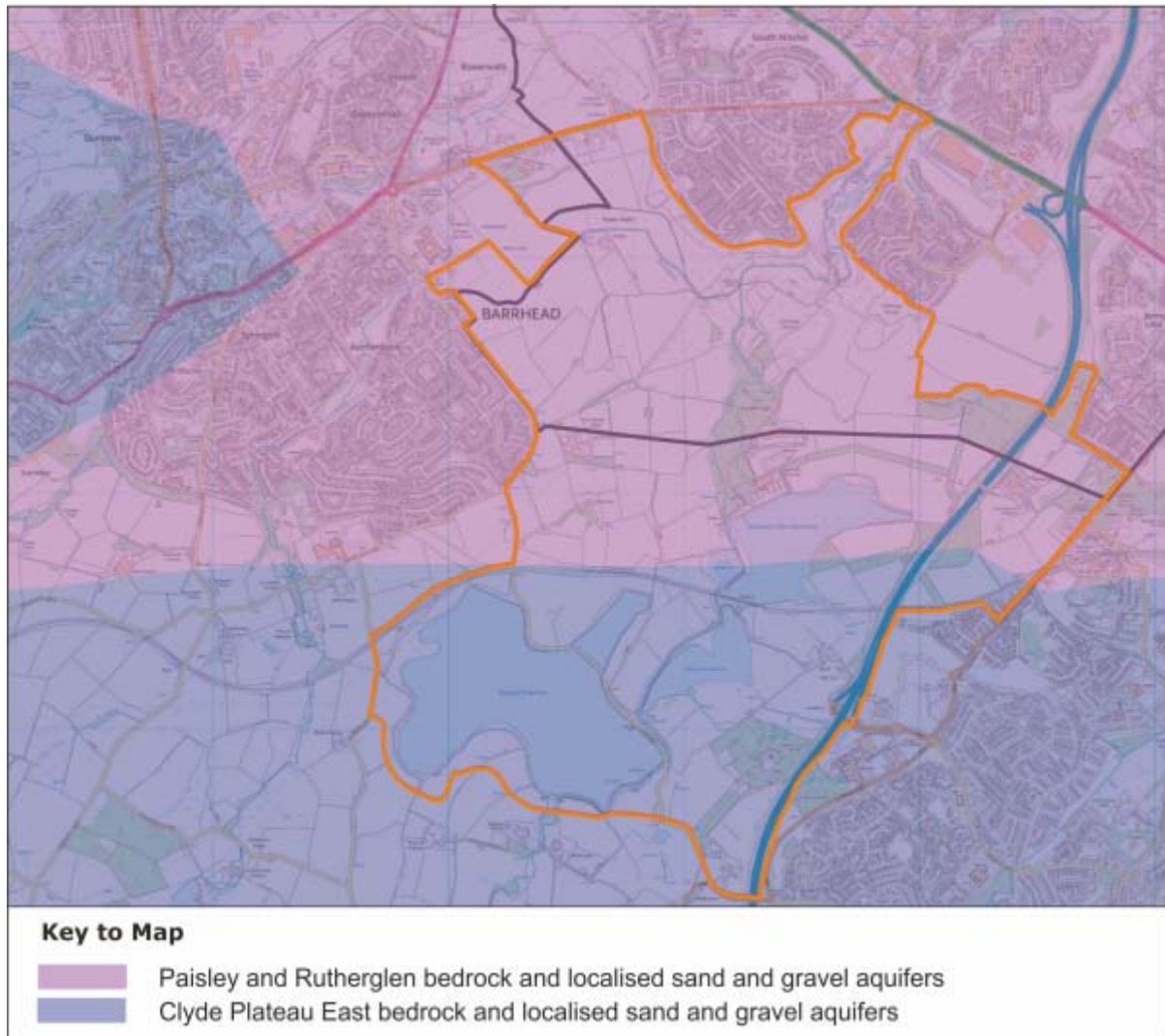
3.2. Lochs

3.2.1 The Barrhead dams are listed as four separate lochs by SEPA. These cover an area of 90 hectares, as noted above. Balgray Reservoir is recorded as being water storage for drinking water supply, although Scottish Water does not presently operate it as such.

3.3. Groundwater

3.3.1. Groundwater within the Country Park is split between two bodies, as identified in Figure 8. There are no licensed groundwater abstraction points within or adjacent to the Country Park.

Figure 8: Country Park Groundwater Bodies

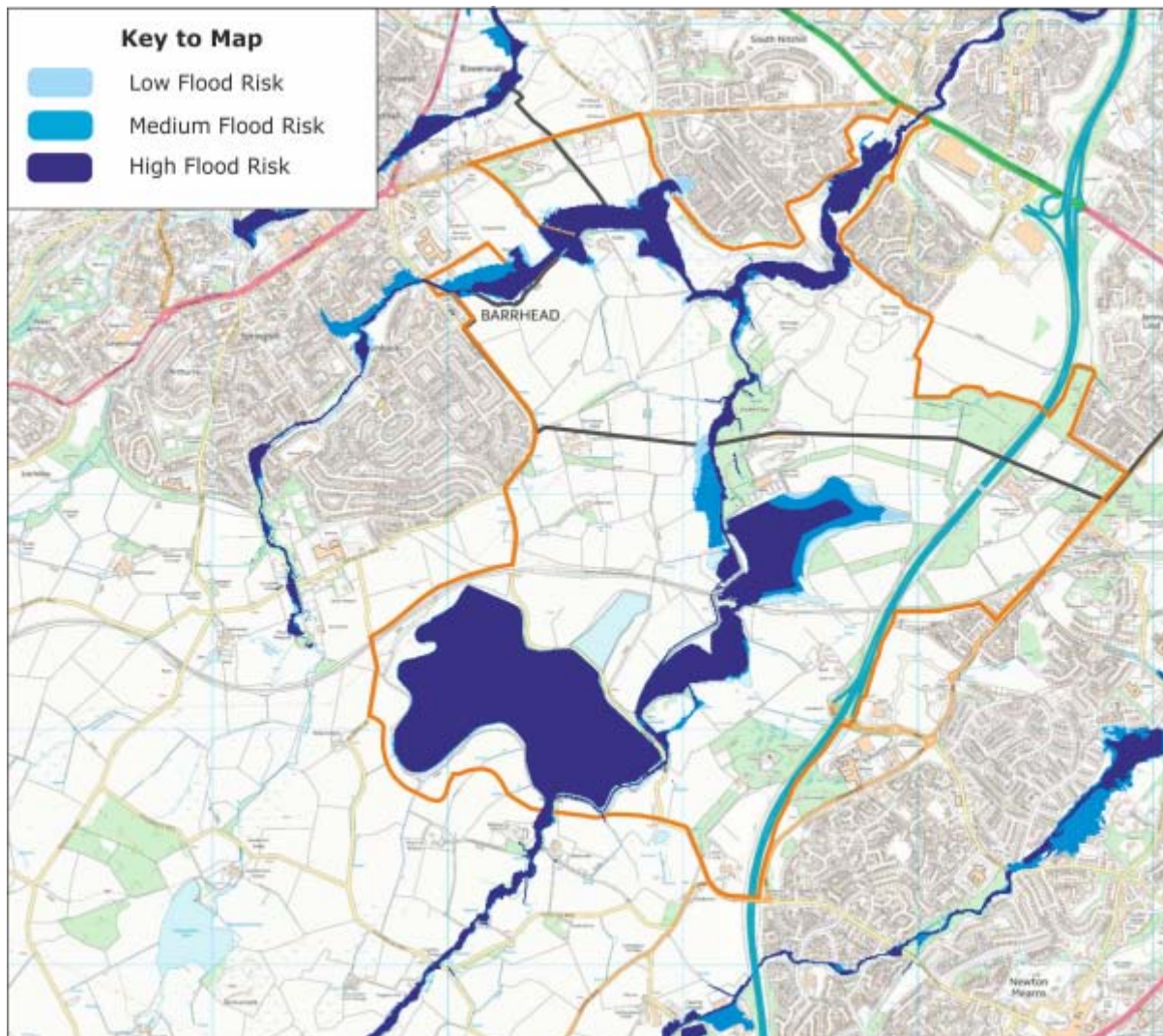


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3.4. Flooding

- 3.4.1. The Scottish Environmental Protection Agency has published a River Flood Extent Map showing potential areas that are likely to flood (figure 9). The map shows probability in terms of high (1 in 10 year event), medium (1 in 200 year event) and low (1 in 1,000 year event). As would be expected, within the Country Park river flooding follows the routes of the Aurs and Brock Burns.

Figure 9: Country Park Indicative River Flooding: 200 Year Event



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4. GEOLOGY

4.1. Solid Geology

4.1.1. The central and northern portion of the Country Park sits on Sedimentary bedrock associated with the Clackmannan Group of rock cycles. These rocks were formed in the Carboniferous period, approximately 312 to 331 million years ago. The southern part of the Country Park sits upon bands of unnamed extrusion rocks, dating from approximately 326 to 359 million years ago¹².

4.2. Waulkmill Glen SSSI (4.96 ha)

4.2.1. An SSSI is an area of land and water that Scottish Natural Heritage considers to be special for its plants, animals, habitats, rocks or landforms, or a combination of these natural features. The purpose of SSSIs is to safeguard and represent the diversity and geographic range of the natural features of Scotland, Great Britain and the EU member states. Sites are designated

¹²British Geological Survey

under the Nature Conservation (Scotland) Act 2004 and are therefore protected by law.

- 4.2.2. The Country Park contains one SSSI at Waulkmill Glen, straddling the boundary between East Renfrewshire and Glasgow City (figure 1). The Waulkmill Glen area has not declined in size over the last two years, indicating that the protection afforded to it is currently being upheld.

4.3. Waulkmill Glen SSSI Description and Notification History

- 4.3.1. Waulkmill Glen, lying just over 1km to the east of Barrhead provides complementary sections in the rocks of the Upper Limestone Formation of Arnsbergian age, formed around 320 million years ago. These are the best available sites for this rock interval in the Central Coalfield-Stirling outcrops, and as such are essential stratigraphic sites. The site shows a section between the Index Limestones and Calmy Limestones, highlighting sedimentary and palaeontological differences and variations within this interval. It is a key site for studies of Arnsbergian (Uppermost Lower Carboniferous) rock in Scotland.

- First notified under the National Parks and Access to the Countryside Act 1949 Act;
- Re-notified under the Wildlife and Countryside Act 1981 (five hectare decrease);
- Notification reviewed under the Nature conservation (Scotland) Act 2004.

4.4. Waulkmill Glen SSSI Management Objectives

- 4.4.1. The Waulkmill Glen site was included within the Geodiversity Audit of the City of Glasgow carried out by British Geological Survey in 2013. The audit concluded that the range and quality of geological features, as well as the lithostratigraphic significance, meant that the site was a good to very good Midland Valley example with regional to national significance. The audit assessed the site in terms of a number of parameters (table 8).

- 4.4.2. A previous report by Scottish Natural Heritage in 2009 identified that the main objective for Waulkmill Glen SSSI was:

- To maintain exposure of and access to the key geological outcrops of Waulkmill Glen by ensuring sampling from exposures only takes place in accordance with the Geological Code. Outcrops should also be safeguarded from vegetation encroachment or other obstruction, and access to the site should follow the Scottish Outdoor Access Code.

Table 8: Geodiversity Audit of the City of Glasgow (2013) - Waulkmill Glen SSSI

Safety of access/ ease and barriers to access into and around the site	<p>Access is variable within the glen, with new and/or well maintained footpaths in places but poor path access towards the head of the glen. Considerable vegetation growth restricts access in places and the terrain is steep and ground uneven.</p> <p>Footbridges providing the only means of crossing the Brock Burn are in very poor condition. The river level is controlled by outflow from Waulkmill Glen Reservoir and crossing of the Brock Burn is not advisable.</p>
Safety of exposure	Numerous exposures are located along the steep gorge walls. Some of these are unstable in places where surfaces are weathering and degraded by vegetation growth.
Nature of exposure	River and gorge sections with generally steep to vertical exposures.
Current conflicting activities or other threats	Vegetation growth restricts both direct access to and views of the outcrops. It may be responsible for some degradation of the exposures. However, the vegetation may also stabilise the soil on the steep gorge slopes.
Restricting conditions	<p>Seasonal growth of vegetation will further restrict views and site access.</p> <p>Raised river flow levels following periods of heavy rain may restrict direct access to river bank sections.</p>
Current condition and how clearly the values can be seen at the moment (close and at a distance)	Vegetation growth and fallen trees are responsible for some degradation of exposures locally and these factors together with poorly maintained bridges restrict access to features of interest in the site.
Site fragility and sensitivities	The relatively limited range of fossil fauna means that fossil collecting is unlikely to be a substantial risk to the site. However, fossil and sample collection from intact exposures should be restricted and conducted in accordance with the Geologists Code (SNH, 2009).

4.4.3. The report also noted that trees have fallen across the burn in places, which, in addition to dense vegetation, can occasionally impede access to exposures, therefore an element of tree and general vegetation control will have a beneficial effect upon the scientific interest. Two other issues affecting the natural features of the site were noted:

- The raising of the water levels in the glen through the construction of dam-like water retaining structures across the burn, would lead to the

loss of outcrops. Consequently, there should be no construction which would effectively dam the burn. In addition, the height of any existing weirs should not be raised. The demolition of weirs or dams is unlikely to damage the scientific interest, provided the resulting debris is removed from the site and not dumped within the burn or upon the outcrops.

- The fossil material present on the site is not considered to be rare or unusual enough to be particularly appealing to collectors. Small-scale amateur collecting of loose material in the bed of the burn, should it occur, would not be damaging to the notified interest.

4.5. Superficial Geology

4.5.1. The majority of the Country Park is covered by diamicton till (poorly sorted sands and gravels). This landscape was formed by glaciers scouring the landscape and depositing moraines of material till with outwash sand and gravel deposits from seasonal and post-glacial meltwaters.

4.6. Radon

4.6.1. Radon is a natural radioactive gas, which enters buildings from the ground. Exposure to high concentrations increases the risk of lung cancer. Radon is the biggest source of human exposure to ionising radiation in the UK and is responsible for an estimated 1,100 lung cancer deaths a year¹³. The Health Protection Agency (HPA) recommends that radon levels should be reduced in homes where the annual average is at or above 200 becquerels per cubic metre (200 Bq m⁻³). This is termed the Action Level.

4.6.2. The HPA recommends that parts of the country with less than a 1% chance of exceeding the Action Level will be referred to as Lower probability areas; the terms Intermediate and Higher probability will be applied to areas with 1 – 10% chance and at least a 10% chance of exceeding the Action Level (table 9). The HPA recommends that householders in intermediate and higher probability radon areas should have measurements made of indoor radon concentration in their home.

Table 9: Radon Potential Classes and Percentage Bands¹⁴

Radon Potential Class	Estimated percentage of dwellings exceeding the Radon Action Level (nominal percentage band)	Estimated percentage of dwellings exceeding the Radon Action Level (actual percentage band)
1	0-1	0 to 0.99999
2	1-3	1 to 2.99999
3	3-5	3 to 4.99999
4	5-10	5 to 9.99999
5	10-30	10 to 29.99999
6	30-100	30 to 100

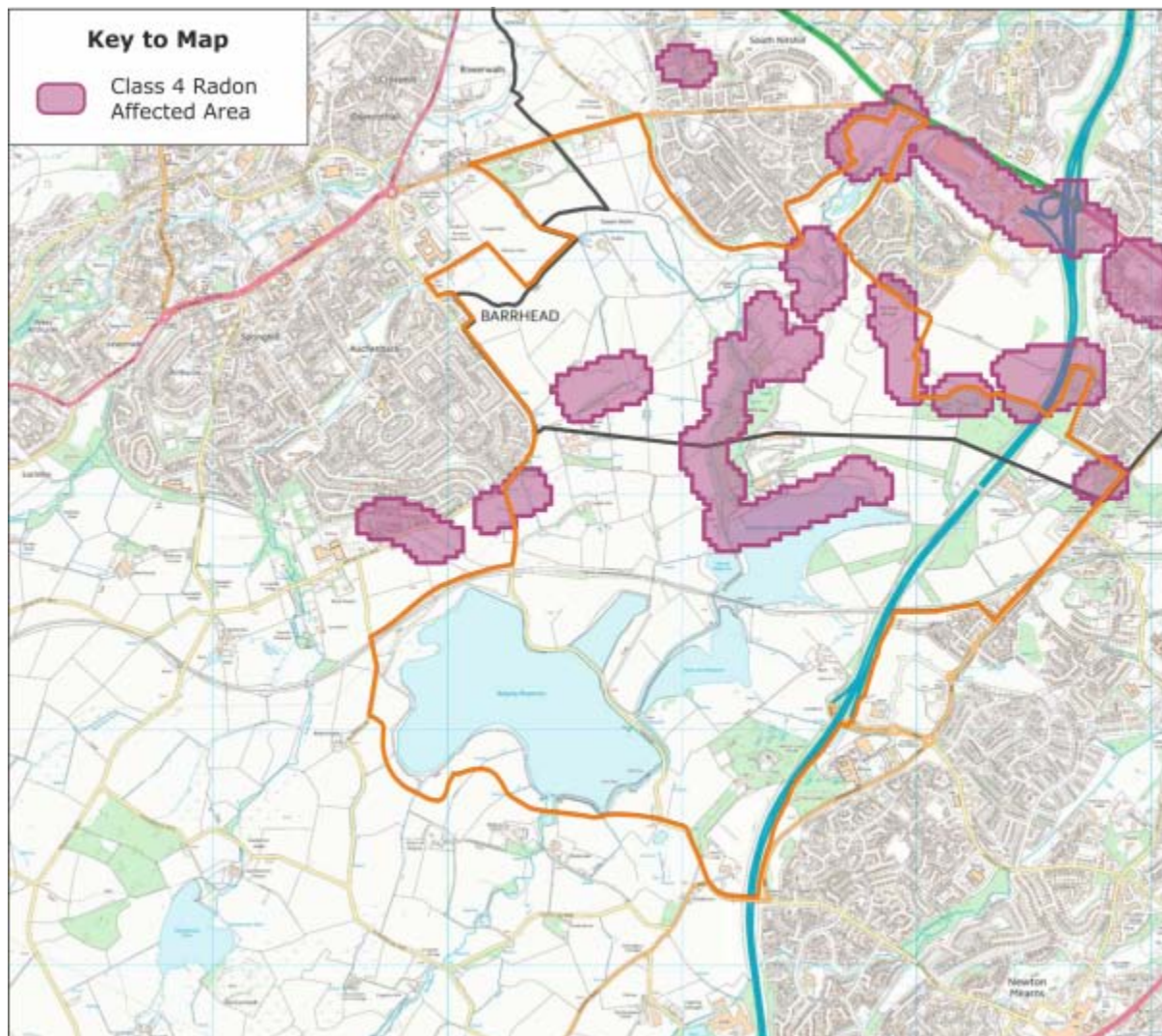
4.6.3. A monthly radiation monitoring exercise was undertaken at seven sites in East Renfrewshire. This was conducted as part of the SCOTRAD programme (formally West of Scotland Environmental Radiation Monitoring Scheme), as organised by Glasgow Scientific Services. All levels throughout the study were

¹³McColl, N. P., Miles, J. C. H., Green, B. M. R., Dixon, D. W., Fey, R., Meara, J. R., Harrison, J. D., and Cooper, J. R. (2010) Limitation of Human Exposure to Radon: Advice from the Health Protection Agency

¹⁴British Geological Society (2012) User Guide for the HPA-BGS Joint Radon Potential Dataset for Great Britain

found to be within the normal background range. Figure 10 shows that some areas of the Country Park are within Radon Potential Class 4, but these do not include proposed visitor facility locations within East Renfrewshire.

Figure 10: Country Park Radon Potential Classes



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5. AIR AND CLIMATIC FACTORS

5.1. Air Quality

5.1.1. Part IV of the Environment Act (1995) places a statutory duty on local authorities to review and assess the air quality within their area and take account of Government guidance when undertaking such work. East Renfrewshire Council's Environmental Health team undertake annual monitoring and reporting on the air quality at strategic locations throughout the Council. The Air Quality Objectives to which they work towards are outlined in the Air Quality (Scotland) Regulations 2010 as shown in table 10.

Table 10: Air Quality Objectives

Pollutant	Air Quality Objective		Date to be Achieved By
	Concentration	Measured as	
Benzene	16.25 µg/m ³	Running annual mean	31.12.2003
	3.25 µg/m ³	Running annual mean	31.12.2010
1, 3-Butadiene	2.25 µg/m ³	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m ³	Running 8-hour mean	31.12.2003
Lead	0.5 µg/m ³	Annual mean	31.12.2004
	0.25 µg/m ³	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m ³	Annual mean	31.12.2005
Particles (PM10) (gravimetric)	50 µg/m ³ , not to be exceeded more than 7 times a year	24-hour mean	31.12.2010
	18 µg/m ³	Annual mean	31.12.2010
Sulphur dioxide	350 µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

5.2. Air Quality Management Areas (AQMA)

5.2.1. Air Quality Management Areas are set up where the objectives shown above are not likely to be met. There are no AQMAs within East Renfrewshire. This has been the case since Strategic Environmental Assessment baseline monitoring, associated with the East Renfrewshire Local Plan, began in 2008. This goes against the predicted trend in the 2009 state of the environment report produced by SNIFFER which suggested that the number of AQMAs in Scotland was set to rise.

5.3. Nitrogen Dioxide (NO₂)

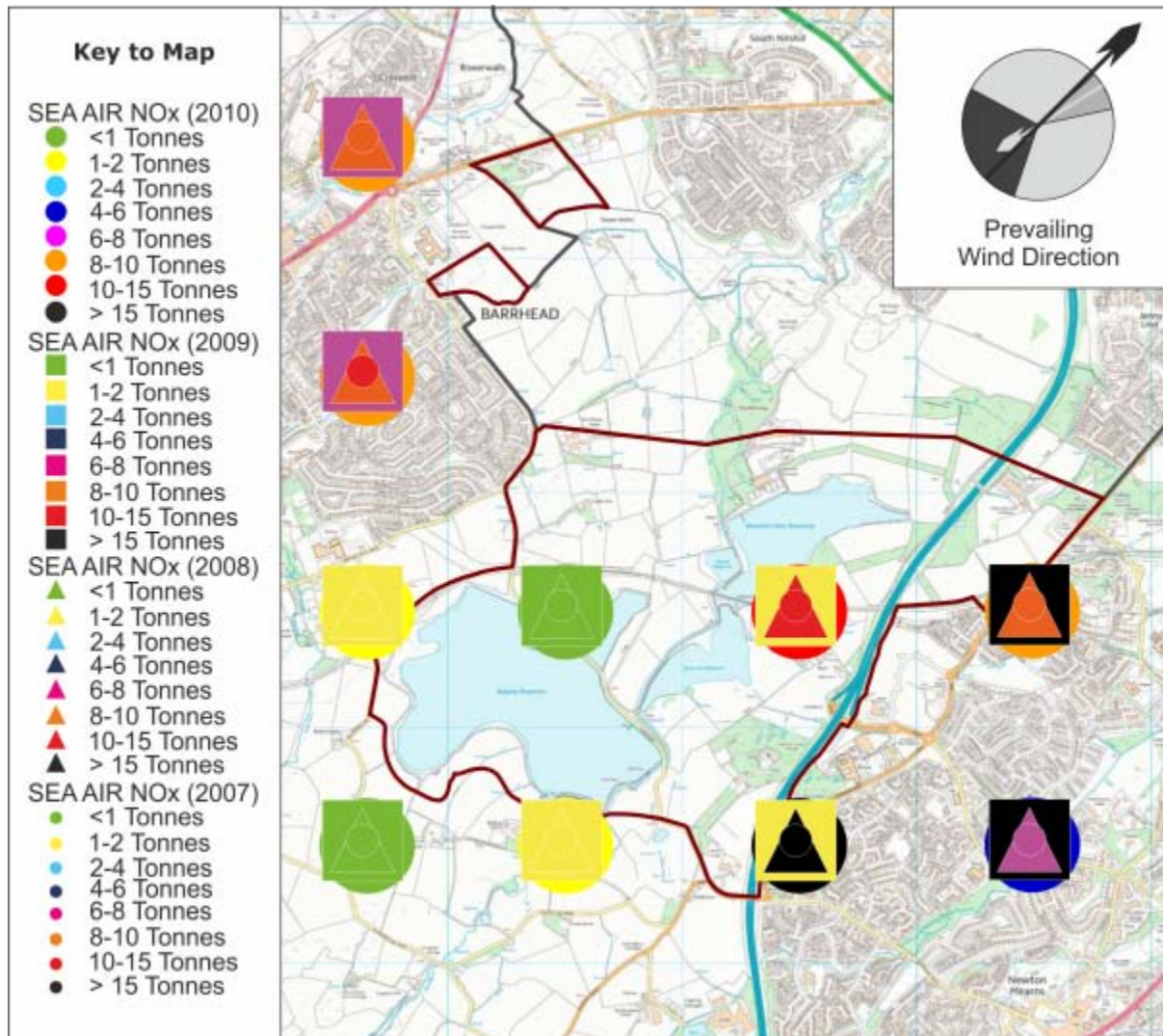
5.3.1. The Council's Environmental Health team monitor levels of Nitrogen dioxide (NO₂) at 25 set locations throughout East Renfrewshire using diffusion tubes. In 2012 none of the sites exceeded the 40µg/m³ maximum limit. This is an improvement on previous year's results where one site exceeded the limit. All of the monitored sites are within urban locations, given that the highest levels of Nitrogen Dioxide will be found where emission sources are concentrated, for example from road transport. There are no monitored sites within the Country Park.

5.4. Nitrogen Oxides (NO_x)

5.4.1. Nitric Oxide and nitrogen dioxide (NO_x) are produced from the reaction of nitrogen and oxygen gases in the air during combustion, especially at high

temperature. The National Atmospheric Emissions Inventory (NAEI) take 1x1km sampling of NO_x from road transport. As would be expected, the results indicate low concentrations within the majority of the Country Park, but with higher concentrations occurring along the M77 corridor, which borders it to the east (figure 11).

Figure 11: NO_x 1x1Km (Tonnes)

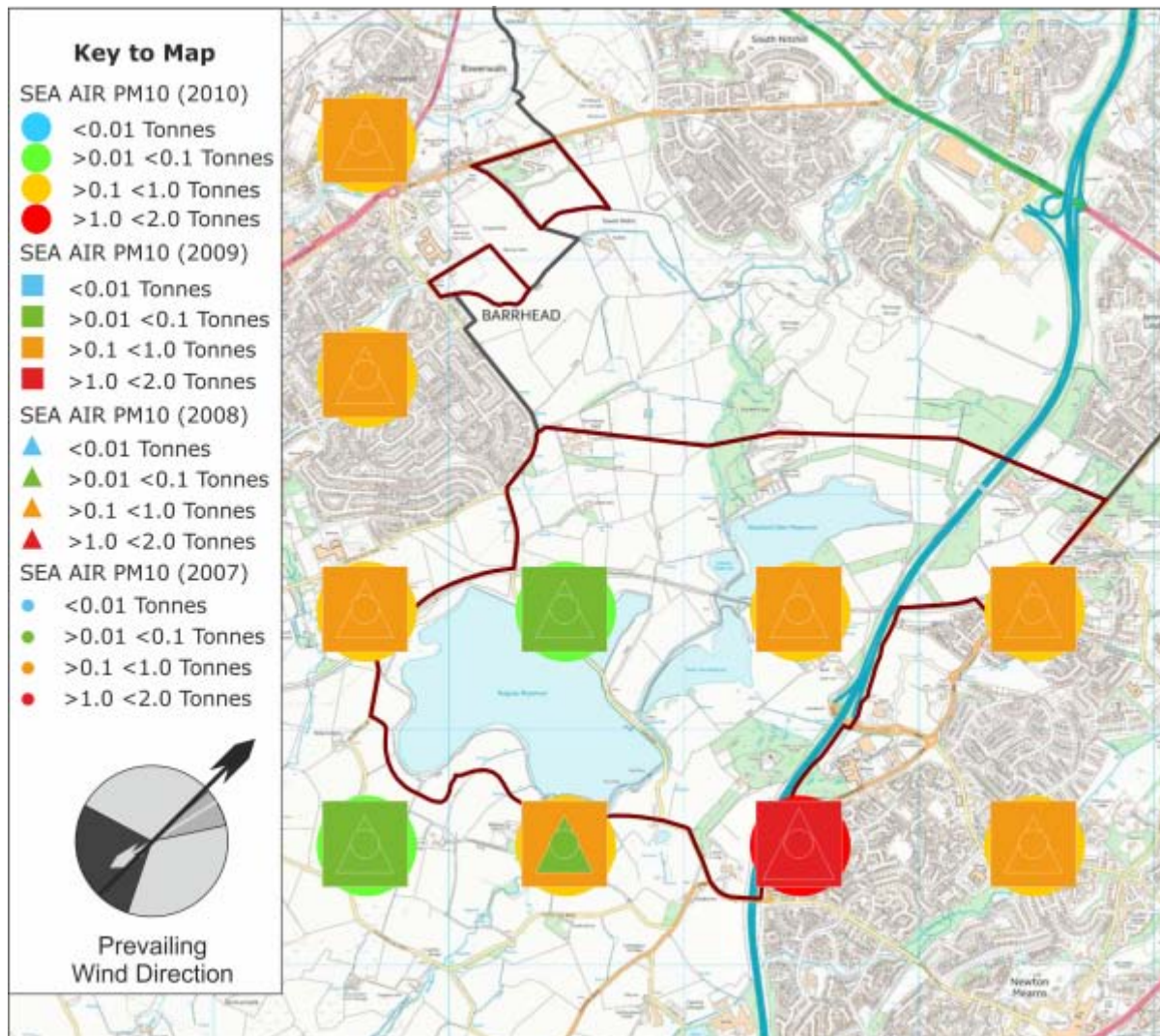


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5.5 Particulate Matter <10µm (PM10)

5.5.1. The PM10 (particles measuring 10µm or less) standard was designed to identify those particles likely to be inhaled by humans. PM10 has become the generally accepted measure of particulate material in the atmosphere in the UK and in Europe. Particulate pollution can harm the respiratory and cardiovascular systems, and is linked to asthma and mortality. All road transport emits PM10, but diesel vehicles emit a greater mass of particulate per vehicle kilometre. Figure 12 shows the National Atmospheric Emissions Inventory records for PM10 since 2007 associated with the Country Park area. As would be expected, levels within the Country Park are greater on its outer edges, showing the impact of adjacent to urban areas and the M77 corridor.

Figure 12: PM10 (Tonnes)¹⁵



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5.6. Carbon Dioxide

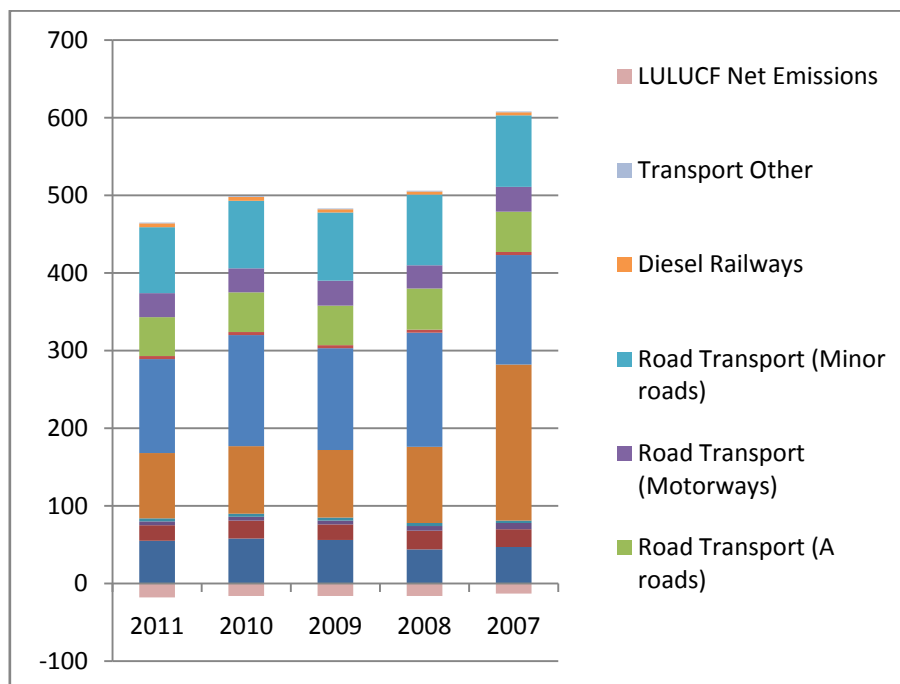
5.6.1. The National Atmospheric Emissions Inventory produces annual carbon dioxide monitoring results by Local Authority. The totals are split by sector as detailed in table 11 and figure 14. There are no specific results associated with the Country Park area. The most obvious change in the last five years is the reduction in the emissions from domestic electricity which has more than halved.

¹⁵Improvements to the method of collection and analysis of data from the NAEI does not allow for direct comparisons to be made between annual results.

Table 11: Carbon Dioxide Sector Totals for East Renfrewshire Council area

Sector Name	CO2 (Kt) 2011	CO2 (Kt) 2010	CO2 (Kt) 2009	CO2 (Kt) 2008	CO2 (Kt) 2007
Industry and Commercial Electricity	55	58	56	44	47
Industry and Commercial Gas	20	23	20	24	23
Large Industrial Installations	0	0	0	0	0
Industrial and Commercial Other Fuels	5	5	5	6	8
Agricultural Combustion	4	4	4	4	3
Domestic Electricity	84	87	87	98	201
Domestic Gas	121	143	131	147	141
Domestic Other Fuels	4	4	4	4	4
Road Transport (A roads)	50	51	51	53	52
Road Transport (Motorways)	31	31	32	30	32
Road Transport (Minor roads)	85	87	88	91	92
Diesel Railways	5	5	4	4	4
Transport Other	1	1	1	1	1
LULUCF Net Emissions	-18	-16	-16	-16	-13
Total for all sectors	448	483	467	490	595

Figure 13: 5 Year Comparison of CO2 levels by sector (Kt)



6. CULTURAL HERITAGE

6.6.1. Over four hundred years of rich and varied history can be documented in relation to the Country Park and its surrounding area. The historic and cultural heritage audit drew out ten themes associated with the Country Park³.

6.6.2. The Country Park area has had an established **farming landscape** since the mid sixteenth century and many of these early farms remain today.

- 6.6.3. The original **Pollock Castle** structure was a simple tower house, thought to be medieval in date. It was rebuilt between 1686 and 1694 and gradually extended over the years. The house was destroyed by fire in 1880 but was rebuilt in 1886. The poor condition of the building meant that it was demolished in 1952. The site now contains private residences.
- 6.6.4. The name of Darnley appears on the earliest known sources relating to the area, but the first reference to **Darnley Mill** dates from 1553. By the late eighteenth century Darnley Mill Farm features, containing 44 acres of land, the mill and associated buildings and various houses. The mill and an associated cottage now form a restaurant.
- 6.6.5. The story of Darnley is dominated by a lengthy history of **mining and quarrying**. Limestone and coal appear to have been mined from the early seventeenth century. During the early twentieth century a huge increase in mining and quarrying activity took place and many of the quarries become associated with fireclay, which exists within the Country Park in seams up to eight feet thick below the limestone. Later landfill operations within the Country Park were largely associated with the areas that saw mining and quarrying in the past. This has left a legacy of undulating, poorer quality and in places unstable land in the northern part of the Country Park.
- 6.6.6. Bleaching was an important process in wool, cotton and linen production, and was often in preparation for dyeing from the late eighteenth century. The growth and decline of **Darnley House and Bleachfields** to the west of Corselet Road can be followed by examining old maps. By the time of the first edition Ordnance Survey map (1858-64) Darnley Bleachfield is simply noted as Darnley House. Later Ordnance Survey maps show the gradual decline of Darnley House and the associated structures and designed landscape. Today most of the structures have been removed and little survives above ground, other than the remains of a curling pond and curved wall, and occasional elements of the designed landscape, including denuded avenues of hedgerows and mature trees.
- 6.6.7. In 1845, the **Gorbals Gravitation Water Company** was established to provide clean water for the Gorbals and later to other adjacent areas on the south side of the River Clyde. The Brock Burn was identified as a suitable source. The reservoirs of Waulkmill Glen and Ryat Linn were the first to be built, between 1847 and 1848. The complex also contained two smaller reservoirs (Littleton and Coalhill). The largest water feature, Balgray Reservoir, was built in 1853-1854 and apparently extended in the 1860s. In 1865 the reservoirs started supplying Barrhead.
- 6.6.8. In the woods just west of Corselet Road, sits the enigmatic **Waulkmill Glen ruin**. The two storey structure is built from dressed sandstone, with a bay at the southern end. The building appears on the first edition Ordnance Survey map (1858-64). It seems likely that it related to the Darnley Bleachfield. The bleachfield was in decline by the 1860s, and it may be that the structure was allowed to deteriorate following a relatively short period of use. It is possible that the building served as a 'woman house', places where women who were not married lived during the summer season while they worked at the bleachfields.

- 6.6.9. Towards the north-eastern part of the Country Park are the remains of an old **rifle range**. The range is divided into two parts, Darnley Rifle Range and Patterton Rifle Range. The rifle range first appears on the second edition Ordnance Survey map (1896-99). The third edition Ordnance Survey map (1914-1920) depicts the range at its most active. By the time the fourth edition Ordnance Survey maps were surveyed and published (1934-1938), the ranges had gone out of use.
- 6.6.10. The site upon which the second world war **prisoner of war camp** once stood to the west of Stewarton Road has largely been developed for housing, although some remains survive in the adjacent woodland which is within the Country Park.
- 6.6.11. The **railway** line cutting through the middle of the Country Park first appears on the third edition Ordnance Survey map (1914-1920). It weaves through the site and across the southern end of Waulkmill Glen Reservoir, carried on a predominantly brick built, Victorian viaduct. The Lanarkshire and Ayrshire Railway was constructed by Robert McAlpine for Caledonian Railways in the late nineteenth century. It was built to provide services from Glasgow to the Ayrshire coast.

6.7. Listed Buildings

- 6.7.1. The list of buildings of architectural or historic interest, drawn up by Historic Scotland, contains four listings associated with the Barrhead dams (figure 14).
- Waulkmill Glen Reservoir, including its draw-off tower, regulating house and self-activating sluice are Category A listed;
 - Balgray Reservoir draw-off tower is Category B listed;
 - The main house, workshops and former water-testing house associated with the reservoirs are Category C listed;
 - The two-storey Lyoncross Farmhouse is Category C listed.

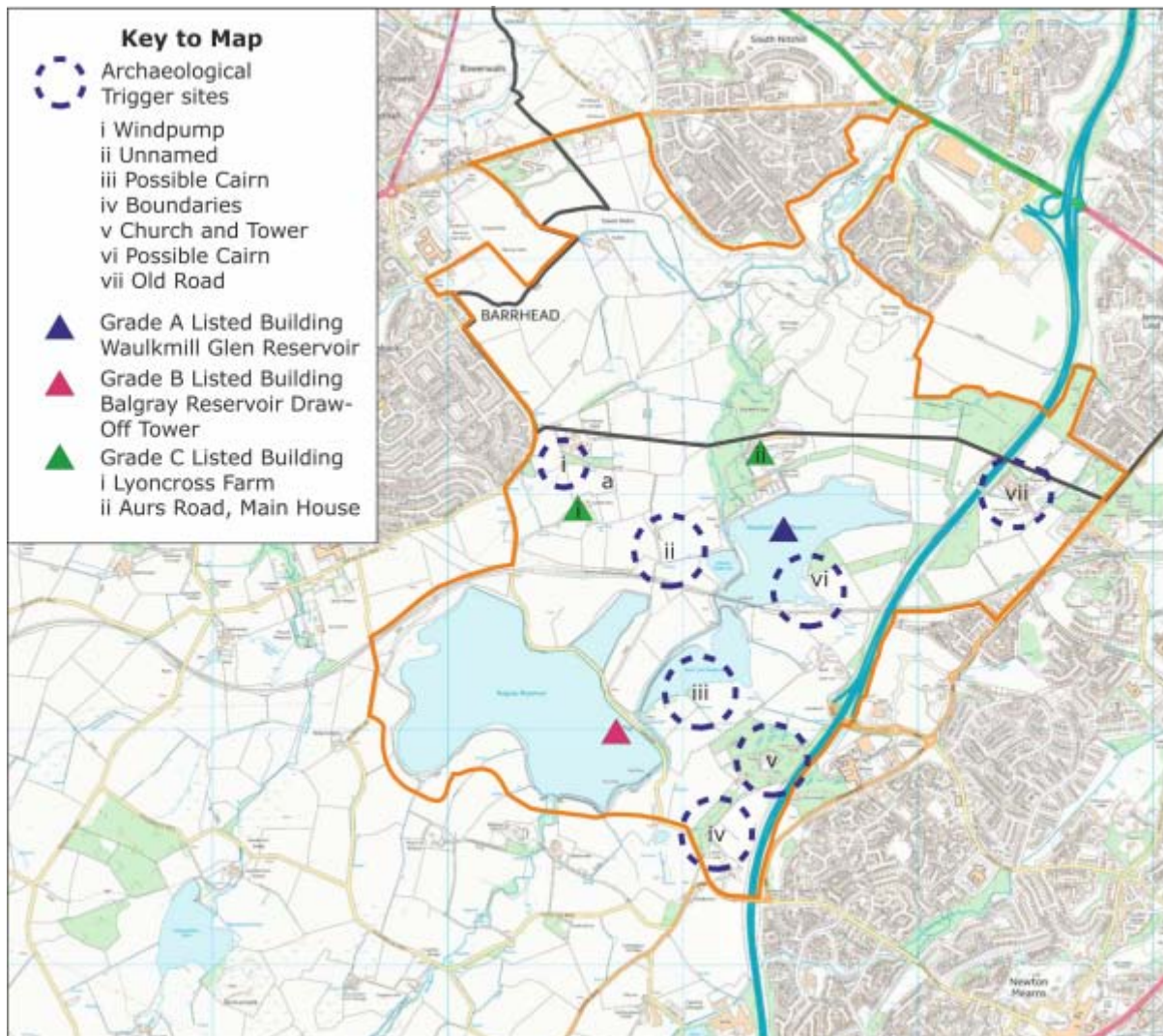
6.8. Buildings at Risk Register of Scotland

- 6.8.1. The listed structures associated with Waulkmill Glen Reservoir are also included within the Buildings at Risk Register of Scotland:
- Waulkmill Glen Reservoir draw-off tower;
 - Waulkmill Glen Reservoir regulating house;
 - Waulkmill Glen Reservoir self-activating sluice.

6.9. Archaeological Sites

- 6.9.1. There are seven identified sites of archaeological interest within the East Renfrewshire element of the Country Park, as detailed in figure 14.

Figure 14: Country Park Archaeological Sites

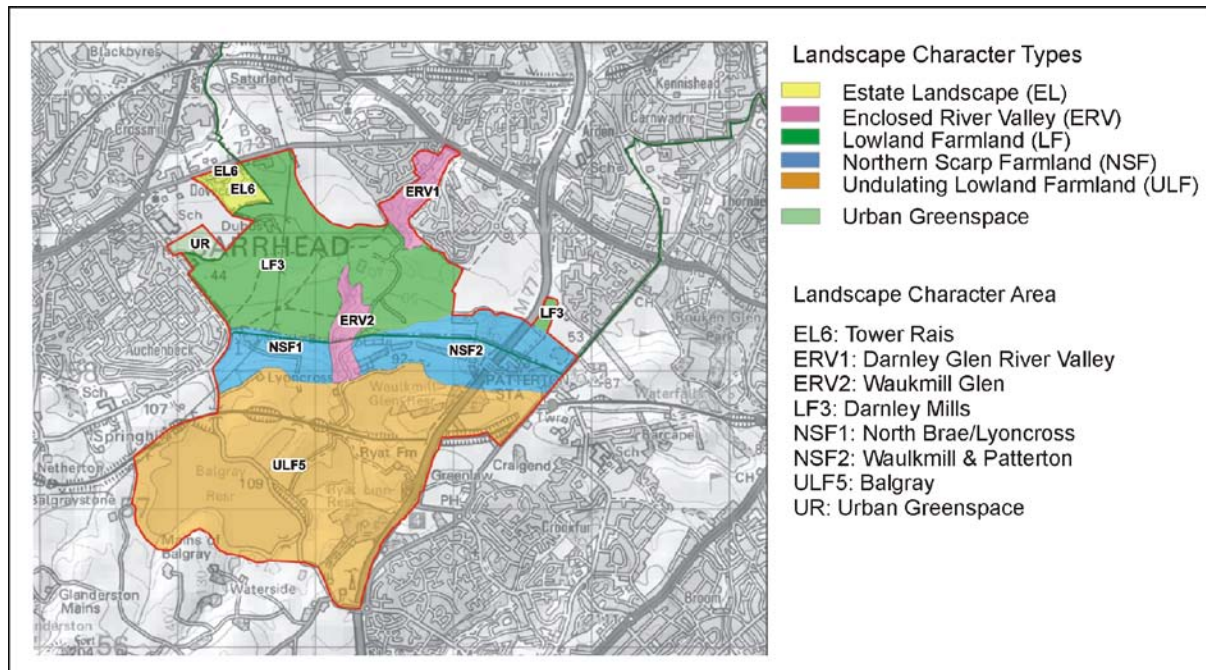


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7. LANDSCAPE

7.1.1. Within the Country Park topography ranges from approximately 30m in the north, stepping up southwards to approximately 110m. The Country Park Landscape Character Assessment¹ established three parallel east to west landscape bands (figure 15). Darnley Mill in the north is made up of a lowland farmland landscape, whilst the area of the Barrhead dams in the south is characterised by an undulating lowland farmland landscape. A narrower scarp slope landscape lay in between. The enclosed river valley landscape surrounding the Brock Burn at Darnley and Waulkmill Glen intersected these bands. Finally Tower Rais, adjacent to Cowan Park in Barrhead, can be identified as a small estate landscape.

Figure 15: Country Park Landscape Character Types and Areas



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7.1.2. The landscape character assessment classified areas of landscape sensitivity based upon the strength of their typical character, condition/intactness and scenic qualities. The well-wooded river valley landscape surrounding the Brock Burn and the undulating landscape centred on the Barrhead dams were of highest landscape sensitivity. This reflects the importance of water and woodland within the Country Park landscape. The open farmland, adjacent to the urban edge had a lower sensitivity, reflecting the poorer condition of the landscape and the influence of adjacent urban areas. The Country Park landscape also retains traces of historic quarrying and mining activities, as well as more recent landfill operations. This has created a legacy of undulating, poorer quality and in places unstable land in the northern part of the Country Park. There are marked edges where the landfill comes to an end providing an obvious junction with better quality land. A remediation project took place in 2012 within Darnley Mill to address the largest area of unstable ground within Glasgow City Council's ownership.

7.1.3. The assessment also established that the strength of the landscape within much of the Country Park reinforced the effectiveness of the green belt, as a result of its value in separating urban areas and its elevation, which created a physical backdrop.

8. TRANSPORT

8.1. Path Network

8.1.1. The Country Park Master Plan, agreed by East Renfrewshire and Glasgow City Councils in 2004, shows a network of paths to and through Dams to Darnley. Some of these links have been delivered, creating a 12.3km path network.

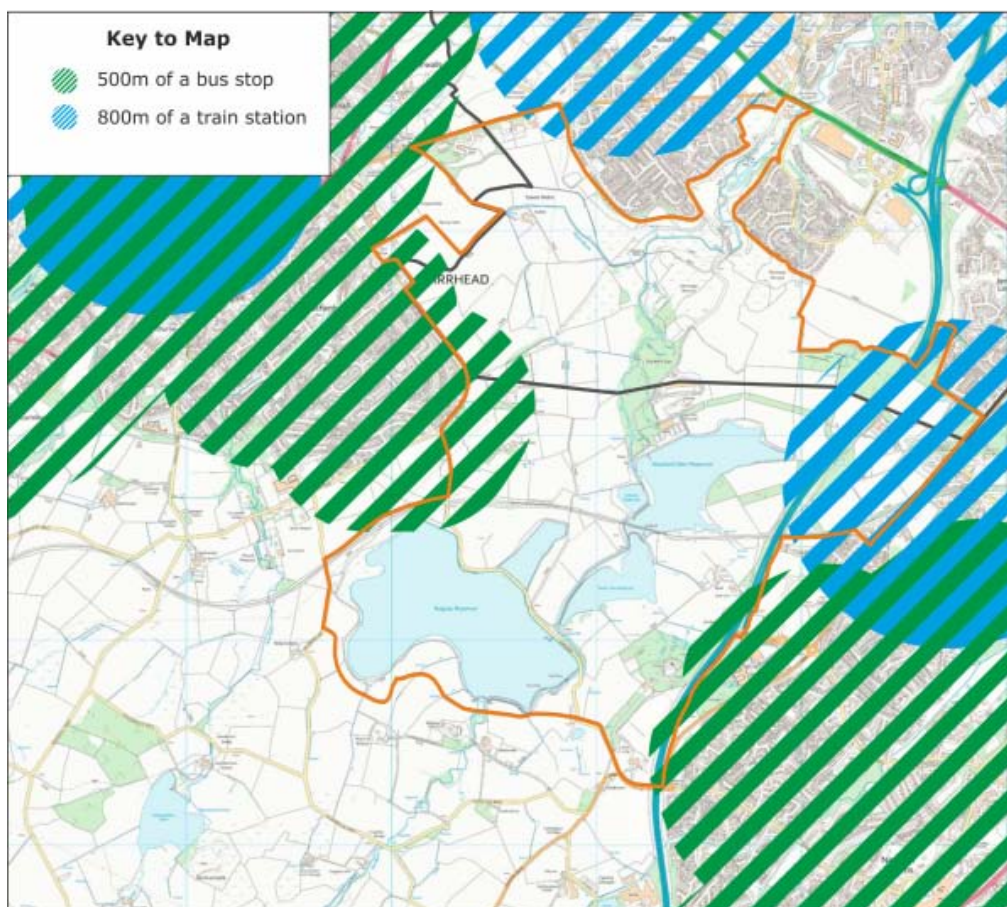
Aspirations remain to establish additional priority routes, as outlined within the Supplementary Planning Guidance.

- 8.1.2. An existing 3.5km spinal route runs through the Country Park from Aurs Road to Nitshill Road (Darnley). A 3km path around the western and southern edge of Balgray Reservoir, with entrances on Aurs Road, Balgraystone Road and Springfield Road (Barrhead), was created between 2008 and 2011. Woodland path loops within Waulkmill Glen, together with a link along the northern shore of Waulkmill Glen Reservoir, were completed in 2012. The existing Darnley Mill network of paths has entrances on Nitshill Road and Corselet Road and includes a 1.5km Brock Burn circular route. An additional network of paths was established within the Parklands Meadow estate, with the main route connecting Parkhouse Road to Corselet Road. A separate network sits on the opposite east side of the M77, created as part of the Mearns Grove estate, next to Patterton Station (Newton Mearns).

8.2. Public Transport

- 8.2.1. There are no bus stops or train stations within the Country Park. Figure 16 shows the location of bus stops and train stations adjacent to the Country Park within East Renfrewshire along with a 500m buffer from bus stops and 800m buffer from train stations.

Figure 16: Bus Stops and Train Stations Adjacent to the Country Park with Buffer



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APPENDIX 4 Baseline Data (2014)

Environmental Issue	Sub Issue	Environmental Objective	Description	Environmental Indicator	Date	Source	Target Area of Data	Comparators & Targets	Trend	Issues/Comments
BIODIVERSITY, FLORA AND FAUNA	LBS	1. Protect, enhance and where necessary restore (Specified) species and habitats	Condition, number and area of Local Biodiversity Sites (LBS)	9 sites sites, 68.8 ha	2013	Review of Site of Nature Conservation Importance (SINCs) in East Renfrewshire. May 2013 www.eastrenfrewshire.gov.uk/biodiversity	Country Park area within East Renfrewshire		Number and area of sites unchanged.	A review of the Sites of Interest to Nature Conservation (SINC) was completed in 2013. Boundaries were revised and the new sites are now referred to as LBS. There will be a need to review the LBS boundaries following the completion of Barrhead South. There will be potential to examine the designation of additional areas within Barrhead South Green Network as new LBS.
			Number and area of LBS lost	0	2014	LBS constraint DM in UNiform	Country Park area within East Renfrewshire		No LBS sites lost	
	LNR	1. Protect, enhance and where necessary restore (Specified) species and habitats	Condition, number and area of Local Nature Reserves (LNR)	1 site, 36 ha	2014	LNR declaration and GIS overlay. Scottish Natural Heritage - Data downloaded and available on GIS.	LNR boundary		LNR boundary	LNR Management Plan to be drafted by GCC.
			Number and area of LNR lost	0	2014	LNR declaration and GIS overlay. Scottish Natural Heritage - Data downloaded and available on GIS.	LNR boundary		LNR boundary	
	Ancient woodland	1. Protect, enhance and where necessary restore (Specified) species and habitats	Area of Ancient Woodland	11.45 ha	2010 2004	Scottish Natural Heritage - Data downloaded and available on GIS Ancient Woodland, Scottish Natural Heritage.	Country Park area within East Renfrewshire		Loss of areas associated with M77.	Need to update State of the Environment Report given previous loss of areas associated with M77.
			Area of ancient woodland lost to development	0	2010 2004	Scottish Natural Heritage - Data downloaded and available on GIS Ancient Woodland, Scottish Natural Heritage.	Country Park area within East Renfrewshire		Loss of areas associated with M77.	
	Biodiversity	1. Protect, enhance and where necessary restore (Specified) species and habitats	Presence of protected and red list species	26 WCA Schedule 1 species, 5 WCA Schedule 5 species, 2 WCA Schedule 6 species, 1 WCA Schedule 8 species, 21 Red List Species, 1 European protected species.	2014	BTO (WeBS), Local Biodiversity Records Office, Birds of Conservation Concern	Country Park area		Increase in red list species across the UK from 40 in 2002 to 52 in 2009.	Baseline data established for Country Park through State of the Environment Report will now be monitored to begin to quantify ongoing trends.
			WeBS counts	2014 WeBS counts Balgray Reservoir (22 species) Ryat Linn Reservoir (10 species) Waulkmill Glen and Littleton Reservoirs (23 species)	1968 - 2014	BTO (WeBS)	Balgray, Ryat Linn and Waulkmill Glen Reservoirs			Work to be undertaken to provide detail of trends since recording started.
			Nesting bird survey	Nesting species present within the Country Park	2015	BTO	Country Park area			Nesting species present within the Country Park to be included as an Environmental Indicator from 2015.
	Agriculture and forestry	2. Ensure sustainable use of agricultural and forestry resources	Loss of agricultural land	0	2014	ERC GIS overlay and relevant path agreements	Country Park area		No change	There will be a need to review the area of working farmland within the Country Park following the completion of Barrhead South.
Area of farmland used for access or biodiversity			500 square metres	2014	ERC GIS overlay and relevant path agreements	Country Park area		500 square metres associated with Balgray Reservoir path		

BIODIVERSITY, FLORA & FAUNA

APPENDIX 4 Baseline Data (2014)										
Environmental Issue	Sub Issue	Environmental Objective	Description	Environmental Indicator	Date	Source	Target Area of Data	Comparators & Targets	Trend	Issues/Comments
POPULATION	Population Statistics	3. Provide environmental conditions promoting health and well being (including increasing opportunities for indoor and outdoor recreation)	Size of population adjacent to the Country Park	127,319	2011	National Records of Scotland - 2011 Mid Year Population Estimates	3.5km buffer of the Country Park		126,527 (2009) 126,989 (2010)	
		3. Provide environmental conditions promoting health and well being (including increasing opportunities for indoor and outdoor recreation)	Population split by age	% Under 16 = 17.82 % 16 - 64 = 65.76 % 65 and over = 16.42	2011	National Records of Scotland - 2011 Mid Year Population Estimates	3.5km buffer of the Country Park		2009 - % Under 16 = 17.81 2009 - % 16 - 64 = 65.76 2009 - % 65 and over = 16.43 2010 - % Under 16 = 17.81 2010 - % 16 - 64 = 65.76 2010 - % 65 and over = 16.43	
HEALTH	Events, health walks and volunteer activities	3. Provide environmental conditions promoting health and well being (including increasing opportunities for indoor and outdoor recreation)	Attendance relating to countryside ranger led events, health walks and volunteer activities	Events (1,451 participants) Health walks (695 participants) Volunteer activities (256 participants)	2013	Country Park statistics	County Park area		2012 Events (1,325 participants) Health walks (515 participants) Volunteer activities (284 participants) 2011 Events (1,823 participants) Health walks (415 participants) Volunteer activities (158 participants) 2010 Events (1,210 participants) Health walks (208 participants) Volunteer activities (89 participants)	
	Noise and vibration	4) Mimimise noise and vibration		Future indicators			County Park area			

POPULATION AND HUMAN HEALTH

APPENDIX 4 Baseline Data (2014)

Environmental Issue	Sub Issue	Environmental Objective	Description	Environmental Indicator	Date	Source	Target Area of Data	Comparators & Targets	Trend	Issues/Comments	
WATER	Rivers	5) Minimise water pollution	River classifications as determined by SEPA	1 River (Brock Burn) is of Good status	2014	SEPA River Classification	Country Park within East Renfrewshire boundary		No change		
		6. Ensure sustainable use of water resources	Kilometers of watercourses (including small burns) in the Country Park	6.1 km	2014	SEPA	Country Park area				
		6. Ensure sustainable use of water resources	Rivers used for recreation	No formal use	2014	Country Park statistics	Country Park area		No change		
	Lochs	5) Minimise water pollution	Waterbody classification as determined by SEPA	1 Loch (Balgray Reservoir) is in Moderate status	2014	SEPA	Country Park within East Renfrewshire boundary		No change		
		6. Ensure sustainable use of water resources	Area of lochs and other inland water bodies	5 Lochs covering 90 ha	2014	SEPA	Country Park within East Renfrewshire boundary		No change		
		6. Ensure sustainable use of water resources	Waterbody used for recreation	No formal use	2014	Country Park statistics	Country Park area		No change		
	Groundwater	6. Ensure sustainable use of water resources	Regional hydrogeological regime	Groundwater within the Country Park is split between two bodies; the Paisley and Rutherglen bedrock with localised sand & gravel aquifers and the Clyde Plateau East bedrock with localised sand & gravel aquifers.	2014	SEPA	Country Park within East Renfrewshire boundary				
		Flooding (fluvial)	7. Ensure proposals do not increase the risk of flooding.	Area of the Country Park within High flood risk.	Unknown		SEPA/ ERC	Country Park within East Renfrewshire boundary			SEPA has issued new Fluvial and Pluvial potential flooding maps which has been incorporated into State of the Environment Report. Area of the Country Park within High flood risk to be calculated for 2015 update.
			Pluvial	7. Ensure proposals do not increase the risk of flooding.	Recorded flooding incidents	Unknown					

WATER

APPENDIX 4 Baseline Data (2014)

Environmental Issue	Sub Issue	Environmental Objective	Description	Environmental Indicator	Date	Source	Target Area of Data	Trend	Issues/Comments
GEOLOGY	Geological Features of Interest	8. Protect and enhance and where necessary restore geological features	Waulkmill Glen Site of Special Scientific Interest (SSSI)	4.96 ha	2009 2013	British Geological Survey Scottish Natural Heratage	Country Park area	The BGS audit of Waulkmill Glen SSSI (2013) noted that vegetation growth and fallen trees were responsible for some degradation of exposures. Waulkmill Glen was noted as being in favourable condition by the 2009 SNH assessment.	

GEOLOGY

APPENDIX 4 Baseline Data (2014)

Environmental Issue	Sub Issue	Environmental Objective	Description	Environmental Indicator	Date	Source	Target Area of Data	Comparators & Targets	Trend	Issues/Comments
AIR	Air Quality	9. Minimise air pollution and ensure a high level of air quality	Number of Air Quality Management Areas (AQMAs)	0	2014	ERC Air Quality Monitoring	Country Park area within East Renfrewshire	The Number of Air Quality Management Areas in Scotland is set to rise - <i>SNIFFER state of the Environment Report (2009)</i>	There has consistently not been the the need to introduce air quality management areas in the Country Park area nor within East Renfrewshire.	Air quality in the Country Park area and across East Renfrewshire is not considered to be of such poor quality that air quality management areas need to be introduced.
			Incidents of Exceeding NO2 standards (annual mean exceeded)	0	2014	ERC Air Quality Monitoring	Country Park area within East Renfrewshire	Annual mean of 40 µg/m3 not to be exceeded - <i>Air Quality (Scotland) (Amended) Regs 2002</i> Greenhouse Gas emission reduction of: • 42% by 2020 *compared to 1990 levels) • 80% by 2050 - <i>Climate Change (Scotland) Act 2009</i>	There are no NO2 monitoring sites within the Country Park.	
	Air Pollution	9. Minimise air pollution and ensure a high level of air quality	Nox emissions from road transport (tonnes). Three 1 x 1 km squares associated with the Barrhead dams.	Square 1 (1-2 tonnes) Square 2 (less than 1 tonne) Square 3 (10 - 15 tonnes)	2010	National Atmospheric Emissions Inventory	Country Park area within East Renfrewshire (3 1x1 km areas)	Greenhouse Gas emission reduction of • 42% by 2020 (compared to 1990 levels) and at least • 80% reduction by 2050. - <i>Climate Change (Scotland) Act 2009</i> Annual mean of 40 µg/m3 not to be exceeded - <i>Air Quality (Scotland)(Amended) Regs 2002</i>	Broadly stable 2007-2010.	
			9. Minimise air pollution and ensure a high level of air quality	PM10 emissions from road transport (tonnes). Three 1 x 1 km squares associated with the Barrhead dams.	Square 1 (0.1 - 1 tonnes) Square 2 (0.01 - 0.1 tonnes) Square 3 (0.1 - 1 tonnes)	2010	National Atmospheric Emissions Inventory	Country Park area within East Renfrewshire (3 1x1 km areas)		Stable 2007 - 2010.
CLIMATIC FACTORS	Greenhouse gases	10) Reduce greenhouse gas emissions	CO2 emissions	448 Kilo Tonnes	2011	National Atmospheric Emissions Inventory	East Renfrewshire area	<ul style="list-style-type: none"> Target to reduce UK carbon dioxide emissions to 60% below 1990 levels by 2050 UK Energy White Paper: Our energy future - creating a low carbon economy, 2003 Interim target of 42% reduction of Scotland's Greenhouse Gas emissions (compared to 1990 levels) by 2020 and at least 80% by 2050 Climate Change (Scotland) Act 2009 	595 Kilo Tonnes (2007) 490 Kilo Tonnes (2008) 467 Kilo Tonnes (2009) 483 Kilo Tonnes (2010)	There are no specific results for the Country Park area.
	Renewable energy	11) Reduce energy use and ensure sustainable use of energy	Country Park visitor facilities enewable energy use	Future indicator			Country Park area			

AIR/CLIMATIC FACTORS

Environmental Issue	Sub Issue	Environmental Objective	Description	Environmental Indicator	Date	Source	Target Area of Data	Comparators & Targets	Trend	Issues/Comments
CULTURAL HERITAGE	Listed Buildings	12. Protect, enhance and where appropriate restore archaeological sites and the historic environment	Number of Listed Buildings	4 listed buildings (1 Category A, 1 Category B and 2 Category C)	2014	Historic Scotland	Country Park area		No change	
		12. Protect, enhance and where appropriate restore archaeological sites and the historic environment	Number of structures on the Buildings at Risk Register of Scotland	3 listed structures	2014	Buildings at Risk Register of Scotland	Country Park area		No change	
	Archeology	12. Protect, enhance and where appropriate restore archaeological sites and the historic environment	Number of Archaeological Trigger Sites	7 sites identified	2014	West of Scotland Archaeology Service	Country Park area		No change	
			Proportion of Archaeological Sites at risk	None	2014		Country Park area		No change	
	Built Heritage	13. Protect, enhance and where appropriate restore the built environment and regenerate degraded environments	Number of activities associated with promoting, protecting and enhancing built environment	Future indicator	2014	Country Park statistics	Country Park area			

CULTURAL HERITAGE

APPENDIX 4 Baseline Data (2014)

Environmental Issue	Sub Issue	Environmental Objective	Description	Current Data	Date	Source	Target Area of	Comparators & Targets	Trend	Issues/Comments
LANDSCAPE	Green space	14. Protect, enhance and create green spaces important for recreation and biodiversity.	Area of Country Park	555 ha	2014	Country Park minute of agreement and GIS/OS mapping	Country Park area		The area of the Country Park has remained stable since the signing of the Minute of Agreement in 2004. There has been no development within its boundary since this date.	The proposed development of Barrhead South will impact upon this Environmental Indicator.
	Landscape Character	15. Protect, enhance and where necessary restore the natural landscape.	Country Park Landscape Quality	The Country Park Landscape Character Assessment classified areas of landscape sensitivity based upon the strength of their typical character, condition/intactness and scenic qualities. The well-wooded river valley landscape surrounding the Brock Burn and the undulating landscape centred on the Barrhead dams were of highest landscape sensitivity. This reflects the importance of water and woodland within the Country Park landscape. The open farmland, adjacent to the urban edge had a lower sensitivity, reflecting the poorer condition of the landscape and the influence of adjacent urban areas. The strength of the landscape within much of the Country Park reinforced the effectiveness of the green belt, as a result of its value in separating urban areas and its elevation, which created a physical backdrop.	2004	Country Park Landscape Character Assessment	Country Park area		No trend data	

LANDSCAPE

APPENDIX 4 Baseline Data (2014)

Environmental Issue	Sub Issue	Environmental Objective	Description	Environmental Indicator	Date	Source	Target Area of Data	Trend	Issues/Comments
TRANSPORT	Path Network	16. Reduce the need to travel	Length of Country Park path network	12.3km	2014	GIS overlay/OS Mapping	Country Park area	Stable since 2012	New path projects contained within Proposed Supplementary Planning Guidance will contribute to indicator.
		17. Promote sustainable transport modes							
	Public Transport	17. Promote sustainable transport modes	Number of bus stops in East Renfrewshire that are within 500m of the Country Park	38		GIS overlay/OS Mapping	Country Park area with		
		17. Promote sustainable transport modes	Number of train stations within 800m of the Country Park	2		GIS overlay/OS Mapping		No change	Although Patterson Station is within 800m of the Country Park, access is currently restricted from it to the Barrhead dams because of the locked M77 overbridge. Proposed new Barrhead South Train Station will contribute to indicator.

TRANSPORT

ACCESS PROPOSALS	Biodiversity, Flora and Fauna		Population and Human Health		Water		Geology	Air	Climatic Factors		Cultural Heritage		Landscape		Transport		Short, Medium or Long-term Effects	Permanent or Temporary Effects	Secondary, Cumulative and Synergistic Effects	MITIGATION REQUIRED	Comments	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17					
Road Realignment and Car Parking																						
Realignment of Aurs Road, south of Barrhead	0	-	0	?	0	0	0	0	?	?	?	0	0	0	-	0	-	M	P	✓	Y	Likely to have medium-term and permanent environmental impacts, associated with the Country Park's landscape. Impact more significant than associated with path projects, given the scale and setting. Implementation of a strong landscaping plan will help in mitigation. Positive secondary health and well-being benefits of the associated path proposal are of great significance.
New Country Park car park associated with the realignment of Aurs Road, south of Barrhead	-	-	+	-	0	0	0	0	-	-	-	0	0	+	-	-	-	M	P	✓	Y	Likely to have medium-term and permanent environmental impacts, associated with the Country Park's landscape. Secondary environmental impacts associated with increases in noise and vibration, air pollution, greenhouse gas emissions and energy use. Implementation of a strong landscaping plan will help in mitigation.
New Country Park car park at Lyoncross as part of Barrhead South	0	0	+	-	0	0	0	0	-	-	-	0	0	+	-	-	-	M	P	✓	Y	Likely to have medium-term and permanent environmental impacts, associated with the Country Park's landscape. Secondary environmental impacts associated with increases in noise and vibration, air pollution, greenhouse gas emissions and energy use. Implementation of the Barrhead South Green Space and Landscape Framework will help in mitigation.
Path Projects																						
New path from Newton Mearns to Balgray Reservoir, adjacent to Aurs Road	-	0	+	+	0	0	0	0	+	+	+	0	-	+	-	+	+	L	P	✓	Y	Likely to have long-term and permanent environmental impacts upon the Country Park's built heritage associated with the boardwalk element. Good design will be key in terms of mitigation. Positive long-term benefits in terms of promoting health and well-being are significant. Will also play a positive role in managing the cumulative impacts upon the Country Park's environment, as a result of anticipated significant increases in visitor numbers.

New path from Patterton Station to Waulkmill Glen Reservoir	0	-	+	+	0	0	0	0	+	+	+	0	0	+	-	+	+	L	P	✓	Y	Likely to have positive long-term and permanent environmental impacts associated with promoting health and well-being. Will play a positive role in managing the cumulative impacts upon the Country Park's environment, as a result of anticipated significant increases in visitor numbers. Will also have an impact upon the Country Park's landscape. Ongoing monitoring of the use of the path will be important given its agricultural setting. Appropriate planting will help to integrate the path within its landscape setting.
New path from Barrhead to Balgray Reservoir, adjacent to Aurs Road	-	0	+	+	0	0	0	0	+	+	+	0	0	+	+	+	+	L	P	✓	Y	Likely to have positive long-term and permanent environmental impacts associated with promoting health and well-being. Will play a positive role in managing the cumulative impacts upon the Country Park's environment, as a result of anticipated significant increases in visitor numbers. May also impact upon the Country Park's biodiversity; biological records will assist to monitor impacts and highlight potential problems. Appropriate planting as it matures will enhance the landscape setting associated with the path.
New paths through the Barrhead South Green Network to Waulkmill Glen Reservoir	0	-	+	+	0	0	0	0	+	+	+	0	0	+	-	+	+	L	P	✓	Y	Likely to have positive long-term and permanent environmental impacts associated with promoting health and well-being. The path will play a positive role in managing the cumulative impacts upon the Country Park's environment as a result of anticipated significant increases in visitor numbers. Ongoing monitoring of the use of the path will be important given its agricultural setting. The proposal will also impact upon the Country Park's landscape, but appropriate planting as it matures will enhance the path's setting.
Alternative proposals																						
New paths through the Barrhead South Green Network to Waulkmill Glen Reservoir	-	-	+	+	0	0	0	0	+	+	+	-	0	+	-	+	+	L	P	✓	Y	The assessment resulted in minor but important changes being proposed to the indicative path routes within Lyoncross. These aimed to avoid or reduce the impact upon biodiversity and landscape setting. The assessment process also identified that the section of this alternative path route along the north side of Littleton Reservoir would have had greater environmental impact upon the biodiversity associated with the fringes of the reservoir, in particular wetland birds.

FACILITIES PROPOSALS	Biodiversity, Flora and Fauna		Population and Human Health		Water		Geology		Air	Climatic Factors		Cultural Heritage		Landscape		Transport		Short, Medium or Long-term Effects	Permanent and Temporary Effects	Secondary, Cumulative and Synergistic Effects	MITIGATION REQUIRED	Comments
	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16					
Environmental Objective from (table 1)																						
Dams to Darnley Wake Park	-	0	+	-	0	+	0	0	0	-	-	0	0	0	-	-	+			✓	Y	It is anticipated that the wakeboarding facility and the activities undertaken from it are likely to have environmental impacts, associated with the Country Park’s biodiversity. At this stage, it is impossible to accurately determine the extent of this impact and whether it will be temporary or permanent. An Environmental Impact Assessment may be required in order to inform future decisions and ultimately a subsequent planning application. Habitat enhancements associated with Balgray Reservoir and beyond will be essential in mitigating the impact of the development of watersports activities upon the biodiversity value of the Barrhead dams, when taken as a whole. The success of such measures may go a long way in determining the permanency of the environmental impact of watersports activities across the Balgray Reservoir. The proposal will have positive environmental impacts associated with the promotion of health and well-being and recreational activities within the Country Park.
Dams to Darnley Visitor Centre	-	-	+	-	0	0	0	0	0	-	-	0	0	+	-	-	+	L	P	✓	Y	Anticipated to have long-term and permanent environmental impacts, in relation to the promotion of health and well-being associated with outdoor recreation, through the support of an integrated Country Park’s path network. The proposal is also likely to have environmental impacts associated with the Country Park’s landscape and secondary environmental impacts in terms of increases in noise and activity. The implementation of a strong landscaping plan will help to mitigate the environmental impacts.
Dams to Darnley Environmental Education Base	+	0	+	-	0	0	0	0	0	-	-	0	0	+	-	-	-	L	P	✓	Y	Anticipated to have long-term and permanent environmental impacts associated with the promotion of health and well-being. The proposal is also likely to have environmental impacts associated with the Country Park’s landscape. The implementation of the Barrhead South Green Space and Landscape Framework will

																						help in mitigation. There will be secondary environmental impacts associated with increases in noise within the Country Park.	
Alternative proposals																							
Dams to Darnley Wake Park	-	0	+	-	0	+	0	0	0	0	-	-	0	0	0	-	-	+	L	P	Y	This alternative site has not been included within the guidance because of the greatest risk of environmental impact. Its feasibility relies upon using the large sheltered bay in the south-west corner of Balgray Reservoir for wakeboarding activities. This bay is of greatest biodiversity value, in terms of habitat and levels of use. As a result, the site has the potential to have considerably greater environmental impact upon biodiversity. There is also a greater likelihood that these impacts will be longer-term and hence more permanent in nature than those associated with the preferred location.	
Dams to Darnley Visitor Centre	0	-	+	-	0	0	0	0	0	0	-	-	0	0	+	0	-	0	L	P	✓	Y	This alternative site has not been included within the guidance because of its suitability and feasibility. The site would potentially have had less impact upon the biodiversity of Balgray Reservoir in terms of short-term disturbance, as it would require to be set back from the water's edge. A visitor centre at this site would also benefit less from sustainable transport options, being considerably more distant from the proposed Barrhead South Rail Station.
Dams to Darnley Environmental Education Base	-	0	+	-	0	0	0	0	0	0	-	-	0	0	+	-	-	-	L	P	✓	Y	This site has not been taken as a proposal within the guidance because of the greatest risk of environmental impact upon the biodiversity associated with the fringes of Littleton Reservoir. A facility at this location, and in particular its required access road and car park, would also have had a considerable impact upon the landscape setting.

NATURAL AND BUILT HERITAGE PROPOSALS	Biodiversity, Flora and Fauna		Population and Human Health				Water		Geology		Air		Climatic Factors		Cultural Heritage		Landscape		Transport		Short, Medium or Long-term Effects	Permanent and Temporary Effects	Secondary, Cumulative and Synergistic Effects	MITIGATION REQUIRED	Comments	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17									
Environmental Objective from (table 1)																										
Biodiversity and Geodiversity																										
Implement habitat enhancements, including working with land managers, schools, volunteers and conservation groups	+	0	+	0	0	0	0	0	+	+	+	0	0	0	0	+	+	0	0	0	L	P	✓		Cumulatively, habitat enhancements will have long-term and permanent environmental benefits. They will focus upon relevant priority habitats and species contained within Local Biodiversity Action Plans, together with objectives and key themes, habitats and species identified within the Country Park Plan. Such activities will also deliver secondary benefits in relation to increasing an appreciation of the Country Park's natural and built heritage and promoting health and well-being.	
Carry out surveys and maintain records of the Country Park's biodiversity and geodiversity assets	+	0	0	0	0	0	0	0	+	0	0	0	0	0	0	0	0	0	0	0	0	L	P	✓		Cumulatively the knowledge gained will help to deliver long-term and permanent environmental benefits. Surveys will focus upon relevant priority habitats and species contained within Local Biodiversity Action Plans, together with objectives and key themes, habitats and species identified within the Country Park Plan.
Manage other Country Park uses in relation to safeguarding its natural heritage	+	0	0	+	+	0	0	+	0	0	+	0	0	0	0	+	+	0	0	0			✓		Management measures will cumulatively focus upon delivering solutions that reduce the impact of recreational activities upon the Country Park's natural heritage. These may be short, medium or long-term and will vary in permanency.	
Landscape																										
Utilise a planting 'design palette' based upon existing woodland types	+	0	0	0	0	0	0	0	0	+	+	0	0	0	0	+	+	0	0	0	0	L	P			Cumulatively, new and enhanced planting will have long-term and permanent environmental benefits.

to highlight Country Park entrances and sympathetically set new paths and facilities into the landscape																								
Reinforce the Country Park's agricultural landscape patterns and network of stone walls, hedgerows and tree belts and groups	+	+	+	0	0	0	0	0	+	+	0	0	+	+	+	0	0	L	P	✓			Cumulatively, works to enhance existing and establish new boundary features within the Country Park will have long-term and permanent environmental benefits. The countryside ranger service will continue to play a role in delivering improvements such as new hedgerows through volunteer activities, enabling secondary benefits that promote health and well-being.	
Create open viewpoints, to provide visual links across the Country Park and provide a contrast in experience from the more enclosed Waulkmill Glen woodland	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	0	0	L	P				The creation of open viewpoints will provide long-term and permanent environmental benefits for Country Park visitors by enhancing their experience of green spaces and natural landscapes, in particular associated with Balgray Reservoir and Waulkmill Glen.	
Built Heritage																								
Protect and enhance the sites of historical importance within the Country Park	0	0	+	0	0	0	0	0	0	0	0	+	+	0	0	0	0	S	P	✓			Most likely to be short-term measures, but will aim cumulatively to provide permanent environmental benefits in terms of protecting and enhancing the Country Park's built heritage. The countryside ranger service will continue to play a role in protecting and enhancing built heritage sites through volunteer activities, enabling secondary benefits that promote health and well-being.	
Work with, and contribute to, the work of local history groups	0	0	0	0	0	0	0	0	0	0	0	+	+	0	0	0	0	S	T				Likely to focus upon short-term, temporary activities.	

Manage other Country Park uses in relation to safeguarding its built heritage	0	0	0	0	0	0	0	0	0	0	0	0	0	+	+	0	0	0	0			✓	Management measures will cumulatively focus upon delivering solutions that reduce the impact of recreational activities upon the Country Park's built heritage. These may be short, medium or long-term and will vary in permanency.
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PROMOTION AND MANAGEMENT PROPOSALS	Biodiversity, Flora and Fauna		Population and Human Health		Water		Geology		Air		Climatic Factors		Cultural Heritage		Landscape		Transport		Short, Medium or Long-term Effects		Permanent and Temporary Effects		Secondary, Cumulative and Synergistic Effects		MITIGATION REQUIRED		Comments
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17										
Environmental Objective from table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17										
New directional signage to support an expanded Country Park path network	0	+	+	0	0	0	0	0	0	0	0	0	0	0	0	0	+	S	P			✓					New signage will have short-term impacts, but cumulatively will deliver permanent, secondary benefits in relation to managing access in relation to the Country Park's natural and built heritage.
Interpretation and promotional material to increase awareness of the Country Park and its natural and built heritage	+	0	0	0	0	0	0	+	0	0	0	+	+	+	+	0	+	S	T			✓					New interpretation will have short-term and temporary impacts, associated with the publication of materials or the installation of structures. Cumulatively, interpretation will deliver more long-lasting benefits in relation to promoting access and increasing an appreciation of the Country Park's natural and built heritage.
Expansion of the successful countryside ranger led environmental education programme for schools	+	+	+	0	0	0	0	+	0	0	0	+	+	+	+	-	0	S	T			✓					An enhanced Country Park environmental education programme will have short-term and temporary impacts in terms of its delivery, but will also provide secondary benefits associated with promoting health and well-being. Cumulatively, such activities will deliver more long-lasting benefits in relation to promoting access and increasing an appreciation of the Country Park's natural and built heritage.
Expansion of the existing programme of countryside ranger led volunteer opportunities, health walks and community	+	0	+	0	0	0	0	+	+	+	0	+	+	+	+	-	+	S	T			✓					An enhanced Country Park programme of events and activities will have short-term and temporary impacts in terms of their delivery, but will also provide secondary benefits associated with promoting health and well-being. Cumulatively, such activities will deliver more long-lasting benefits in relation to promoting access and increasing an appreciation of the Country Park's natural and built heritage.

events and activities																								
Improved management of habitats across the Country Park, including those within the Barrhead South Green Network	+	0	+	0	+	0	0	0	+	+	0	0	0	+	+	0	0	L	P	✓			Cumulatively, habitat management will have long-term and permanent environmental benefits. They will focus upon relevant priority habitats and species contained within Local Biodiversity Action Plans, together with objectives and key themes, habitats and species identified within the Country Park Plan.	
Practical measures to combat community safety and antisocial issues across the Country Park	0	+	0	0	0	0	0	+	0	0	0	+	+	+	+	0	0	S	T	✓			Measures to combat community safety and antisocial issues will have short-term and temporary impacts in terms of their delivery, but will also provide secondary benefits in terms of enhancing green space important for recreation and biodiversity.	

If you require this information in large print, Braille or translated, please telephone our Customer Service Officer on 0141 577 3001.

इस सूचना-पत्र मे उल्लेखित सूचना यदि आप हिन्दी अनुवाद मे चाहे तो कृपया सम्पर्क करे ।

ਜੇ ਤੁਸੀਂ ਇਸ ਲੀਫਲੈਟ ਵਿਚ ਦਿਤੀ ਜਾਣਕਾਰੀ ਦਾ ਅਨੁਵਾਦ ਚਾਹੁੰਦੇ ਹੋ ਇਥੇ ਸੰਪਰਕ ਕਰੋ।

اگر آپ اس لیفٹ میں درج معلومات کا ترجمہ اپنی زبان میں چاہتے ہیں تو ہم سے رابطہ کریں

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