

Our Green Network Local Development Plan (Proposed Plan) Planning Guidance



November 2015

This document complements Chapter 8 of the West Dunbartonshire Local Development Plan. It provides further detail on the Integrating Green Infrastructure (IGI) approach referred to in Policy GN2 and sets out the standards that will be expected of different types of new development in terms of open space provision.

The guidance is split into three parts:

Part 1 – Identifying Assets and Opportunities

In order to safeguard the green network in West Dunbartonshire it is necessary to define it. A mapping exercise has been undertaken to highlight the green networks within West Dunbartonshire and their most important assets. Also identified are the key opportunities to enhance the green network, for example by improving access or habitat networks.

Part 2 – Enhancing and Expanding Our Green Network

This section sets out the principles for embedding the green network within the design of new development. It also includes the open space accessibility, quality and quantity standards that will be required and the mechanisms that will be applied to determine the level of provision or financial contribution expected in order to enhance and expand the green network.

Part 3 – Design Guidance

This section sets out what the Council is looking for in terms of the design and layout of new development sites, starting with the process of appraising the site in the context of the existing network.

Further copies of this guide can be downloaded [here](#).

For further advice please contact Planning and Building Standards on 0141 951 7941
or email ldp@west-dunbarton.gov.uk

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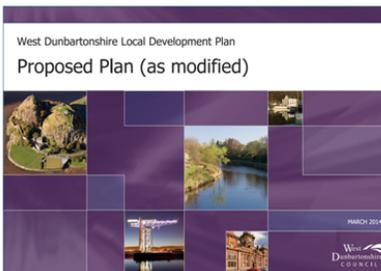
Introduction

Introduction

West Dunbartonshire has an outstanding natural environment. This environment has shaped, and been shaped by, the area's history, and defines West Dunbartonshire as a place today. It is vital to future prosperity and wellbeing. The area boasts a wide variety of parks and gardens, play space and sports areas, woodland, natural and semi-natural green spaces and other open spaces which together form a valuable green network.

The West Dunbartonshire **Local Development Plan's strategy** for this green network is to safeguard the existing network and to ensure new development enhances and expands it by improving existing open space assets, the connections between them and by creating new multifunctional green and open spaces.

The **purpose** of this supplementary guidance is to define the green network in West Dunbartonshire and identify its existing assets and opportunities; outline the principles for embedding the green network at the heart of new development; and to define the open space standards that will be required of new development and how these standards will be achieved.



The Local Development Plan

What is a Green Network?

Green infrastructure is the 'green' and 'blue' features of natural and built environments. They can provide naturalised water management, useable open space, active travel routes and habitats for wildlife.

Green networks are connected areas of green infrastructure and open space that together form an integrated and multi-functional network (Fig.1).

What is the Value of a Green Network?

Open spaces can have value in a number of ways:

- as habitats for biodiversity;
- as active travel routes;
- locations for sport and recreation;
- areas for the management of water; and
- in defining distinctive and attractive places in which to live, work and visit.

The most valuable open spaces are those which are **multi-functional**, which possess more than **one value**, and are **connected** to other spaces and to where people live, allowing people and wildlife to move around.

Green networks can provide a range of beneficial outcomes, including economic, environmental, climatic, health and social improvements (see [Green Infrastructure: Design and Placemaking, 2011 \(Scottish Government\)](#) for more detail on this).

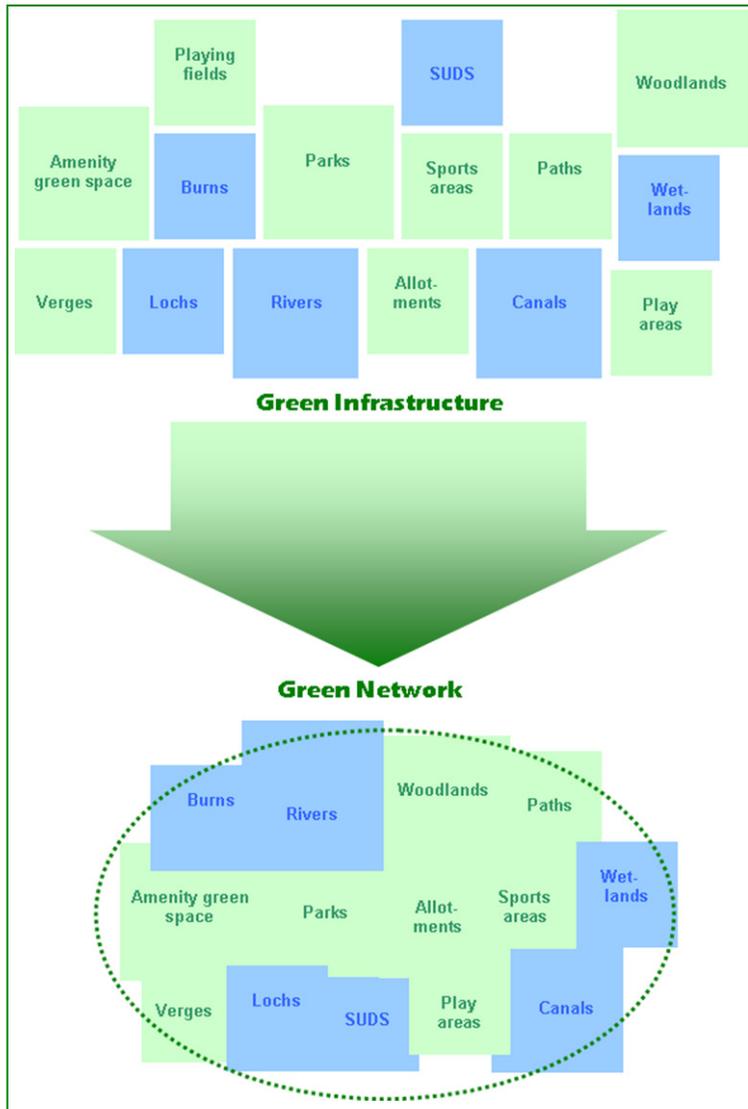


Fig 1 Illustration showing relationship between green infrastructure and the green network

Planning and the Green Network

The planning system is a key mechanism for delivering the green network. In turn, the green network can help deliver the aims of the planning system.

National Planning Framework 3 (NPF3) and Scottish Planning Policy (SPP)

NPF3 and SPP share a **single vision** for the planning system in Scotland in seeking to create high quality places and increasing sustainable economic growth. Four planning outcomes explain how planning should support this vision. These are: a successful, sustainable place; a low carbon place; a natural resilient place; and a more connected place. The green network can contribute to these outcomes by helping to support sustainable economic growth and regeneration; the creation of well-designed sustainable places; reducing our carbon emissions and adapting to climate change; and helping to protect and enhance our natural assets.

SPP states that planning should protect, enhance and promote green infrastructure, including open space and green networks, as an integral component of successful placemaking.

The **Central Scotland Green Network** is identified as a national development in NPF3. It seeks to deliver a step change in environmental quality to address disadvantage and attract investment, whilst sustaining and enhancing biodiversity, landscape quality and wider ecosystems.

Glasgow and the Clyde Valley Strategic Development Plan

The green network in the Glasgow city region is a fundamental component of the SDP's Spatial

“Planning should protect, enhance and promote green infrastructure, including open space and green networks, as an integral component of successful placemaking.”

SPP, para 220



Canal at Miller Street, Clydebank

Our Green Network

Development Strategy. The Green Network is part of a long-term strategic solution to a complex array of environmental demands in the city region and central to the area's economic competitiveness and social well-being.

Action in delivering the green network in Glasgow and the Clyde Valley has been prioritised and the Clyde Waterfront, encompassing Dumbarton, Old Kilpatrick and Clydebank, is identified among the SDP's Green Network spatial priorities.

West Dunbartonshire Local Development Plan

The West Dunbartonshire Local Development Plan takes on board the strategic framework and priorities of the SDP and reflects these at a more **local level**, by putting in place a strategy and policies for the protection, enhancement and expansion of the green network.

The Green Network is identified as one of twelve **Changing Places** that the Council wants to see change over the next 5 – 10 years. The key corridors and assets which make up the Green Network are highlighted in Map 13 of the LDP. In line with the SDP, the Green Network in West Dunbartonshire is largely centred on the Clyde Waterfront, but with additional focus on the Vale of Leven corridor, identified at the local level as having a distinct green network with significant opportunities for future expansion and enhancement.

The **Plan's strategy** for the green network is to (i) safeguard the existing green network; and (ii) ensure development enhances and expands the green network by creating new multifunctional green and open spaces, and improves existing green network assets and connections between them. This strategy is supported by policies GN1 and GN2.



Our Green Network

Policy GN1

Development which would result in the loss of an open space which is, or has the potential to be, of quality and value (to be considered in relation to further information and detail which will be provided with supplementary guidance) will not be permitted unless provision of an open space of equal or enhanced quality is provided within the development or its vicinity.

The proposals map identifies publicly accessible open spaces that are greater than one hectare, but Policy GN1 protects all playing fields and open spaces of value to the green network, as together these open spaces, including smaller spaces not shown on the Proposals Map, form the green network.

Policy GN2

Development will be required to follow the Integrating Green Infrastructure approach to design by incorporating SUDS, open space, paths and habitat enhancements at a level proportionate to the scale of development and in accordance with Supplementary Guidance.

The **Integrating Green Infrastructure** approach has been developed by the Glasgow and the Clyde Valley Green Network Partnership and puts green infrastructure on a par with transport, water, waste and energy as the critical infrastructures for successful placemaking. It focuses on the delivery of the green network by identifying, at the early stages of the design process where quality, multi-functional, open spaces should be retained, enhanced and provided.

Part 1—Identifying Assets and Opportunities

Introduction

West Dunbartonshire comprises three main urban areas: the Vale of Leven (Renton, Alexandria and Bonhill); Dumbarton (including Milton and Bowling) and Clydebank (including Old Kilpatrick).

A key purpose of this **supplementary guidance** is to develop further the mapping carried out for the SDP and LDP, to show in greater detail where West Dunbartonshire's existing green network can be found, in order to allow opportunities for expansion and enhancement to be explored. The following section describes the existing green network assets within each settlement, and using an annotated aerial map, highlights some of the development opportunities identified in the Local Development Plan that can help to develop the green network.

The Green Network in West Dunbartonshire

The Rivers Leven and Clyde form the spine of the green network in West Dunbartonshire. The Leven corridor and the Clyde Waterfront and key green network locations such as the Dalmuir wedge, the Saltings and Overtoun are linked through the urban area to the Kilpatrick Hills and the muirs to the west of the Vale of Leven by paths, burns and habitat corridors including the Forth & Clyde Canal and the national cycle route.

By mapping existing green assets and networks, 3 distinct corridors have been identified. These corridors are shown on Map 1 along with a list of the local green networks which are described in turn in this chapter.

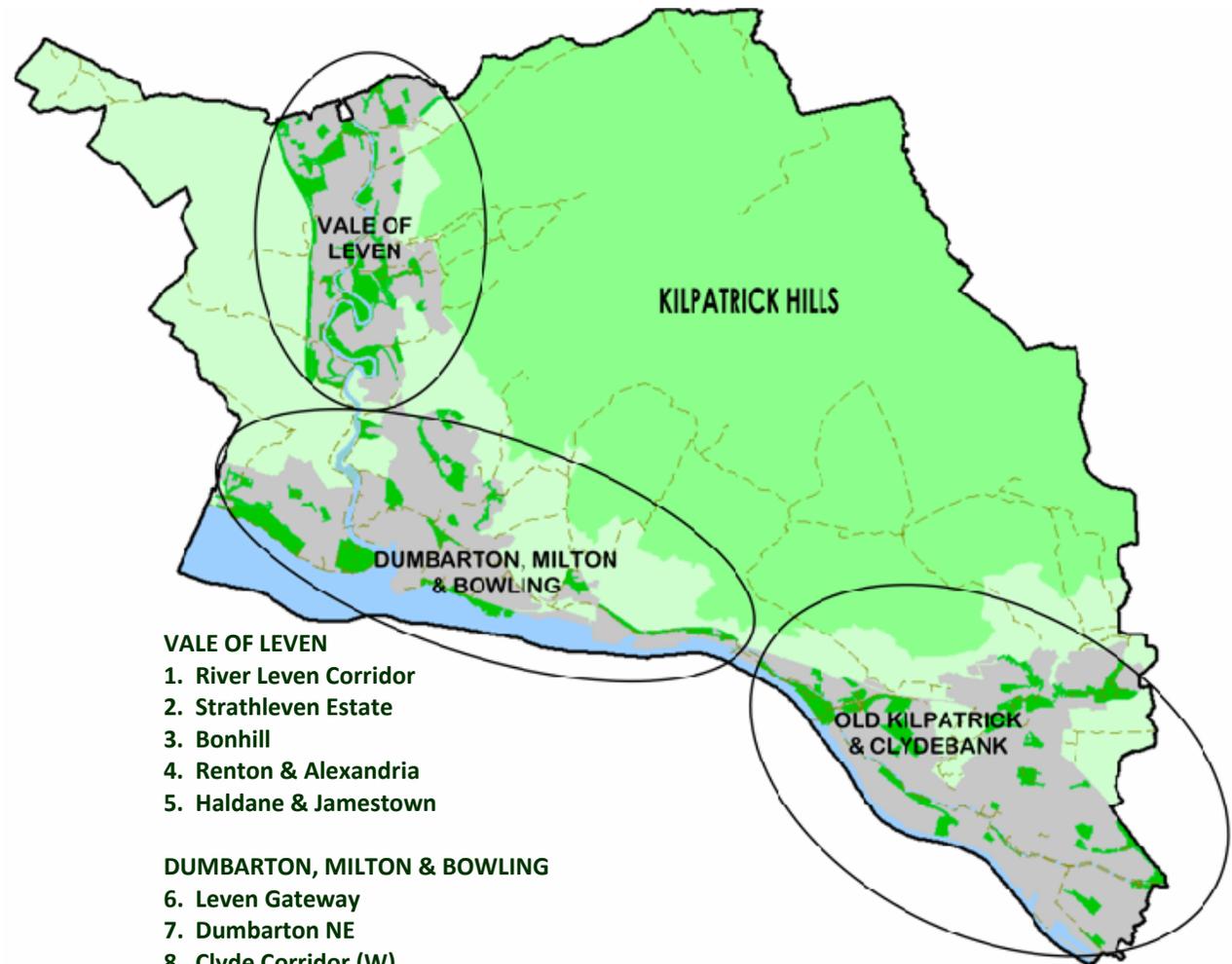


Fig 2 Key green network corridors

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The Vale of Leven

The Vale of Leven is flanked by the muirs to the west and the Kilpatrick Hills to the east. Through the middle of these landforms runs the River Leven, which runs from the southern end of Loch Lomond to the River Clyde at Dumbarton. The main settlements of the Vale of Leven are Alexandria and Renton on the western side of the Leven, and Bonhill to the east. These settlements lie alongside the river and are mainly contained within the valley floor.

Five distinct **local scale** green networks have been identified which together form the green network in the Vale of Leven.

1. River Leven Corridor

The River Leven runs through the centre of the Vale of Leven and is a key feature of the green network in West Dunbartonshire. Movement within the River Leven Corridor is predominately north/south, with pedestrian crossing points within the Vale of Leven limited to Balloch Road and Lomond Road in Balloch, Bonhill Bridge and two further footbridges linking Renton to the Vale of Leven Industrial Estate and Jamestown with Alexandria.

Key Features

The National Cycle Route (NCR) 7 runs along the west side of the River Leven and is well used for recreation and active travel. It acts as a spine, with adjoining east/west routes linking the corridor to the hills through the urban area. Formal pedestrian routes along the east bank of the Leven are limited in extent.

The River Leven is a migratory route for lamprey and Atlantic salmon, which are the qualifying species of the Endrick Water Special Area of Conservation (SAC) further upstream. A number of important habitats – including Local Nature Conservation Sites – lie alongside the river, including grasslands at Ballantines and Dillichip, Dalquhurn Point and Fishers Wood. In addition to their biodiversity value, these serve to make large parts of the river corridor an attractive setting and location for recreation, despite the area's industrial heritage.

A barrage controls the flow of water from Loch Lomond down the River Leven and there are a number of steep, wooded burns that run down the hills east and west towards the Leven. Parts of the River Leven Corridor are identified as potentially vulnerable to flooding.

Opportunities for Enhancements

1 & 5 The River Leven can be seen as a barrier to east/west movement across the river corridor. This is felt at the Black Bridge between Bonhill and the Vale of Leven Academy. The bridge is currently closed as it is unsafe. Reinstating a crossing point here would greatly enhance connectivity within the Vale of Leven, particularly as an active travel route to the school. The crossing point between Renton and the Vale of Leven Industrial Estate could also be enhanced.

2&3 Various lades alongside the River Leven have become nesting sites and represent good opportunities for habitat improvement particularly for breeding birds.



Bonhill Bridge

Picture courtesy of geograph.org.uk

Further opportunities exist for pond creation at Cordale and Dalquhurn Points.

4 A significant area of green space – over 4.5ha – sits next to the River Leven on the east bank adjacent to the Turnberry Homes development, Willowbank Gardens. This site currently has limited green network functionality and represents an opportunity for enhancement.

Development at the River Leven Corridor must not have an adverse effect on the integrity of the Endrick Water SAC. An expert appraisal to inform a project level HRA will be required for any developments proposed that may impact on the SAC, building on the findings of the HRA for this guidance.

Development Plan Opportunities

- BC2(9)+(48) Dalquhurn
- GE1(16) Lomond Industrial Estate

Opportunities: River Leven Corridor

- 1 Improving access over river
- 2 Habitat improvement at Cordale Point
- 3 Habitat improvement at Dalquhurn Point
- 4 Functionality enhancement on east bank of Leven at Bonhill
- 5 Improving access over Black Bridge



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2. Strathleven Estate

Situated on the eastern side of the River Leven, the Vale of Leven Industrial Estate (VoLIE) is set within a mature landscape of the former Strathleven Estate, on an area of low lying land on the bend of the river. It is primarily in use for a mix of industrial and business uses. The landscape includes elements of the former Strathleven Estate planting, including avenue trees and structural planting. The A-listed Strathleven House and associated coach house and dovecot are located within the industrial estate and there is housing to the north. The new Lomondgate business park lies to the south.

Key Features

Strathleven contains large areas of mature mixed woodland on the boundaries of the industrial estate, providing an impressive backdrop to the estate. The majority of the woodland blocks are concentrated along the western edge of the estate, following the river meander.

Features of a designed landscape associated with Strathleven House remain. The house operates as a business centre but its coach house and dovecot are ruinous.

The estate is well used for walking and over 2km of the path network was upgraded in 2013.

The sloping banks of the River Leven provide a good habitat for a range of species.



Strathleven House

Opportunities for Enhancements

A Green Network Enhancement Study has been prepared for the Vale of Leven Industrial Estate which proposes a number of opportunities for enhancement around placemaking; enterprise and regeneration; environment; and stronger communities:

- 1 Flood protection measures and SUDS, for example, rainwater harvesting and recycling, a site-wide SUDS strategy, and new SUDS wetlands areas.
- 2 Enhancing and expanding areas of native woodland through woodland planting and management to prevent further fragmentation, improve biodiversity value and strengthen the landscape structure.
- 3&4 Enhancing the setting of Strathleven House and Designed Landscape, with a range of recreational opportunities for employees, local people and visitors, including the creation of a new park celebrating the area's link with Robert the Bruce.
- 5 Improving access to the River corridor, both visually and physically, and the attractiveness of the footbridge over the river to Renton.

Development at Strathleven Estate must not have an adverse effect on the integrity of the Endrick Water SAC. An expert appraisal to inform a project level HRA will be required for any developments proposed that may impact on the SAC, building on the findings of the HRA for this guidance.

Development Plan Opportunities

GE1(1) - GE1(5) Vale of Leven Industrial Estate



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Opportunities: Strathleven Estate

- 1 Flood protection measures/SUDS
- 2 Woodland planting and biodiversity enhancement
- 3 Opportunity for new park to celebrate link with Robert the Bruce
- 4 Enhance the setting of Strathleven House
- 5 Improving access over river to Renton

3. Bonhill

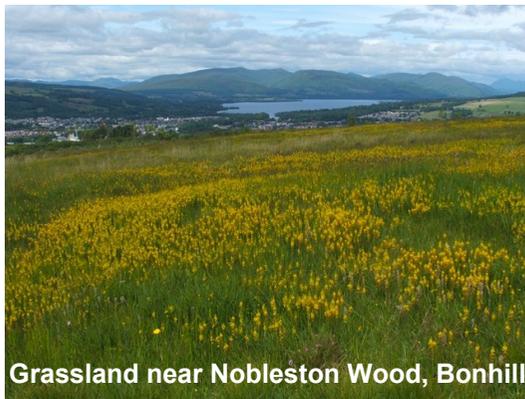
Bonhill is sited on the eastern bank of the River Leven, with the distinction made between 'Old' Bonhill, focused around Main Street, and 'New' Bonhill, the housing built in the 1960s and 70s which extends up the hillside. There are significant areas of open space in Bonhill, mainly south of Old Bonhill at Dillichip. Bonhill has been identified through Green Network opportunities mapping as one location in West Dunbartonshire where there is greatest opportunity to deliver multiple green network benefits.

Key Features

Dillichip Loan is an important access route, albeit the Black Bridge over the River Leven is no longer in use. Beyond this, east/west connections are good through Bonhill, leading to several access points into the Kilpatrick Hills.

Dillichip Park provides formal sports pitches adjacent to Dillichip Grassland – an identified local nature conservation site noted as a wet woodland habitat and very important in terms of habitat connectivity.

Pappert Well Community Woodland is an important resource to the east of New Bonhill on the fringes of the Kilpatrick Hills, although it does suffer from anti-social behaviour.



Grassland near Nobleston Wood, Bonhill

Picture courtesy of geograph.org.uk

Opportunities for Enhancements

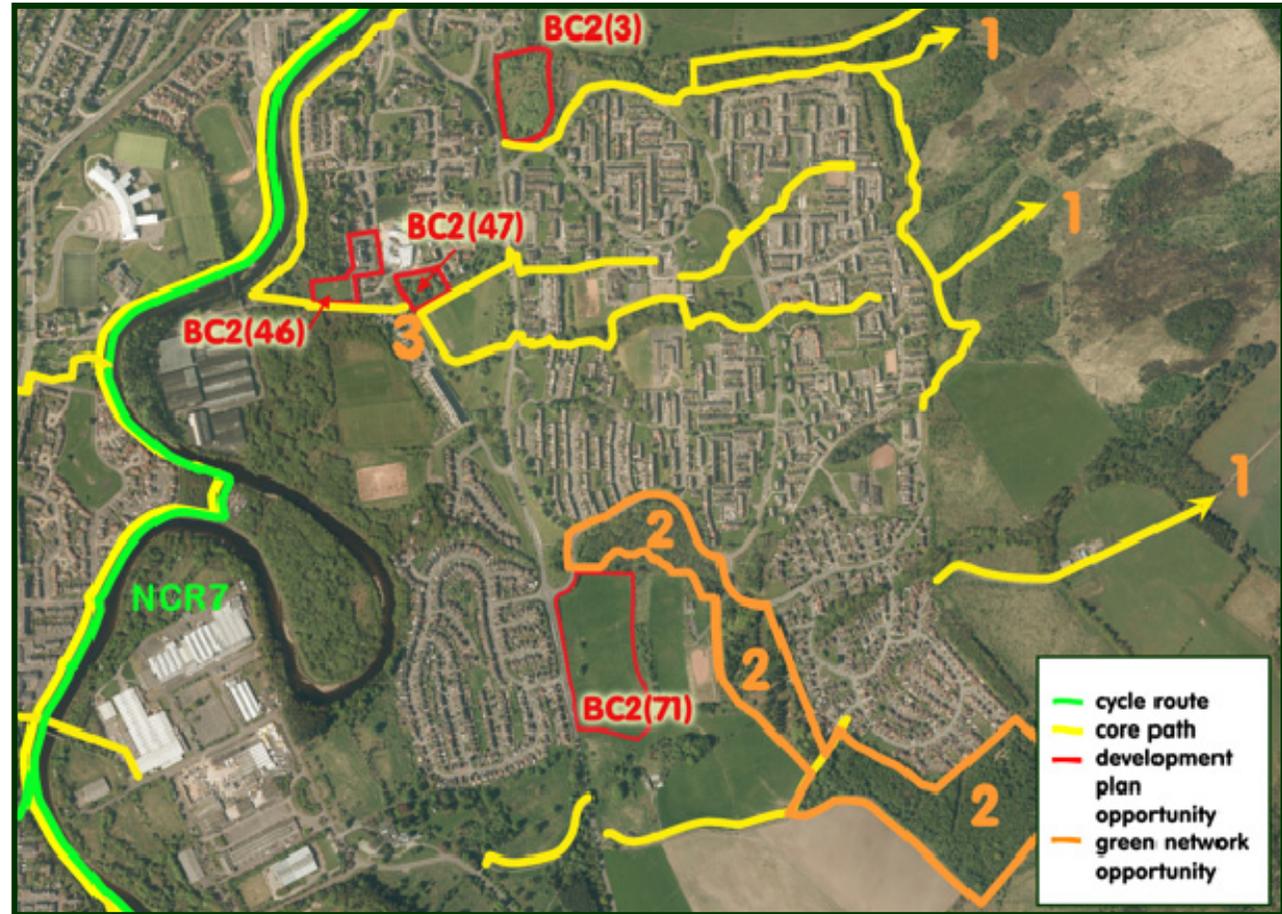
- 1 Pappert Woodland remains an opportunity for enhancing woodland and grassland habitats and encouraging recreation. Improving the quality of access and boundary interfaces with residential areas is of key importance.
- 2 There is limited management of the woodland to the south of New Bonhill (Croft Huggan, Beech Wood and Broomhill Wood) and no formal recreational access, therefore significant potential to improve the woodlands as a green network resource for the local population exists.
- 3 A canalised watercourse running alongside Main Street is prone to overtopping during heavy rainfall events, flooding the road due to the amount of water and the sudden right-hand bend that the channel takes at the south-western edge of Ladyton Field. An opportunity may exist for a soft engineered solution to this issue that will bring about additional green network benefits.

Development Plan Opportunities

- BC2(3) Bonhill Quarry
- BC2(46) Bonhill Primary School
- BC2(47) Croft Street/Ranglan Street
- BC2(71) Stirling Road

Opportunities: Bonhill

- 1 Improving access to Pappert Woodland and enhance existing habitat
- 2 Active management and recreational access to woodlands at Croft Huggan, Beech Wood and Broomhill Wood
- 3 Soft engineered solution to localised flooding at Ladyton Field



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4. Renton and Alexandria

Renton and Alexandria are two adjoining settlements characterised by their linear nature, being bounded to the west by the A82 and the North Clyde railway line and to the east by the River Leven, a configuration which provides barriers to east/west movement. Analysis which mapped green network opportunities in West Dunbartonshire identified Renton and Alexandria as locations where there were significant issues with quality and functionality of the current Green Network, but also opportunities for enhancement and expansion.

Key Features

Christie Park and Argyll Park provide extensive areas of open space to the north of Alexandria town centre. Christie Park is one of four 'flagship' parks in West Dunbartonshire (identified in the Open Space Assessment), comprising of formal lawns, gardens and woodland. Argyll Park provides a good quality play area and well-maintained football pitches.

To the south, Wylie Park in Renton is a large area of open space predominately used for football.

There are four access points to the western muirs from Renton and Alexandria, either over or under the A82. The crossing to the north within the National Park forms part of the John Muir Way.

Opportunities for Enhancements

Analysis of strategic green network opportunities in Renton and Alexandria found that communities identified as being without access to usable open space, did have areas with potential to address the situation. These areas are residential amenity spaces which are largely mown grass with the potential to deliver far

more recreational, aesthetic and biodiversity value than they currently do:

- 1 Place of Bonhill Park: potential to be a focal point for Renton with reinvestment and maintenance to reinvigorate the park, replacing infrastructure such as lighting, picnic benches and the boardwalk.
- 2 Cordale Avenue Space: the area to the north is very wet with obvious maintenance problems and could support new wetland, woodland and grassland habitats making the space more biodiverse, and visually appealing and with reduced maintenance requirements. Tree planting could be extended across the site. Enhancements to the games court for older children/teenagers could be made alongside natural play provision including re-profiling of the topography in some areas.
- 3 Vale of Leven Academy: provision of public access and biodiversity improvements would have significantly positive benefits for the green network.
- 4 Wylie Park: creation of a path network, with seating and bins. Peripheral areas could be taken out of a mown grass regime and new habitats created.
- 5 Argyll Park: opportunities to address access points, poor internal access and low biodiversity and aesthetics.

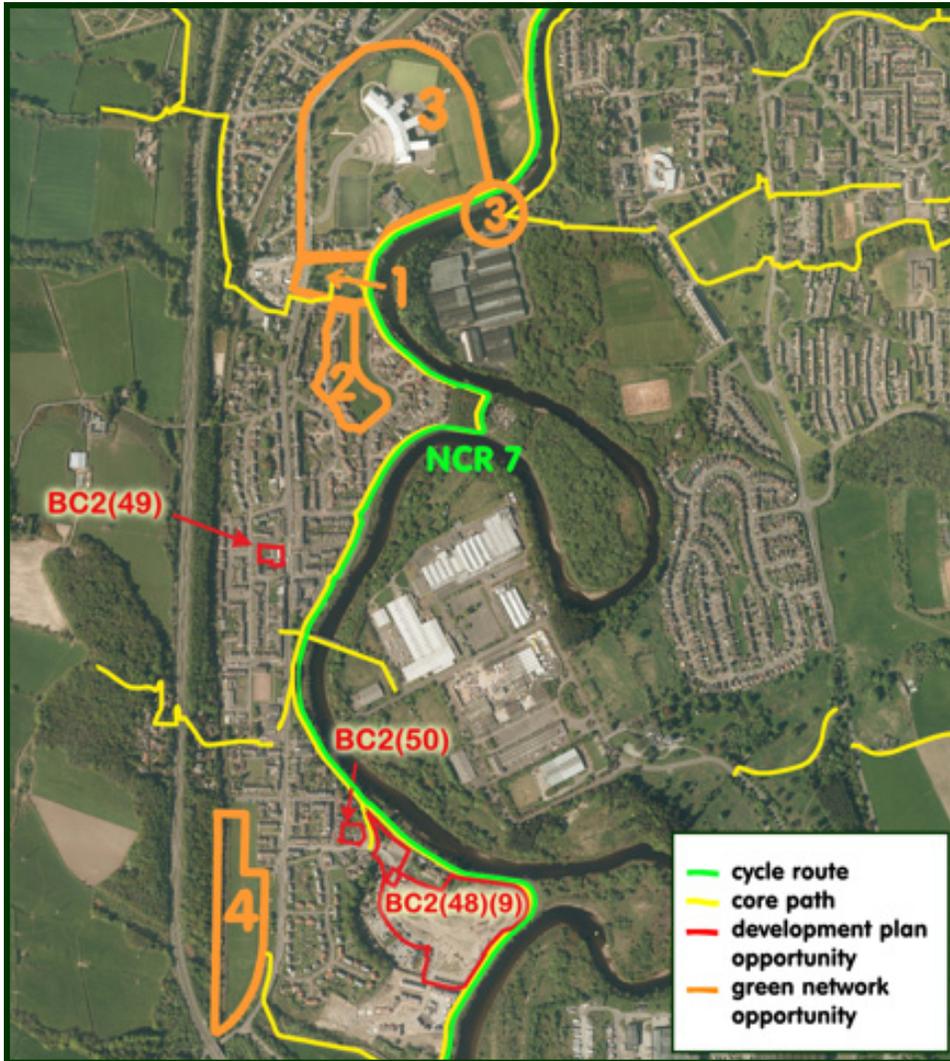
Development at Renton and Alexandria must not have an adverse effect on the integrity of the Endrick Water SAC. An expert appraisal to inform a project level HRA will be required for any developments proposed that may impact on the SAC, building on the findings of the HRA for this guidance.



Christie Park, Alexandria

Development Plan Opportunities

- BC2(1) + BC3(1) Heather Avenue, Alexandria
- BC2(2) + BC2(70) Wilson Street, Alexandria
- Alexandria Town Centre
- BC2(50) John Street Depot, Renton
- BC2(9) + (48) Dalquhurn
- BC2 (49) Village Square



Opportunities: Renton & Alexandria

- 1 Investment in Place of Bonhill Park
- 2 Wetland, woodland and grassland habitats at Cordale Avenue space
- 3 Public access and biodiversity improvements beside the Vale of Leven Academy
- 4 New path network and habitat creation at Wylie Park
- 5 Improve access points and biodiversity at Argyle Park



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5. Haldane and Jamestown

Haldane and Jamestown lie to the north of Bonhill and Dalmonach. Haldane is predominately a residential area and its housing stock has undergone (and continues to undergo) significant regeneration in recent years. Alongside the construction of new housing, the area's main open spaces have also been upgraded. Jamestown adjoins Haldane and includes a number of industrial premises and a large sawmill. Local residents in Jamestown have previously suggested there is a lack of play facilities for children in the area, despite the relative proximity of Inler Park – indicating an element of separation between Haldane and Jamestown.

Key Features

Inler Park sits adjacent to Haldane Primary School and is an extensive, multi-functional open space which delivers a number of green network benefits.

Brown Street is primarily a civic space at the heart of Haldane. It has been upgraded with seating, play equipment and tree planting.

The Mill of Haldane Green Corridor was a community-led environmental project to improve the visual appearance and perceptions of Haldane. Completed in 2005, it focused on the Ballagan burn, creating a new footpath to link the transport network and wider opportunities in Balloch; alleviating erosion and flooding issues; restoring wetland habitats; and increasing biodiversity.



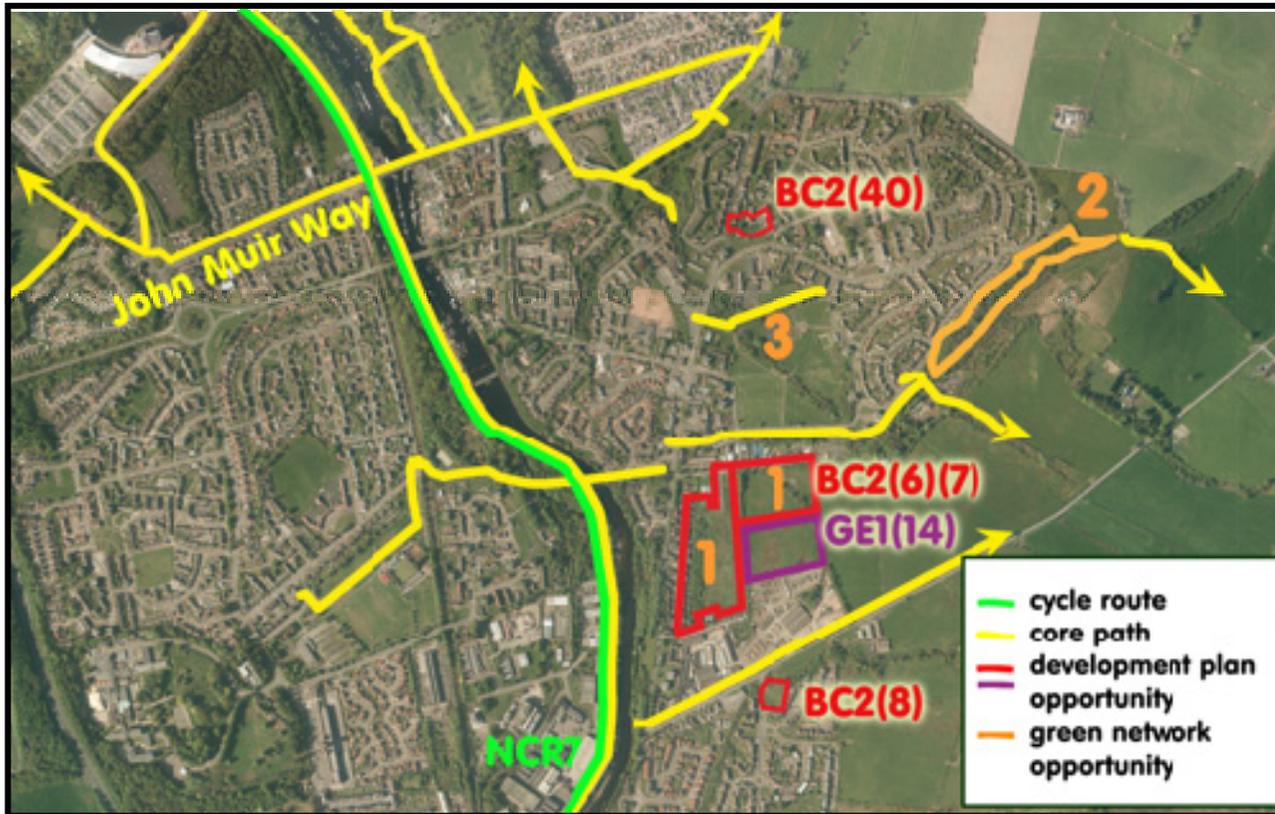
Inler Park, Haldane

Opportunities for Enhancements

- 1** A co-ordinated approach to open space provision and green network linkages should inform the layout of the two housing opportunity sites in Jamestown, BC2(6) and BC2(7). The two sites offer the opportunity to address a perceived shortfall in play facilities for children in the area by creating on-site open space which can be used by neighbouring properties, specifically the residents of Levenbank Terrace.
- 2** Woodland to the south of Carmona Drive could be enhanced to improve biodiversity value and create a path network which links with nearby core paths.
- 3** A site at Inler Park has been identified for allotments, with the aim of meeting local demand for gardening and food production.

Development Plan Opportunities

BC2(6) Levenbank Terrace, Jamestown
 BC2(7) Jamestown Industrial Estate
 BC2(40) Miller Road, Haldane
 GE1(14) Main Street, Jamestown



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Opportunities: Haldane & Jamestown

- 1 Residential sites with requirement for open space provision/play facilities within layout
- 2 Enhance biodiversity value of woodland and link with nearby core paths
- 3 Create new allotment site

Dumbarton, Milton and Bowling

Dumbarton lies on the north bank of the River Clyde, where the River Leven flows into the Clyde estuary. The town is at the intersection of two distinct strategic-scale green network corridors: a north-south corridor which connects Loch Lomond to the River Clyde and encompasses the Vale of Leven, and an east-west corridor bounded by the Kilpatrick Hills and the Clyde which runs from Dumbarton via Bowling and Old Kilpatrick to Clydebank and then all the way into Glasgow city centre.

In addition to the networks described above, three further **local scale** green networks form the green network in Dumbarton, Milton and Bowling.

6. Leven Gateway

At the mouth of the River Leven sits Dumbarton Rock, an iconic landmark which is of significant historical, cultural and geological value. Beside it, along Castle Road and Castle Street, former shipyards and distillery sites have been cleared, opening up opportunity for redevelopment and re-establishing access to the river. Dumbarton town centre sits on the east bank of the River Leven and enjoys views to the castle and Levensgrove Park but does not embrace the waterfront as it might.

Key Features

Dumbarton Rock is designated as a geological Site of Special Scientific Interest and the castle is both a listed building and scheduled monument. A key visitor attraction, it offers stunning views over the Firth of Clyde and along the Vale of Leven to Loch Lomond and the Trossachs.

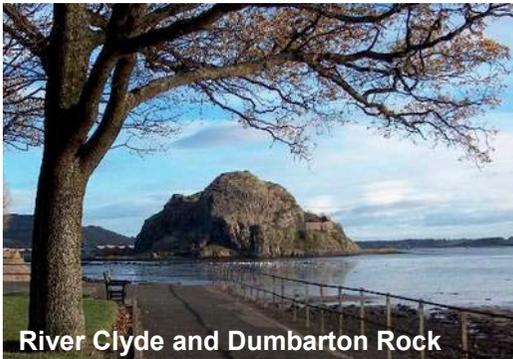
Levensgrove Park is one of four flagship parks in West Dunbartonshire and provides good quality greenspace and recreational opportunities within a very special setting. A traditional Victorian park with large grassed events areas, the park has been successful in securing a Stage 1 Heritage Lottery Fund grant approval. Over £3million will be spent on enhancing the park's historic features, creating new play, sports and cafe facilities and improving accessibility.

The cycle route National Route 7 (NCR7) runs through the town centre, over the Dumbarton Bridge to the east side of the River Leven where it runs northwards to Loch Lomond.

Where the River Leven joins the Clyde is the Inner Clyde Special Protection Area. This is an international designation with the qualifying interest being the wintering population of redshank.

Opportunities for Enhancements (map 1)

1 The Local Development Plan strategy for Dumbarton Town Centre and Waterfront includes the creation of a new pedestrian footbridge between the town centre and Levensgrove Park. The crossing would significantly improve accessibility to open space from the town centre and has the potential to increase usage of the park.



River Clyde and Dumbarton Rock

2 The core path network runs along both sides of the River Leven between the A82 and Dumbarton Bridge. On the east bank of the Leven, public access to the waterfront ends at Riverside Lane, with no link continuing to Dumbarton Rock. Aspirations for the development of Dumbarton Waterfront include a continuous promenade along the water's edge, which will link the town centre to Dumbarton Rock.

3 Expanding on the concept of a promenade, a green riverside park could bring multiple green network benefits, including a water management role and act as a visual buffer at the foot of Dumbarton Rock. Access to the foreshore at this point will be required to respect the habitat value of the foreshore and include measures to promote responsible access and prevent disturbance of birds during the sensitive winter months of September to April.

4 Redevelopment of the Sandpoint Marina site provides the opportunity for continuous access along the waterfront, linking routes along the Rivers Leven and Clyde, capitalising on the site's unique setting.

Development at the Leven Gateway must not have an adverse effect on the integrity of the Inner Clyde SPA or Endrick Water SAC. An expert appraisal to inform a project level HRA will be required for any developments proposed that may impact on the SPA or SAC, building on the findings of the HRA for this guidance.

Development Plan Opportunities (Map 1)

Changing Places—Dumbarton Town Centre

BC2(12)(55)

BC2(14)

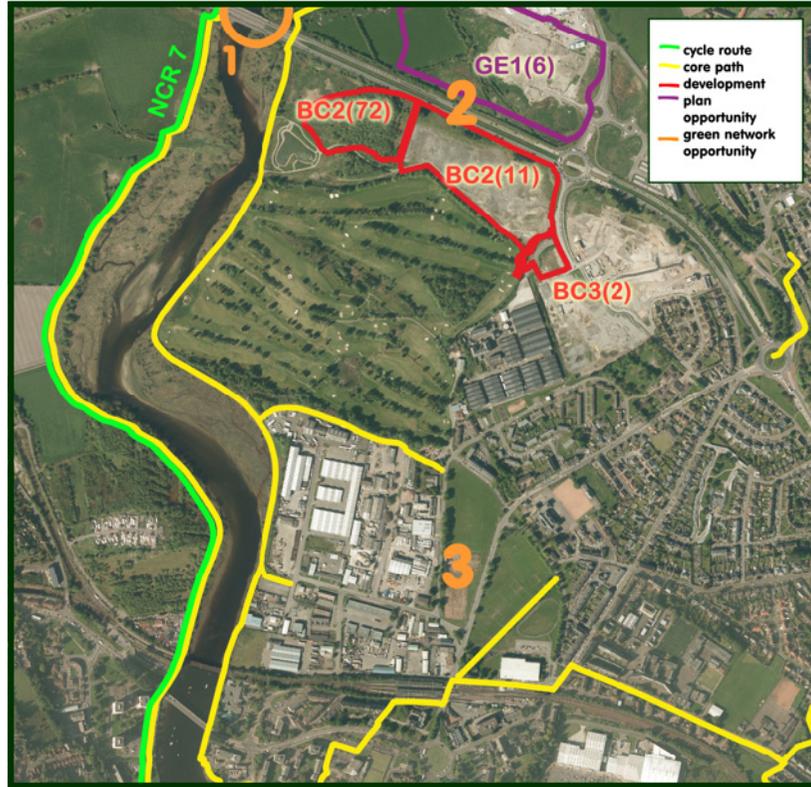
BC2(74)



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Opportunities: Leven Gateway (Map 1)

- 1** New pedestrian footbridge
- 2** Promenade along the water's edge
- 3** Green riverside park with access to foreshore of River Clyde from town centre
- 4** Network connections from West Dumbarton to Sandpoint and beyond



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Opportunities: Leven Gateway (Map 2)

- 1 Improve access at A82 over River Leven
- 2 Cluster of sites within green network
- 3 Create new allotment site

Opportunities for Enhancements (Map 2)

1 There are core paths either side of the River Leven from Dumbarton to the Vale of Leven. Connectivity could be enhanced by using the south side of the A82 as a pedestrian crossing over the river to join up the two river banks. Any proposal to allow pedestrian access along the A82 would need to be acceptable to Transport Scotland.

2 North of the town centre, Townend sits adjacent to Meadow Park, Dumbarton Common and golf course. The area has a cluster of development sites with a great opportunity to deliver multiple green network benefits, specifically the creation of woodland, wetland and grassland habitats (to the west of the cluster) and open space enhancement (east).

3 A site on Townend Road has been identified for allotments, with the aim of meeting local demand for gardening and food production

Development Plan Opportunities (map 2)

BC2 (11), BC2 (72), BC3(2) and GE1(6)

7. Dumbarton North East & Milton

To the north-east of the Leven Gateway the land begins to rise steeply towards the Kilpatrick Hills. Bellsmyre, one of Dumbarton’s largest housing estates, is a housing regeneration area surrounded by open space, including Dumbarton Cemetery and the Bellsmyre Grasslands Local Nature Conservation Site. A number of watercourses, including the Murroch Burn and Gruggies Burn, form important wildlife corridors incising the urban area. Milton lies to the east of Dumbarton, with Dumbuckhill Quarry in between. The Milton Burn cuts through an extensive area of open space.

Key Features

Located to the north of Milton, Overtoun Estate is a Garden and Designed Landscape of national importance. The estate is a large, mid-late 19th-century parkland landscape with picturesque burnside walks and remnants of a contemporary formal garden. Today, it is a well used gateway to the Kilpatrick Hills, with provision for parking.



Overtoun House, Dumbarton

The area boasts an extensive core path network, linking Bellsmyre and Milton with Overtoun Estate and the Kilpatrick Hills and there are a number of circular routes which form a distinct green network in this location.

The principal areas of native woodland within the Kilpatrick Hills are associated with estate landscapes and watercourses, particularly in their lower reaches, and there is significant native woodland cover in the area. In 2011, the Woodland Trust bought land at Maryland Farm, adjoining the Crosslet Estate and will plant over 200,000 native species to extend woodland cover, access and enhance biodiversity.

Opportunities for Enhancements

1 The restoration of Dumbuckhill Quarry in the longer term provides the opportunity to deliver green network enhancements, including habitat creation and recreation. Integrating the quarry with the existing core path network will further improve options for walking.

2 The Bellsmyre Grasslands LNCS has the potential to offer a very diverse and valuable habitat. Restoration as neutral grassland through scrub clearance and management would bring significant biodiversity benefits.

A number of housing opportunity sites identified by the Local Development Plan (see below), including at the Council offices on Garshake Road and Crosslet House; the rationalisation of the schools estate within Bellsmyre and the redevelopment of the high flats at Tay Place all offer opportunities to enhance the green network in this part of Dumbarton.

Development Plan Opportunities

- BC2(20) Crosslet House
- BC2(21) Milton Brae
- BC2(52) Auchenreoch Avenue

- BC2(16) Pinetrees
- BC2(51) Valeview Terrace
- BC2(53) Pennicroft Avenue



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Opportunities: Dumbarton North East

- 1** Restoration of quarry
- 2** Bellsmyre Grassland biodiversity enhancement
-  Housing sites with green network opportunities

8. Clyde Corridor (West)

As a settlement, Dumbarton has a stronger relationship with the River Leven than it does the River Clyde and the Clyde waterfront from Dumbarton to Bowling remains mainly undeveloped. New housing within Kirktonhill, on the site of the former Keil School, is adjacent to the river but either side of this are large areas of open space: Havoc playing fields and Brucehill Cliffs to the west, and Levensgrove Park to the east. On the opposite side of the Leven, beyond Dumbarton Rock, a narrow coastal strip is bounded by a gas holder, sewage works, a railway line and bonded warehouses. Further east, the waterfront is bounded by the former Esso Oil terminal, Scott's Yard (a former shipyard), Bowling Harbour and Bowling Basin. At this point, the corridor between the Kilpatrick Hills and the River Clyde is particularly narrow, and the vacant sites, along with the A82, act as a barrier to connectivity between the river and hills.

Key Features

The Inner Clyde estuary consists almost entirely of tidal mudflats, covering over 1800 ha and extending 20km westwards from Newshot Island to Craigendoran Pier on the north shore and to Newark Castle on the south shore. In West Dunbartonshire, all inter-tidal land downstream of Queen's Quay in Clydebank is designated as a Special Protection Area (SPA) and a Site of Special Scientific Interest. The Inner Clyde is important for wintering waterfowl, notably supporting an internationally significant population of redshank, (one of the highest density wintering populations of redshank in Britain), which qualifies the Inner Clyde as an SPA.

Brucehill Cliffs are of biological and geological interest and are identified as a Local Nature Conservation Site.

The area hosts a number of grassland and butterfly species. Havoc playing fields adjacent are well used but there are issues with fly-tipping and vandalism.

Access along the Clyde shorefront is possible from the boundary with Argyll and Bute to the Sandpoint Marina site via core paths and for a short distance east of Dumbarton Rock before linking to NCR7.

Opportunities for Enhancements

1 With the Forth and Clyde Canal, NCR7 and a former railway line running through it, the Bowling Basin site is already an important green network asset. The former railway line in particular represents an opportunity to create a linear park through the site and to provide an improved route for NCR7, helping the site to become a focal point in the wider green network.

2&3 Esso Bowling and Scott's Yard represent a major redevelopment opportunity. There is no public access along the waterfront or to Dunglass Castle. The intertidal areas west of the Esso site are important in the context of the Inner Clyde SPA and represent a unique opportunity to allow coastal habitat to migrate inland in response to sea level rise. The LDP strategy for these sites makes provision for green infrastructure towards the western end of the site to provide a buffer between development and this important habitat area, with opportunities to enhance the green network.

4 Castle Road (BC2(17)) is a housing opportunity site within the Dumbarton waterfront/Leven Gateway area but with an important frontage onto the River Clyde adjacent to Dumbarton Road. Subject to a better understanding of how Redshank use the area, there is the potential to create an attractive environment here,



Bowling Basin, Bowling

with houses or apartments overlooking riverside open space, with improved linkages to the castle and incorporating the historic 'Sunderland' slipway.

5 Brucehill Cliffs has potential as a Local Nature Reserve. Pond and wetland creation and improved grassland and woodland management have been identified as ways of improving the local habitat network.

Development at the Clyde Corridor (W) must not have an adverse effect on the integrity of the Inner Clyde SPA. An expert appraisal to inform a project level HRA will be required for any developments proposed that may impact on the SPA, building on the findings of the HRA for this guidance.

Development Plan Opportunities

Esso Bowling (LDP Map 8), Bowing Basins (LDP Map 9) BC2(17) Castle Road



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Opportunities: Clyde Corridor (West)

- 1 Enhancing green network asset at Bowling Basin including linear park on former railway line
- 2 Green infrastructure and improved access at Scott's Yard
- 3 Enhancing intertidal areas adjacent to Esso Bowling and provision of green infrastructure on site, to protect the important habitat of Inner Clyde SPA
- 4 Improved linkages and creation of attractive environment alongside river
- 5 Potential as Local Nature Reserve

Clydebank and Old Kilpatrick

Before 1870, the area which later became Clydebank was largely rural, and agricultural. It consisted of some villages (Hardgate, Faifley, Duntocher, Dalmuir, Old Kilpatrick), farms and estates. The town of Clydebank developed around the Thomson shipyard, built in 1871, and subsequently the Singer sewing machine factory and over time came to subsume these villages, creating the single settlement which is recognisable today. Like Dumbarton, Clydebank sits between the River Clyde and the Kilpatrick Hills.

Three local green networks are identified within Clydebank. The densely developed nature of Clydebank, particularly central and eastern parts, mean that green network 'stepping stones' and 'isolated green spaces' are particularly important. These include green spaces such as Boquhanran Park, Kilbowie Cemetery and the John Brown Recreation Ground.

9. Clyde Corridor (East)

The Clyde Corridor broadens out as it continues eastwards but public access and interaction with the river remains limited by inaccessible vacant sites (Carless and Queen's Quay) and existing industrial uses (including bonded warehouses and a water treatment works), although new development at Cable Depot Road and Cart Street has opened up the waterfront in these locations. The Saltings Local Nature Reserve in Old Kilpatrick is the only 'natural' environment alongside this stretch of the Clyde.



Forth & Clyde Canal, Clydebank

Key Features

The Forth & Clyde Canal could be considered to be a green network in its own right and is certainly a significant corridor within the wider green network. The canal runs from Bowling Basin to Whitecrook/Linnvale through Clydebank town centre and is well used from recreation (walking, cycling) and active transport. A number of crossing points means the canal doesn't act as a barrier to movement in perhaps the same way the River Leven does in the Vale of Leven.

The Saltings Local Nature Reserve sits underneath the Erskine Bridge, bounded by the River Clyde and Forth & Clyde Canal. Managed by the Council and extending to 19 ha, the Saltings comprises of areas of wildflower, woodland and salt marsh. A well constructed path network offers accessibility, including to wheelchair users.

Lussett Glen is a key 'hub' in the green network in terms of connectivity, linking the Erskine Bridge, The Saltings, canal and Kilpatrick Hills. A new pavilion at the recreation ground, a play area and parking is to be provided

The Clyde Corridor presents potential roosting opportunities for redshank, the qualifying feature of the Inner Clyde SPA. Access improvements should take account of such potential roosting locations.

Opportunities for Enhancements

1 Derived from a Green Network Strategy for the wider Clyde Waterfront, there is potential for a project focused on Clydeside Community Park. It would improve north-south connectivity between the River Clyde adjacent to the Golden Jubilee hospital and the Forth & Clyde Canal and Dalmuir Park via the Duntocher Burn corridor. Stronger east-west links through the hospital grounds, including a new waterfront path, would be secured.

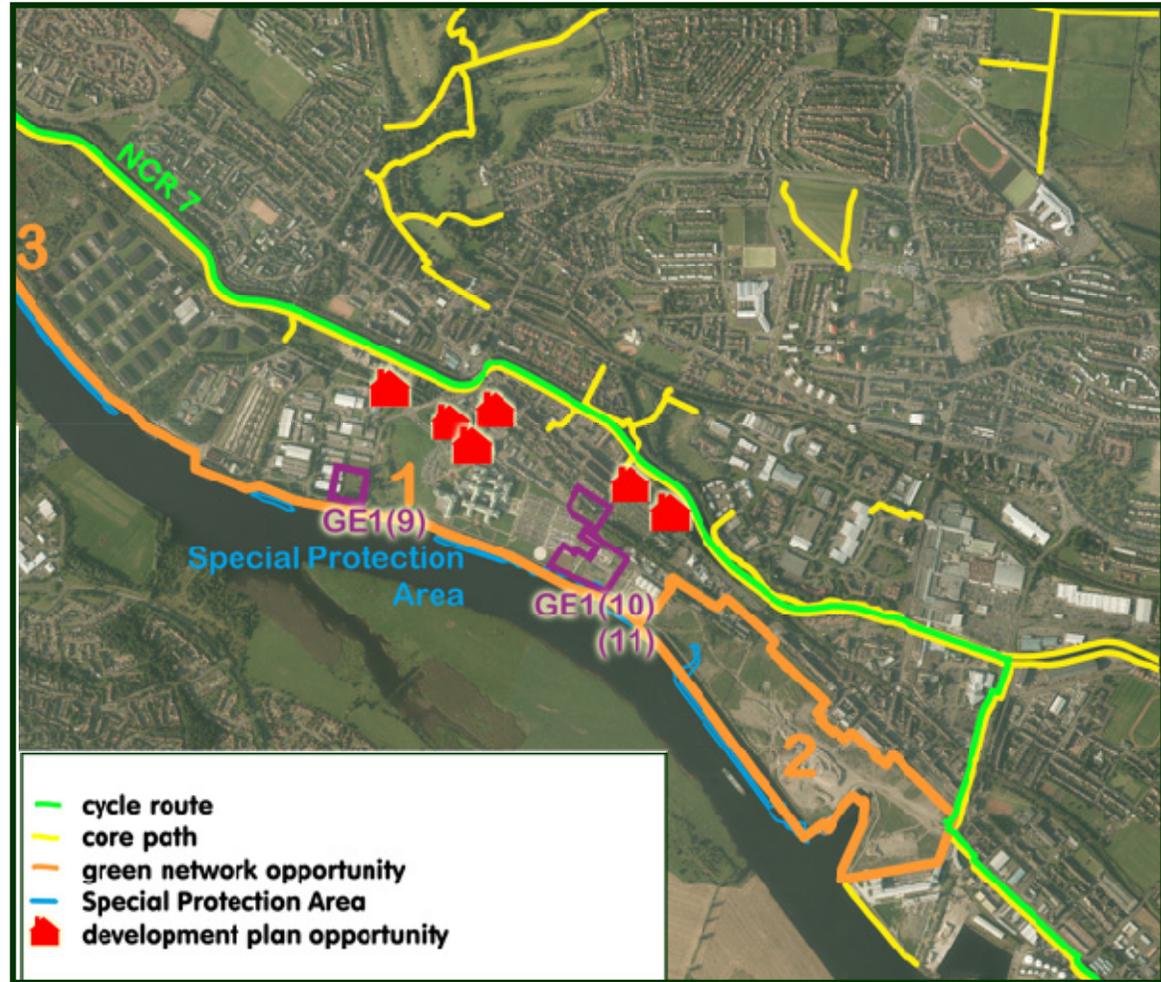
2 Queen’s Quay is located on the River Clyde to the south of Clydebank town centre. It is a major redevelopment opportunity (41ha) and enhancements to the green network will be expected, including waterfront access and linkages to the town centre.

3 A walking and cycling route along both sides of the River Clyde from Glasgow city centre to the Erskine Bridge (and beyond) is a long standing aspiration of the South of Scotland Access Forum. This can be achieved through the development of sites like Queen’s Quay and Carless.

Development at the Clyde Corridor (East) must not have an adverse effect on the integrity of the Inner Clyde SPA. An expert appraisal to inform a project level HRA will be required for any developments proposed that may impact on the SPA, building on the findings of the HRA for this guidance.

Development Plan Opportunities

Queen’s Quay (LDP Map 6) and Carless (LDP Map 7)
 GE1(9) Clydebank Industrial Estate
 GE1(10)(11) Cable Depot Road and Clyde Gate



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Opportunities: Clyde Corridor (East)

- 1 Clydeside community park**
- 2 Waterfront access and connections to town from Queens Quay**
- 3 Development of walking/cycling route along river**
- Housing opportunity sites**

BC2(35) Former Transfer Station
 BC2(59) Auld Street
 BC2(60) Beardmore Street East

BC2(61) Boquhanran Road
 BC2(62) Caledonian Street
 BC2(68) 354 Dumbarton Road

10. Duntocher Burn Corridor

The Duntocher Burn forms a corridor of varying width between the River Clyde and Duntocher. Tributaries which form a series of corridors through Faifley and Hardgate, extend down from the lower slopes of the Kilpatricks. The zone also includes a significant 'wedge' of undeveloped land separating Parkhall and Mountblow and incorporates Dalmuir Park, Dalmuir golf course and Auchentoshan Woods.

Key Features

Auchentoshan Woods, Dalmuir Municipal golf course and Dalmuir Park together form the "Dalmuir Wedge" a green wedge within Clydebank, south of the A82, which is a significant green network core north to south.

Dalmuir Park was originally a designed landscape and in 2012/13 a project was undertaken with Heritage Lottery and Council funding to restore the park's historic features and create new facilities. It is the only park in West Dunbartonshire to achieve Green Flag Award status.

Golden Hill Park in Duntocher is notable as the only site in West Dunbartonshire where the Antonine Wall is visible above ground. As the name suggests, the park is on a hill and is managed mainly as mown grass. Mature woodland sits alongside the Duntocher Burn in the northern part of the park.

Faifley Knowes is a largely wooded area sitting between Hardgate and Faifley. The Knowes also include playing fields and a recently installed play park and there is an aspiration for the area to be designated as a Local Nature Reserve. There is an extensive network of paths within the area.



Goldenhill Park, Duntocher

Opportunities for Enhancements

1&2 Faifley Knowes, Golden Hill Park and the Dalmuir Park are linked by a near continuous path along the route of Duntocher Burn. The path also extends into the Kilpatrick Hills (known as the 'Bankies Trek'). South of the Forth & Clyde Canal, proposals have been drawn up to open up the burn to improve biodiversity (including the installation of a fish pass) and improve access. This would potentially create a route right through from the River Clyde to the Kilpatrick Hills.

3 A project to improve Golden Hill Park forms part of a scheme to enhance the presentation of the Antonine Wall in West Dunbartonshire. This would include improving paths within the park, the park's entrances and the area around the exposed rampart base.

4 A site adjacent to Skypoint community facility has been identified for allotments, with the aim of meeting local demand for gardening and food production.

Development Plan Opportunities

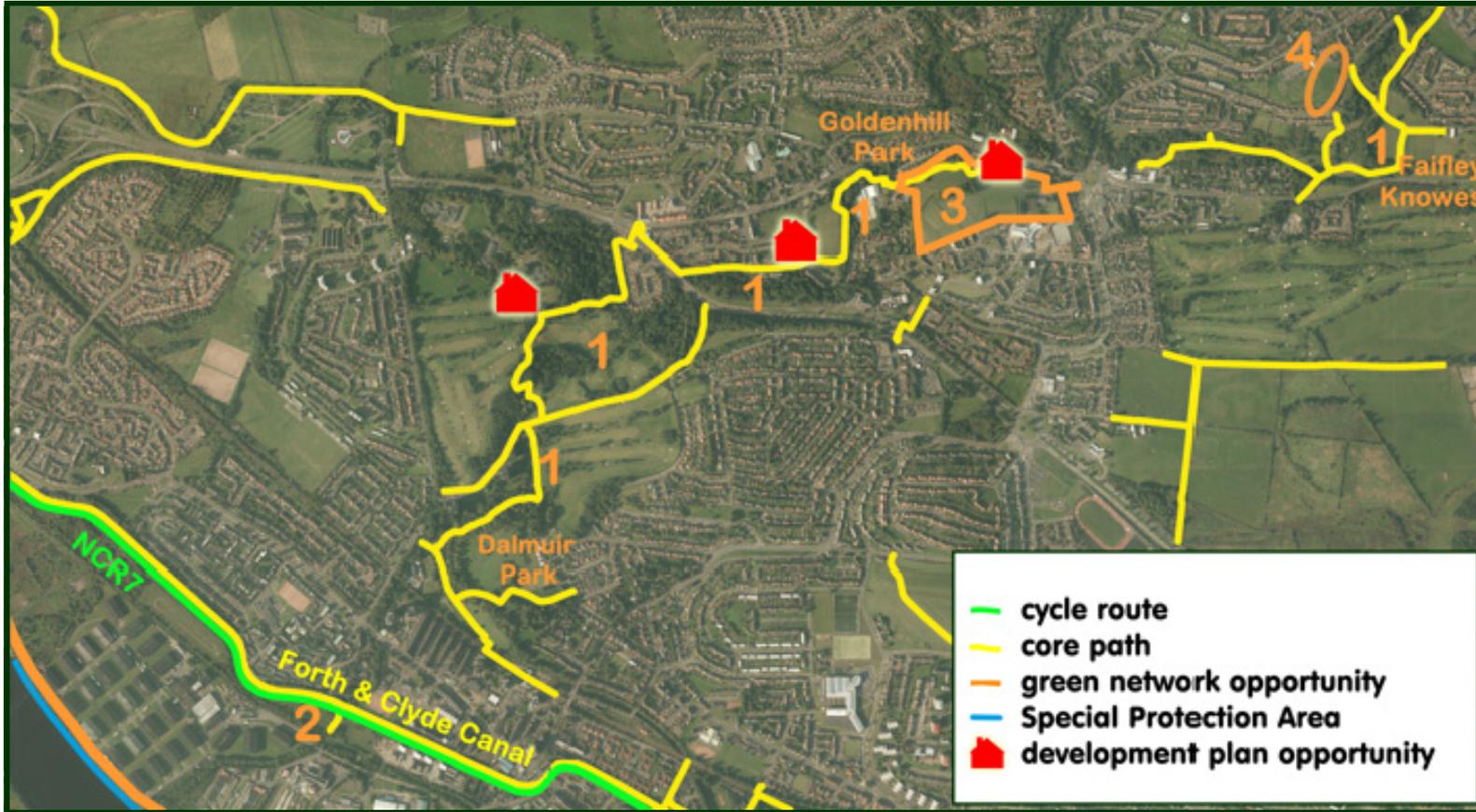
BC2(25) William Street

BC2(26) Old Mill Garage

BC2(27) Hardgate Hall

BC3(5) Auchentoshan (Care home)

BC5(4) Auchentoshan (replacement school)



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Opportunities: Duntocher Burn Corridor

- 1 Biodiversity enhancement of Duntocher Burn corridor including Faifley Knowes
- 2 Duntocher Burn at River Clyde— access and connections
- 3 Enhancement of Golden Hill Park and presentation of Antonine Wall
- 4 Create new allotment site
-  Housing opportunity sites

11. Clydebank East

Clydebank East is made up of the communities of Whitecrook, Linnvale and Drumry. The green network of the area is characterised by pockets of green space within a relatively densely populated area. These pockets of green space are largely focussed along key transport routes including the Forth and Clyde Canal, A82 and the two railway lines in the area.

Key Features

The Forth and Clyde canal forms an important green network for Clydebank East. It provides an attractive, well used active travel route, ensuring a good connection between the communities of Clydebank East and Clydebank town centre.

Whitecrook Park provides a well used and well maintained recreational resource for the area, with a large childrens play area, multi-use games area, tennis courts and extensive playing fields.

A significant part of Whitecrook is covered by a Tree Preservation Order. The protected trees in this area, as well as the mature street trees in Linnvale contribute to the amenity and character of the area and form an important feature of the green network in these communities.

National Cycle Route 7 runs along the industrial area to the south of Dumbarton Road, before turning north into the town centre and joining up with the canal. This provides an additional active travel route, linking Clydebank East to the east and west.



Canal and bridge at Linnvale

Opportunities for Enhancements

- 1 A community sports hub is being proposed for the existing rugby club on Dean Street, which will provide a range of indoor and outdoor sports facilities, with potential for becoming the centre for Gaelic football in Scotland.
- 2 The setting of the Forth and Clyde Canal within Clydebank East could benefit from biodiversity improvements and new planting, especially at points where it connects into residential areas.
- 3 The former playing fields to the east of Linnvale represent an opportunity for biodiversity enhancements and tree planting, in order to increase the contribution that this large open site makes to the green network.
- 4 The peripheral parts of Whitecrook Park could benefit from biodiversity and habitat enhancements to complement the recreational qualities of the park.

Development Plan Opportunities

- BC2(32) John Knox Street
- BC2(37) + BC2(64) St Andrews High School
- BC2(28) Thor Ceramics
- BC2(79) Rosebery Place
- BC2(80) Stanford Street
- BC2(38) + BC2(65) Braidfield High School
- BC2(39) + BC2(66) St Eunans Primary School



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Opportunities: Clydebank East

- 1 New community Sports hub on Dean Street
- 2 Improve pedestrian access points to the Forth and Clyde canal
- 3 Enhance biodiversity value of former playing fields
- 4 Enhance biodiversity value of Whitecrook Park

Part 2—Enhancing and Expanding our Green Network

Introduction

The Local Development Plan seeks to ensure that new development not only safeguards the existing green network but also enhances and expands it by improving existing green network assets, creating new green and open spaces and improving connectivity within the network.

Part 2 also includes the accessibility, quality and quantity standards that will be applied to determine the level of open space provision or financial contribution expected from new development.

Principles for Embedding the Green Network

In order to safeguard, enhance and expand the green network, development proposals will be required to:

- ✓ **Protect** the existing green network.
Green infrastructure and open spaces which currently exist on a site should be protected unless there is adequate mitigation which enhances the quality of the network elsewhere.
- ✓ **Understand** the wider green network.
It is vital that development proposals look beyond the boundaries of individual sites, however large or small, to consider the broader spatial context and create a more coordinated and joined-up network.



Vacant site at Main St, Jamestown

- ✓ **Integrate** green infrastructure into the design process. The greatest green network benefits can be achieved if green infrastructure is considered integral to the development design process, rather than an afterthought once other elements have become 'fixed'. Pages 38-46 provides guidance on the design of green infrastructure elements.
- ✓ **Create** new green and open spaces as part of the development. Where development increases the number of people who would use and derive benefit from the green network, proposals should seek to extend the network through the creation of new green and open spaces.
- ✓ **Enhance** the functionality and biodiversity value of existing assets. The site appraisal and design process should identify opportunities to enhance the value of existing assets.
- ✓ **Link** to the existing network.
Green infrastructure and path connections on new sites should link up with the existing green network where possible.
- ✓ **Contribute** financially towards off-site projects
In some instances the best way of achieving green network enhancement will be by making a financial contribution to projects beyond a site's boundary, for example upgrading a local play park or path network. Page 36 outlines the circumstance and level of contribution that may be required.

✓ **Look** long-term towards future management and maintenance. How green infrastructure and open spaces will be sustained should be considered from the outset. Without careful consideration being given to future management and maintenance of assets the range of benefits will reduce quickly over time. Page 45 considers stewardship.

Development Types

Not all forms of development will have to contribute directly or indirectly to open space provision. The level of contribution expected will be **proportionate to the scale and impact** of that development on the green network. Developments with the greatest impact are those that increase user demands on the green network i.e. residential uses. Table 1 sets out these requirements and the flow chart in Appendix 2 provides a quick guide to the expectations for provision of open space.

New build commercial and industrial developments should comply with the principles of good design set out in Policy DS1 and look for opportunities to provide amenity space, access links, SUDS and enhance biodiversity through planting.

Each residential opportunity site is expected to enhance the green network and applicants should fully explore all opportunities for doing so at the outset of master-planning and site design. The requirements for residential developments are based on an assessment of need and opportunity **using the population size of the development** and the **standards of accessibility, quality and quantity**. The green network requirements for each individual site will be discussed and agreed at pre-application stage.

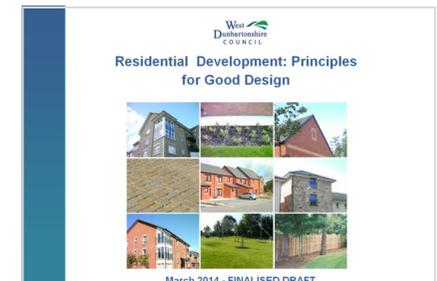
TYPES OF PROVISION	Residential development (units)			New commercial or industrial development
	1-9	10 -49	50+	
Layout to include landscaping and setting	✓	✓✓	✓✓	✓
Green and Open Spaces incl. play spaces and equipped areas	×	✓	✓✓	×
Access Networks e.g. walkable link to green network	✓	✓	✓	✓
Water Management e.g. SUDS	✓✓	✓✓	✓✓	✓✓
Habitat Networks e.g. biodiversity	✓	✓	✓	✓
Off-site contribution/delivery	✓✓	✓	✓	✓

× not required
 ✓ required where need/opportunity identified
 ✓✓ required

Table 1 Matrix of types of development and indicative requirements

For some sites it will not be appropriate to form play spaces or equipped play areas and instead a financial contribution is expected (see Appendix 1, Worked Example 3). The form of green and open spaces should be influenced by the site and context and a move away from standard play equipment is encouraged. There is an expectation that **major residential developments provide an equipped play area if there is not adequate provision within 250m** (see Appendix 1, Worked Example 4).

The Council’s Supplementary Guidance “Residential Developments: Principles for Good Design” provides further guidance on layouts.



The Open Space Strategy has a vision to have “attractive and sustainable open spaces with enhanced facilities, appearance and accessibility thereby promoting physical and mental wellbeing”

Section 3.1, Open Space Strategy, 2011



Pappertwell Right of Way, Bonhill

Our Green Network

Open Space Standards for Residential Development

In order to create a valued green network within West Dunbartonshire each component of the green network has to be “fit for purpose”, in other words, it is in a condition that can support its intended purpose and function. Three key measures are used to determine whether a component is “fit for purpose”. These are: **accessibility, quality** and **quantity**. The open space standards used in this guidance are based on these three measures and use the Council’s Open Space Audit (2011) and Open Space Strategy (2011) as the evidence base.

The open space standards are to be used:

- to inform developers what the minimum requirements are for sites;
- to prioritise works to provide/enhance facilities; and
- to identify areas where green spaces are not fit for purpose.

Accessibility Standard

This is the principle measure and is about how close people should be to their nearest publicly usable open space. The Council is keen to ensure that the distance to open spaces takes into account the walking abilities of children and older people. It is assumed that a child would be able to walk 250m in approximately 5 mins and this distance forms part of the standard. Accessibility to different types of spaces is also important. The priority is to ensure that people have easy access to small “kick-about” spaces and multi-purpose spaces.

The accessibility standard is:

Everyone will live within a 250m walk of a 0.2ha usable amenity greenspace, play space or natural/semi-natural greenspaces

When carrying out a site appraisal, developers should assess the distance of these three types of open space relative to the site, providing details on plan form. The distances should not be “as the crow flies” but based on a network analysis using streets and paths, access points to open spaces and highlighting barriers to those spaces. For larger sites the network analysis should be measured from several points around the site.

Quality Standard

The quality of a greenspace is an assessment-derived scoring based on work undertaken as part of the Open Space Audit carried out in 2011. It measures the quality of spaces against set criteria. The quality measure has two main uses: to identify where investment is needed in existing spaces, and to ensure that new spaces meet/exceed the quality standard. The quality standard is:

All publicly usable open spaces should meet or exceed the Threshold Score set out in Table 2.

Where a space is identified as being below the Threshold Score shown in Table 2 this indicates the quality of that space is below standard and requires investment. All new provision should at least meet the minimum threshold scores in Table 2. The Open Space Audit provides further details of how the score figures are reached for each site and can be used to “test” the quality of a proposal. The quality of existing sites can also be checked using the Audit. An example of the scoring sheet used can be found in Appendix 3.

TYOLOGY	MAXIMUM SCORE	THRESHOLD SCORE
Parks and Gardens	130	40%
Amenity Greenspace	100	20%
Play space	97	40%
Green (open space) corridors	50	40%
Natural/semi-natural greenspaces	114	30%

Table 2 Quality scorings for different typologies of open space (Open Space Audit (2011))



Quantity Standard

This is the amount of publicly available open space per population and is expressed as hectares (ha) per 1000 people. The standard for new developments is:

All new housing developments should provide/access 1.5ha of publicly useable space per 1000 people

This equates to **15sq.m per person** and allows amenity space, equipped play areas and natural/semi-natural greenspaces to be provided within a site. **Sites should provide this quantity as a minimum where the accessibility standard identifies a need (i.e. by a network analysis of the surrounding area). Where a need is not identified sites should provide an equivalent financial contribution as agreed with Planning Services.**

This standard is in response to an analysis carried out of good open space provision on new development sites in the last 5 years, and seeks to work towards an objective of the Open Space Strategy to have 100% of all households within 5min of a 2ha greenspace. It also takes account of areas in West Dunbartonshire where there are high standards of open space per 1000 whilst seeking to boost provision in areas which have much lower levels.

The projected population of any development is calculated using the number of bedrooms. Developers should use Table 3 to work out the average occupancy for their site. Appendix 1 provides worked examples of how this is done.

DWELLING SIZE	HOUSEHOLD SIZE	QUANTITY OF OPEN SPACE
1 bed	1.3	19.5 sq.m (15 x 1.3)
2 bed	1.9	28.5sq.m (15 x 1.9)
3 bed	2.5	37.5 sq.m (15 x 2.5)
4 bed	3.0	45.0 sq.m (15 x 3.0)
5 bed	3.3	49.5 sq.m (15 x 3.3)

Table 3 Average household occupancy based on Scottish Household Survey (2013)

Developments will also have to look at the green network opportunities identified in Part 1 to determine what form the open space should take to ensure a mix of play spaces and semi-natural green space, green corridor, etc.

The Council seeks to ensure that people have good access to spaces which are at least 0.2ha in size. Where larger sites would provide more than this in open space it can be multi-functional and needn't be one large area. For example, a Multi Use Games Area could be provided along with a flat open grassed area, or a woodland walkway could be combined with an equipped play area in another part of the site.



Dalquhurn, Renton

How will these standards be used?

Accessibility, quality and quantity will be used to **inform provision** of open space for new development in West Dunbartonshire.

Developers will need to demonstrate that the amount of open space they propose on a site is based on an assessment of these measures.

Accessibility is a key objective for the Council so even if a development site is in an area which has a good general provision of open space, if these are not readily accessible from the site i.e. within 250m, then provision on-site will have to be made or works carried out to improve accessibility e.g. a footbridge over a river, new footpath connection.

Planning Services will provide **further advice** on the use of these standards and the specific requirements for development sites as part of pre-application discussions.

On-site Provision for Residential Developments

Open spaces should be designed into the proposal at an early stage in the process and the open space standards of accessibility, quality and quantity are used to determine what level of on-site provision there should be. **Design Statements** should be a record of the appraisal carried out of the existing green network and set out justification for the level of provision.

Each site is unique but the Figure 3 identifies the thought process applicable to all sites requiring on-site provision.

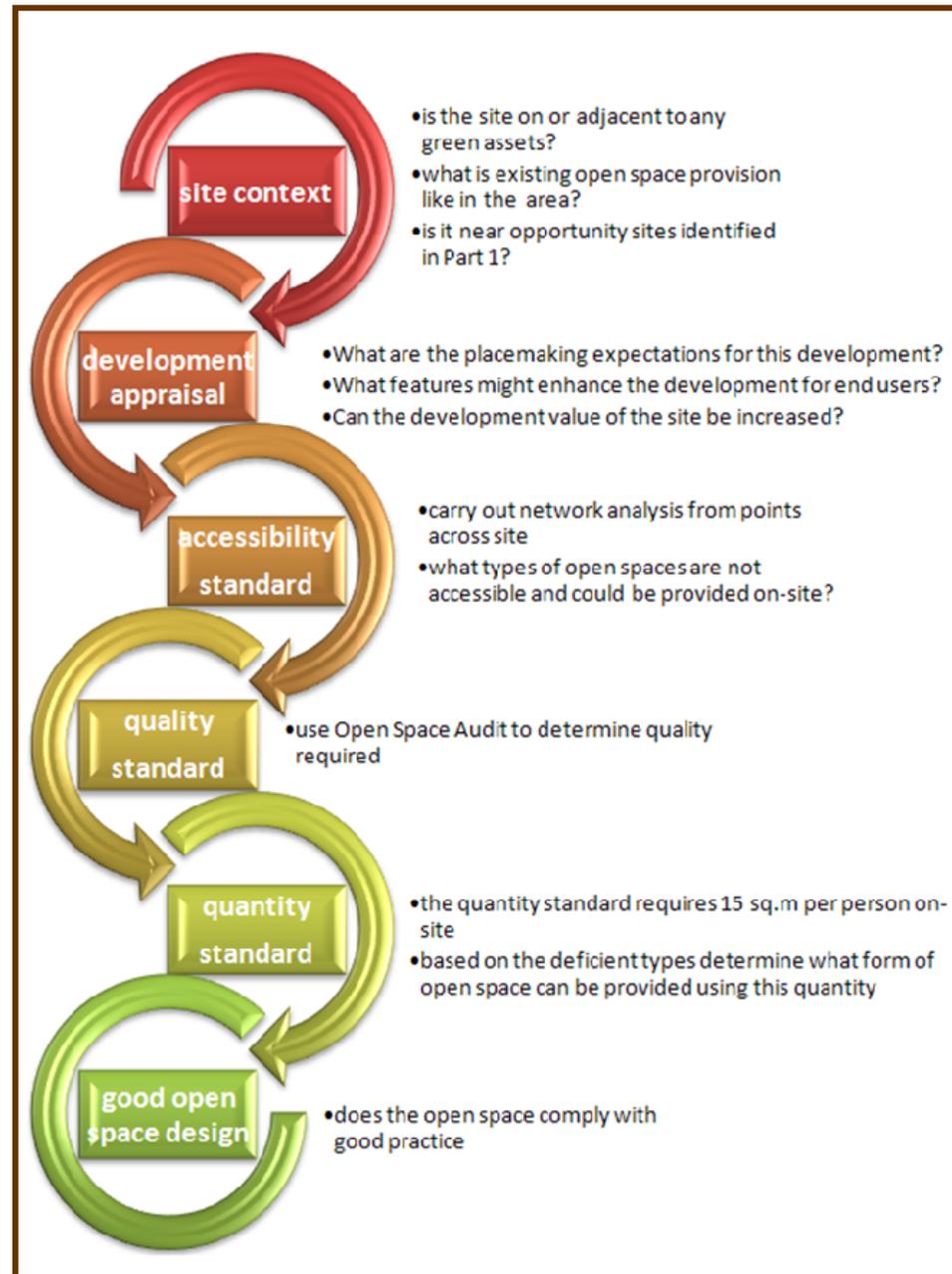


Fig 3 Diagram illustrating site appraisal and design process

“Developers will need to demonstrate that the amount of open space they propose on a site is based on an assessment of these measures.”

p33, GNSG



East End Park, Dumbarton

Our Green Network

The worked example (1) in Appendix 1 demonstrates how to calculate on-site provision based on the projected population. A site of 80 units has to provide 4839 sq.m. This could be multi-functional spaces e.g. SUDS and wetland diversity with a kick-about space. Each site is unique and the Design Statement should demonstrate why particular typologies are promoted. Their location and design should reflect best practice and create viable spaces i.e. not fractured.

If a site doesn't wholly provide the required area then it may be possible in some instances to meet the shortfall with a financial contribution to enhance the green network nearby. This is discussed below. Opportunity sites identified in Part 1 and projects being brought forward by Greenspace will be preferred.

Developer Financial Contributions

Developer contributions will apply in a number of situations:

- smaller sites of less than 10 units;
- where meeting the quantity standard for on-site provision is not appropriate, e.g high density urban areas;
- where a site is accessible to open spaces but those spaces are of a poor quality; and
- where sites are accessible to good quality open spaces but a contribution to the green network is required.

What will the contribution be?

The contribution is a flat rate of **£30 for every sq.m.** of open space required for the site, equivalent to £450 per person. This figure is based on what it would cost to provide a facility 2000sq.m (0.2ha) in size which includes a small play park, kick-about area, biodiversity area and path connection. Excluding land costs, this would be in the region of £60,000.

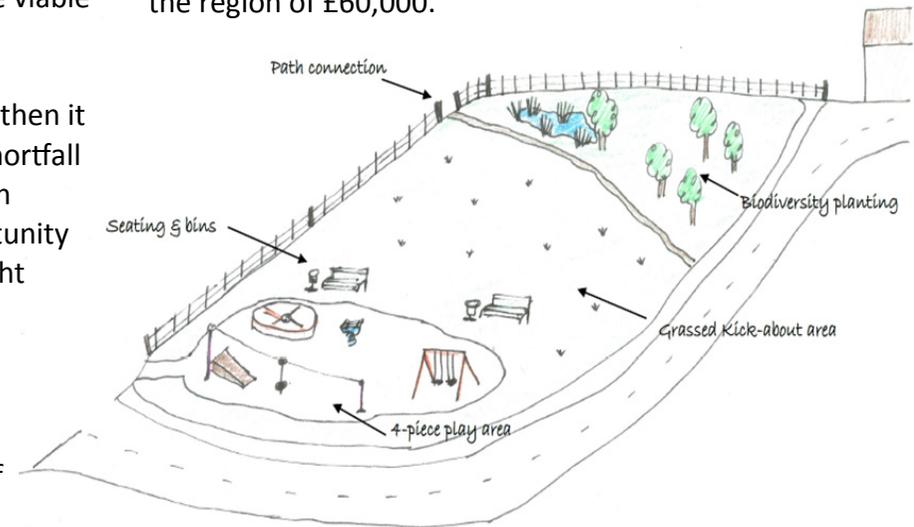


Fig 4 Theoretical park used to calculate contribution

To calculate the contribution the first step is to work out how much open space would have been required for the site using the quantity standard and estimated site population. For example, for 45 people at 15sq.m per person the area of open space would be 675sq.m. The off-site contribution would therefore be £30 x 675 sq.m - £20,250 (£450 per person).

Appendix 1 provides some further worked examples.

Where will the contributions go?

Developing upon the context set out in Part 1, a schedule of green network projects will be developed by Planning Services and Greenspace. This will allow for the improvement of existing facilities and the creation of new ones as identified in Part 1.

Financial contributions will be paid to the Council and ring-fenced for the identified project. When an application is determined, a period of time will be agreed during which the financial contribution must be spent. Should the contribution not be spent in this timeframe, the money will be returned to the applicant.

What is the mechanism?

Financial contributions can be made through either the section 69 of the Local Government Act or tied to the land title through a section 75 planning obligation (Town and Country Planning (Scotland) Act 1997 as amended by the 2006 Act. Discussions should be held with Planning Services at an early stage to discuss the most appropriate mechanism. In most instances financial contributions are required prior to any planning consent being issued.



Play park, Haldane

Part 3—Design Guidance

Introduction

Part 3 sets out the Council's **expectations** for the design of new sites in order to maximise the benefits to the green network.

The Local Development Plan (LDP) sets out within **Policy GN2** a requirement that the design of new development follows the Integrating Green Infrastructure approach and incorporate water management, access networks, habitat enhancements and open space within new development. Integrating these four green infrastructure components successfully will help to enhance and expand the green network.

The Integrating Green Infrastructure approach puts green infrastructure on an even footing with four other crucial infrastructures (water, waste, energy and transport – collectively referred to as 'grey infrastructure') which together are integral to the delivery of successful, healthy and vibrant places.

When designing the green infrastructure, consideration should be given to the six placemaking qualities: distinctive, welcoming, safe and pleasant, easy to move around, resource-efficient, adaptable. These are set out in more detail in **Policy DS1** of the LDP

Policy GN2

Development will be required to follow the Integrating Green Infrastructure approach to design by incorporating SUDS, open space, paths and habitat enhancements at a level proportionate to the scale of development and in accordance with Supplementary Guidance.

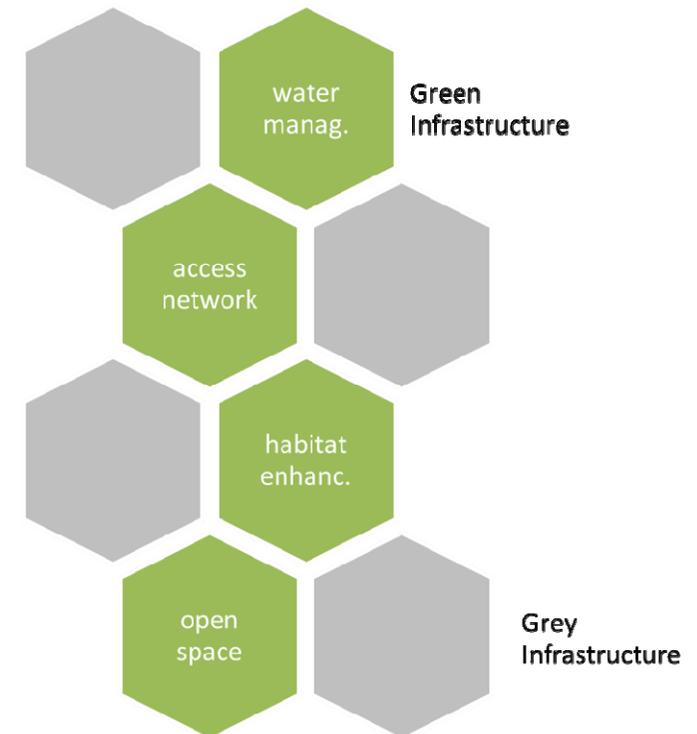


Fig 5 Relationship between green and grey infrastructure

Planning Application: Information Requirements

Successfully integrating green infrastructure into new development requires a firm understanding of the proposed site and its context. The possibilities for open space and other green infrastructure provision on a site are unique to that site and an appraisal of the site and its surroundings should be undertaken. Where a Design and Access Statement is required it should form part of that appraisal. For other sites an assessment in the form of a planning statement can be submitted.

Once a proposed development site has been appraised in the context of the existing and surrounding green network, consideration should be given as to how the necessary infrastructure – including green infrastructure – can be designed in a way that maximises benefit to the green network.

The following information should be provided for the proposed green infrastructure as part of the Design and Access Statement/Planning Statement:

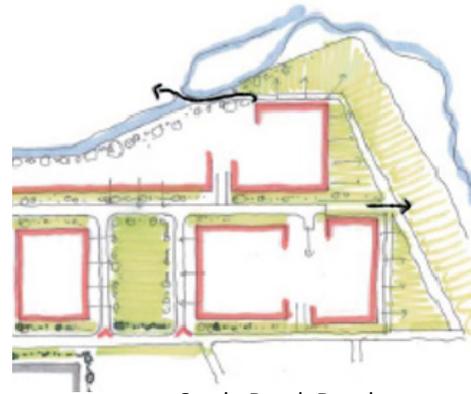
1. Location and Size

Include a scaled plan of the proposal using the B-plan approach advocated in Green Infrastructure: Design and Placemaking (Scottish Government publication, p20). This helps identify the relationship between buildings, public spaces and private spaces. Sizes of public spaces should be annotated on plans.



2. Connections to existing green networks

Map the existing and proposed connections on a block plan.



Castle Road, Dumbarton
(drawing courtesy of Ark Architecture)

3. Function of Green Infrastructure

The best value spaces are multi-functional. The planning submission should include an assessment of function and Appendix 3 provides a useful checklist developed by Fife Council (shown below).

Functions of green infrastructure		New green infrastructure proposed through this development provides:		
		Major provision	Some provision	No provision
Active travel routes				
Opportunities for play				
Biodiversity				
Sport and recreation				
Landscape setting				
Drainage and flood alleviation				
Community focus				
Food production				
Enterprise opportunities				

4. Details of the provision

Include a breakdown of the green infrastructure required for the site and provide details. For example, planting schedules, path specifications, biodiversity values, hard surfacing, seating and litter provision.



Faifley Knowes

“ . . . the design of new development [should] follow the Integrating Green Infrastructure approach and incorporate water management, access networks, habitat enhancements and open space within new development . . . ”
p38, GNSG

Design of Green Infrastructure

This section sets out the principles for designing Green Infrastructure into new development. These will be used to assess proposals submitted for planning permission.

Design Criteria: Usable Open Space

Open spaces should be ‘fit for purpose’ and multi-functional. They should be designed with the following criteria in mind:

✓ distinctive landscape features or local habitats should be retained and enhanced to help form locally distinctive spaces;

✓ open spaces should have clearly defined public/private boundaries and features to prevent unauthorised vehicle access;



✓ a sense of ownership of spaces can be created through design, use of quality materials and community involvement at an early stage;

✓ open spaces should have no hiding places created by corners, fencing or landscaping and have good natural surveillance with properties overlooking. They should be well-lit, e.g. using downlighters, at key areas such as entrances;



✓ amenity open space around buildings should be appropriate to the scale of the building – larger, taller buildings require more;

✓ children’s play areas and kick-about spaces should be in a central location and not on the periphery of a site or positioned to the rear of dwellings;



✓ children’s play areas should be robustly designed and meet the minimum quality standards set by the Council. The minimum size for a children’s play area is 400sq.m and should contain at least 4 pieces of equipment;

✓ play areas should incorporate a variety of innovative play equipment. Detailing such as fencing, surfacing, seating, bins and signage should reflect characteristics and materials of the local area;



✓ multi use games areas (MUGAs) should be at least 680 sq.m and conform to Council standards; and

✓ youth shelters should not be sited too close to footpaths so to avoid intimidation by users. Facilities and fittings should be suitable for their intended use and be robust.



Design Criteria: Access Networks

A successful green network needs to have good connections between the different open spaces that exist in and around our settlements. New development has a role to play in this by ensuring that sites connect to the green network wherever possible.

When appraising the context of a site, consideration should be given to what existing green network opportunities exist and how the development site might connect to that green network. It could be by **direct linkages** e.g. opening up a path access, forming a semi-natural space next to an existing semi-natural space or having a green corridor which will extend an existing corridor than runs along an embankment. Alternatively, **indirect linkages** may be possible such as encouraging easy access through a site to an open space or extending a cycle route nearby.

Many of the opportunities identified in Part 1 are “connection opportunities”. It is realised that large parts of West Dunbartonshire do have open space but the access and green corridors are incomplete. Access and connections should be designed with the following criteria in mind:

- ✓ Paths need to reflect desire lines with minimal road crossings;

- ✓ Sites may require enhancing of existing path connections as well as forming new connections to improve accessibility to the green network;



- ✓ Path connections should be to destination points such as schools, shops and transport hubs with cycle parking at destination points to encourage cycling. Further guidance on cycle parking can be found in Transport Scotland’s “Cycling by Design” (2010);



- ✓ The banks and margins of watercourses and canals often provide effective and attractive access routes for walkers and cyclists. Naturalised SUDS provide a similar feature and a potential location for active travel routes separate from the road network;

- ✓ Paths should be Disability Discrimination Act (DDA) compliant where possible, and of a construction standard and width which is appropriate to the level of use. They should be designed to withstand water run-off or incorporate SUDS to improve drainage. Main routes should be to an adoptable standard, self-binding materials may be appropriate for low key routes; and



- ✓ Paths should generally have wide verges and no vigorous growing plants to reduce sight lines or create hiding places. Entrances should be wide and avoid use of steps or steep grades.



The Council's **supplementary guidance on Residential Developments** provides further detail on how sites can be integrated into their surroundings. Secured by Design provides good guidance on creating safe environments especially in relation to path location, width and use of landscaping.

Design Criteria: Water Management

The Water Environment (Controlled Activities) (Scotland) Regulations 2011 require all surface water from new development to be treated by a sustainable drainage system (SUDS) before it is discharged into the water environment, except for single houses or where the discharge will be into coastal water.

SUDS help to protect water quality and reduce potential for flood risk by facilitating natural drainage of surface water run-off (including roof water). They encourage infiltration and attenuation to prevent and reduce pollution from diffuse urban sources and release capacity in water management infrastructure. If carefully designed and constructed these SUDS can be multi-functional green infrastructure elements, providing high amenity and biodiversity value.

Where new infrastructure is to be provided in the riparian zone, any alterations to the landform (e.g. new paths or embankments) should not impact on the functionality of the floodplain. SEPA can provide further guidance/best practice on the need to maintain distinct 'buffer zones' and/or 'stand-off areas' between the water environment and new infrastructure.

Water management should be designed with these criteria in mind:

✓ the Integrating Green Infrastructure approach starts by considering the 'water journey' through a development site;

✓ a surface water management plan can be created, based on naturalised SUDS features, as the building blocks for the spatial layout of the development proposal;

✓ surface water run-off from new development must be routed through SUDS before it is drained into the water environment;



✓ adequate space to accommodate SUDS must be included within site layouts, especially when considering applications for planning permission in principle;

✓ SUDS systems should be multi-functional, creating a positive and distinctive landscape setting and maximising the biodiversity value of a site; and



✓ the design of SUDS should respond sensitively to site topography and landscape character.

Table 4 on page 43 illustrates some examples of SUDS solutions. Further detail on SUDS is provided in best practice guidelines issued by SEPA and CIRIA.

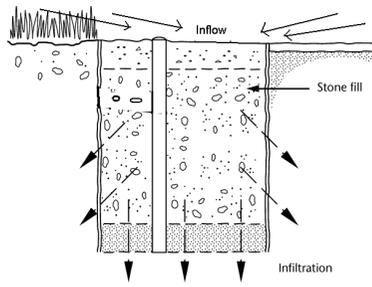
<p>Rain Gardens Shallow depressions planted with species able to tolerate short periods of inundation in free-draining soil. Slows rainfall run-off received from a downpipe or hard surface and offers some filtration.</p>		<p>Filter strips Vegetated, usually grassy, areas of broad, flat and gently sloping land over 1m wide which intercept rainfall run-off from a site as overland sheet flow. Can be planted with native plants to create useable open space including wildflower meadows</p>	
<p>Permeable (or porous) surfaces Including block pavers and some forms of concrete which allow water to drain through vertical holes or gaps between individual units. Allows run-off to percolate naturally into the ground or a collection chamber, reducing run-off from hard surfaces.</p>		<p>Bio-retention areas Landscaped shallow depression specifically to capture and remediate polluted run-off from roads and car parks. Reduces run-off at localised flooding. Can be formally landscaped with shrubs and herbaceous plants</p>	
<p>Swales Linear, shallow channels that specifically transport water, for example from one SUDS feature to another. Slows down run-off and allows natural infiltration into the soil.</p>		<p>Detention basins Vegetated basins which temporarily hold water allowing gradual infiltration into the soil and removal of pollutants. Potentially high ecological value.</p>	
		<p>Ponds Permanent water bodies which can add significant value in terms of amenity and biodiversity. Over-engineered and fenced-off ponds should be avoided to ensure SUDS ponds are integrated into the landscape.</p>	

Table 4 Examples of different SUDS solutions

Design Criteria: Biodiversity and Habitat Networks

Many sites will have opportunities to create/enhance habitats, create connections between those habitats or increase the biodiversity of the site through specific planting. A spatial planning tool known as the Integrated Habitat Network model should be used to identify where wetland, woodland and grassland within a proposed development would be most beneficial allowing for integration of networks. More details of this can be found [here](#).

Sites should be designed with the following in mind:

- ✓ landscape design should be consistent with the wider landscape, e.g. continuation of an off-site woodland, formation of semi-natural grassland on rural fringes



- ✓ the site attributes of soil, topography and existing drainage should help determine what works best for a site;

- ✓ naturalised SUDS create opportunities to enhance and expand wetland and create other habitats for biodiversity;



- ✓ existing habitats can be linked with wide green spaces or riparian corridors to address fragmentation;

- ✓ care is need to avoid the creation of unsustainable habitats;

- ✓ existing habitats should be retained and enhanced with interpretation boards to develop opportunities for education on-site;



- ✓ specimen tree planting is encouraged in key locations such as entry points, along major paths or in public parks;

- ✓ planting should mostly be appropriate native species with some selective non-native species e.g. beech hedging.



- ✓ planting design should consider how to maintain seasonal interest and be linked with SUDS features; and

- ✓ there should be a balance between habitat protection and access. Some sites may need low impact design solutions, e.g. boardwalks in wetlands. Interpretation boards can be used to promote responsible access. Some routes may need to be designed to avoid disturbance to sensitive areas;



Stewardship Over Time

Well-designed green infrastructure should continue to deliver multiple benefits into the future. Consideration to how the various features of the green network is to be maintained will ensure that it remains 'fit for purpose'.

Just as 'grey infrastructure' elements such as roads and drains require ongoing maintenance, so does green infrastructure. Many of the problems associated with the quality of existing open spaces reflect the lack of initial consideration given to funding and management mechanisms for **effective long term management** of green infrastructure. Good stewardship ensuring the long term quality of green spaces is vital to a well-functioning green network.

Partnership working and agreements between public agencies and other organisations may be necessary to recognise the multi-functional nature of the green infrastructure and ensure that resources that would otherwise be spent on 'grey' infrastructure are allocated to the effective management of the green infrastructure.

Applicants should demonstrate how their design proposals will be **sustainably managed** over the long-term including financial models for future funding of appropriate management and maintenance.

Planning conditions and legal agreements may be used to ensure that new developments provide details of the ongoing maintenance of sites. There are different options for management and maintenance depending on the tenure and nature of the site. For private housing the preferred method is a requirement for maintenance and management of all common areas to form part of the land title for all owners of a site. Registered Social Landlords will have to provide evidence of a regular maintenance contract.

In some cases the Council is willing to consider land transfer and adoption provided:

- the provision meets the relevant quality standards
- the developer pays all legal costs relating to the transfer of land
- a commuted sum is paid to cover the maintenance of the site for a period of between 15 and 25 years.

Enhancing through Temporary or Advanced Greening

Temporary greening of stalled development spaces offers opportunities to deliver social, environmental and economic benefits. Temporary greenspaces can:

- improve the appearance and reputation of an area
- contribute to the green infrastructure of an area
- provide safe and pleasant places for local people

The "Stalled Spaces" report by Greenspace Scotland looks at different ways in which temporary greening might be achieved.



Advanced greening relates to sites which have a planning consent and where there is an opportunity to install green infrastructure such as SUDS or advance greening such as landscaping or open space/habitat creation before any buildings are in place. This has the advantage of enhancing the development value (mature landscaping) and reduces the impact on neighbouring buildings through screening or visual improvement to derelict sites.

Where there are applications for planning permission in principle or masterplan proposals the opportunities for temporary or advance greening will be discussed in line with the local development plan.

Pre-Application Discussions

Development Management encourages pre-application meetings with developers to discuss what would be appropriate for their site in terms of green network provision, based on the requirements set out in Part 2 of this guidance.

This discussion may include input from the Council's Greenspace and some of our other partners such as GCV Green Network, SNH and Forestry Commission. Furthermore, some of the most successful places involve the input of the local community from the outset and developers should look at ways to engage local people early in the process, including the use of charrettes or similar methods of community engagement.



Appendix 1—Worked Examples

Using the Quantity Standard—Worked Example 1

A residential site proposes a mixed development of 80 units comprising flats, terraced, semi-detached and detached properties. There are two blocks of 12 flats consisting of 6 1-bed and 18 2-bed flats. There are 56 houses comprising a mix of eight 2-bed terraced houses, thirty 3-bed semi-detached houses and eighteen 4-bed detached properties. What is the expected occupancy and what should the minimum open space provision be?

All new housing developments should provide/access 1.5ha of publicly useable space per 1000 people

STEP 1 – Work out the number of bedrooms.

Unit Type	Numbers of Units
1 bed	6
2 bed	26
3 bed	30
4 bed	18
TOTAL	80

STEP 2 – Apply the average household size figures to the bedrooms using Table 3

Unit Type	Numbers of Units	Factor	Persons
1 bed	6	1.3	6 x 1.3 = 7.8
2 bed	26	1.9	26 x 1.9 = 49.4
3 bed	30	2.5	30 x 2.5 = 75
4 bed	18	3.0	18 x 3.0 = 54
TOTAL	80		186.2 persons

STEP 3 – Add last column to get projected population and multiply this figure by the minimum quantity standard i.e.
 $186.2 \times 15 \text{ sq.m} = \mathbf{2793 \text{ sq.m.}}$

This is the amount of open space to be provided for a development proposal of this size. The form of this needs to be determined using the site appraisal method.

Using the Quantity Standard for Small Sites—Worked Example 2

A small housing opportunity site proposes a block of four one-bed flats. What is the expected occupancy rate and the minimum open space provision?

STEP 1 – Work out the number of bedrooms.

Unit Type	Numbers of Units
1 bed	4
2 bed	0
3 bed	0
4 bed	0
TOTAL	4

STEP 2 – Apply the average household size figures to the bedrooms using Table 3

Unit Type	Numbers of Units	Factor	Persons
1 bed	4	1.3	4 x 1.3 = 5.2
2 bed	0	1.9	0
3 bed	0	2.5	0
4 bed	0	3.0	0
TOTAL	4		5.2 persons

STEP 3 – Add last column to get projected population and multiply this figure by the minimum quantity standard i.e.

$$5.2 \times 15 \text{ sq.m} = \mathbf{78 \text{ sq.m.}}$$

This is the amount of open space to be provided. However it is a small site of less than ten units and the GNSG requires a financial contribution instead of providing on-site.

STEP 4 – Multiply the open space provision by financial contribution rate of £30 per sq.m

$$78 \text{sq.m} \times \text{£}30 = \mathbf{\text{£}2,340}$$

All new housing developments should provide/access 1.5ha of publicly useable space per 1000 people

Everyone will live within a 250m walk of a 0.2ha usable amenity greenspace”, “play space” or “natural/semi-natural greenspaces

Accessibility Standard: On-site Provision or Financial Contribution—Worked Example 3

The development site is a gap site within a built up area. It is 0.41ha in size and the proposal is to build a single block of flats. There is a mix of 15 one-bed and 30 two-bed flats. What would the developer be required to provide using the GNSG?

All new housing developments should provide/access 1.5ha of publicly useable space per 1000 people

Everyone will live within a 250m walk of a 0.2ha usable amenity greenspace”, “play space” or “natural/semi-natural greenspaces

STEP 1 – Using the flow chart in Appendix 2, the proposal is for more than ten units so the first step is to see if it meets the accessibility standard i.e. is it within 250m of a 0.2ha space? The site is not, so it is required to provide one on-site based on estimated population.

STEP 2—Work out the number of bedrooms and apply the average household size figures using Table 3.

Unit Type	Numbers of Units	Factor	Persons
1 bed	15	1.3	15 x 1.3 = 19.5
2 bed	30	1.9	30 x 1.9 = 57
TOTAL	45		76.5 persons

STEP 3 – Add last column to get projected population and multiply this figure by the minimum quantity standard i.e.

$$76.5 \times 15 \text{ sq.m} = \mathbf{1147.5 \text{ sq.m}}$$

This is the amount of open space to be provided.

The site is in an urban area where a high density development is supported. The applicant has made a case for making a financial contribution to upgrade play equipment in a large park less than 400m walking distance. It is agreed that off-site provision is more appropriate in this instance so the contribution needs to be calculated.

STEP 4 – Multiply the open space provision by financial contribution rate of £30 per sq.m, i.e

$$1147.5 \text{ sq.m} \times £30 = \mathbf{£34,425.}$$

Therefore for this site a financial contribution of £34,425 is required to upgrade play equipment in the park.

Using the Quantity Standard for Large Sites—Worked Example 4

A large housing development is proposed for a greenfield site (5.15ha). It is close to an existing woodland and a path network which leads into the wider countryside. There are 115 dwellings proposed for the site, a mixed of detached, semi-detached and terraced properties. What would the developer be required to provide using the GNSG?

1 bed terraced	12
2-bed semi-detached	18
3-bed semi-detached	30
3-bed detached	25
4-bed detached	30

STEP 1 - Using the flow chart in Appendix 2, the proposal is for more than ten units so the first step is to see if it meets the accessibility standard i.e. is the site within 250m of a 0.2ha amenity greenspace, play space or natural/semi-natural greenspace? The site is within 250m of a natural/semi-natural greenspace provided path links are made to connect into these areas from the site. In addition, there is an expectation that major residential developments provide an equipped play area if they are not within 250m of one (column 4, Table 1). The site appraisal identifies that there are no equipped play areas nearby. To meet the standards the site could combine provision i.e. have on-site provision and make an off-site contribution to make the woodland accessible.

STEP 2 – Work out the number of bedrooms and apply the average household size figures using Table 3.

Unit Type	Numbers of Units	Factor	Persons
2 bed	30	1.9	30 x 1.9 = 57
3 bed	55	2.5	55 x 2.5= 137.5
4 bed	30	3.0	30 x 3.0 = 90
TOTAL	113		284.5 persons

STEP 3 – Add last column to get projected population and multiply this figure by the minimum quantity standard i.e.
 $284.5 \times 15 \text{ sq.m} = 4267.5 \text{ sq.m}$

This is the total amount of open space required based on the estimated population. To provide on-site and make an off-site contribution this figure is split: a 0.2ha (2000sq.m) equipped play space will be provided within the site and the remainder will be a financial contribution to enhance access to and within the woodlands.

STEP 4 – The off-site financial contribution to enhance access to and within the woodlands will be less the area of the equipped play space i.e.

$$4267.5 \text{ sq.m} - 2000\text{sq.m} = 2267\text{sq.m}$$

$$£30 \times 2267\text{sq.m} = \text{£68,025}$$

The provision responds to the site context.

All new housing developments should provide/access 1.5ha of publicly useable space per 1000 people

Everyone will live within a 250m walk of a 0.2ha usable amenity greenspace”, “play space” or “natural/semi-natural greenspaces

Not all of the Site is Accessible? —Worked Example 5

A large housing development is proposed on a long, narrow site with the railway adjacent to the southern boundary. There are 104 dwellings proposed on the 2.8ha site: a mix of detached, semi-detached, terraced and flatted properties. What would the developer be required to provide using the GNSG?

All new housing developments should provide/access 1.5ha of publicly useable space per 1000 people

Everyone will live within a 250m walk of a 0.2ha usable amenity greenspace”, “play space” or “natural/semi-natural greenspaces

All publicly usable open spaces should meet or exceed the threshold score set out in Table 2.

STEP 1 - The proposal is for more than ten units so the first step is to see if it meets the accessibility standard i.e. is it within 250m of a 0.2ha amenity greenspace, play space or natural/semi-natural greenspace? The site is within 250m of a large park and recreation ground which is in need of an upgrade. However the railway separates the site from the park so that the walking distance is greater than 250m for most of the site except the flatted properties to the west. Improving connections by building a bridge is too expensive so some on-site provision is required. There is an expectation that major residential developments provide an equipped play area.

STEP 2 – Work out the number of bedrooms and apply the average household size figures using Table 3.

Unit Type	Numbers of Units	Factor	Persons
1 bed	24	1.3	24 x 1.3 = 31.2
2 bed	26	1.9	26 x 1.9= 49.4
3 bed	38	2.5	38 x 2.5 = 95
4 bed	16	3.0	16 x 3.0 = 48
TOTAL	104		223.6 persons

STEP 3 – All the 1 bed flats (24) are within 250m of the play area so need to be excluded from the calculation of amount of on-site provision required i.e. subtract 31.2 persons from the total:

$$223.6 - 31.2 = 192.4 \text{ persons}$$

STEP 4 - Multiply the numbers of people who aren't accessible to the open space to derive the minimum quantity standard provision for the site i.e.

$$192.4 \times 15 \text{ sq.m} = \mathbf{2886\text{sq.m}}$$

STEP 5 – Those properties who are accessible still have to pay a financial contribution to enhance the green network. This would be £450 per person (p34) i.e. 31.2 x £450 = **£14,040**

The site would have to provide 2886sq.m of open space (including an equipped play area) and make a financial contribution of £14,040.

Looking at Quality Standards — Worked Example 6

A residential development of 45 flats is proposed, a mix of 30 two-bed and 15 one-bed flats. Applying the accessibility standard, it is located close to an existing park and the canal. What would the developer be required to provide using the GNSG?

STEP 1 - The proposal is for more than ten units so the first step is to see if it meets the accessibility standard i.e. is it within 250m of a 0.2ha amenity greenspace, play space or natural/semi-natural greenspace? The site is within 250m of a park. The site has less than 50 units so an equipped play park is not expected on the site. The quality of that park needs to be assessed using the quality standard.

STEP 2 – the most recent Audit carried out for this site shows that there are a number of concerns about the play equipment, surfacing and path connections. Using the scoring the play area is below the 40% threshold and requires investment.

STEP 3 – A financial contribution is required based on the site population. Work out the number of bedrooms and apply the average household size figures using Table 3.

Unit Type	Numbers of Units	Factor	Persons
1 bed	15	1.3	15 x 1.3 = 19.5
2 bed	30	1.9	30 x 1.9 = 57
TOTAL	104		76.5 persons

STEP 4 – Add last column to get projected population and multiply this figure by the minimum quantity standard i.e.
 $76.5 \times 15 \text{ sq.m} = 1147.5 \text{ sq.m}$

This is the amount of open space to be provided.

STEP 5– Multiply the open space provision by the financial contribution rate of £30 per sq.m i.e.
 $1147.5 \text{ sq.m} \times £30 = \text{£ } 34,425$

For this site a financial contribution of £ 34,425 is required to help upgrade the park.

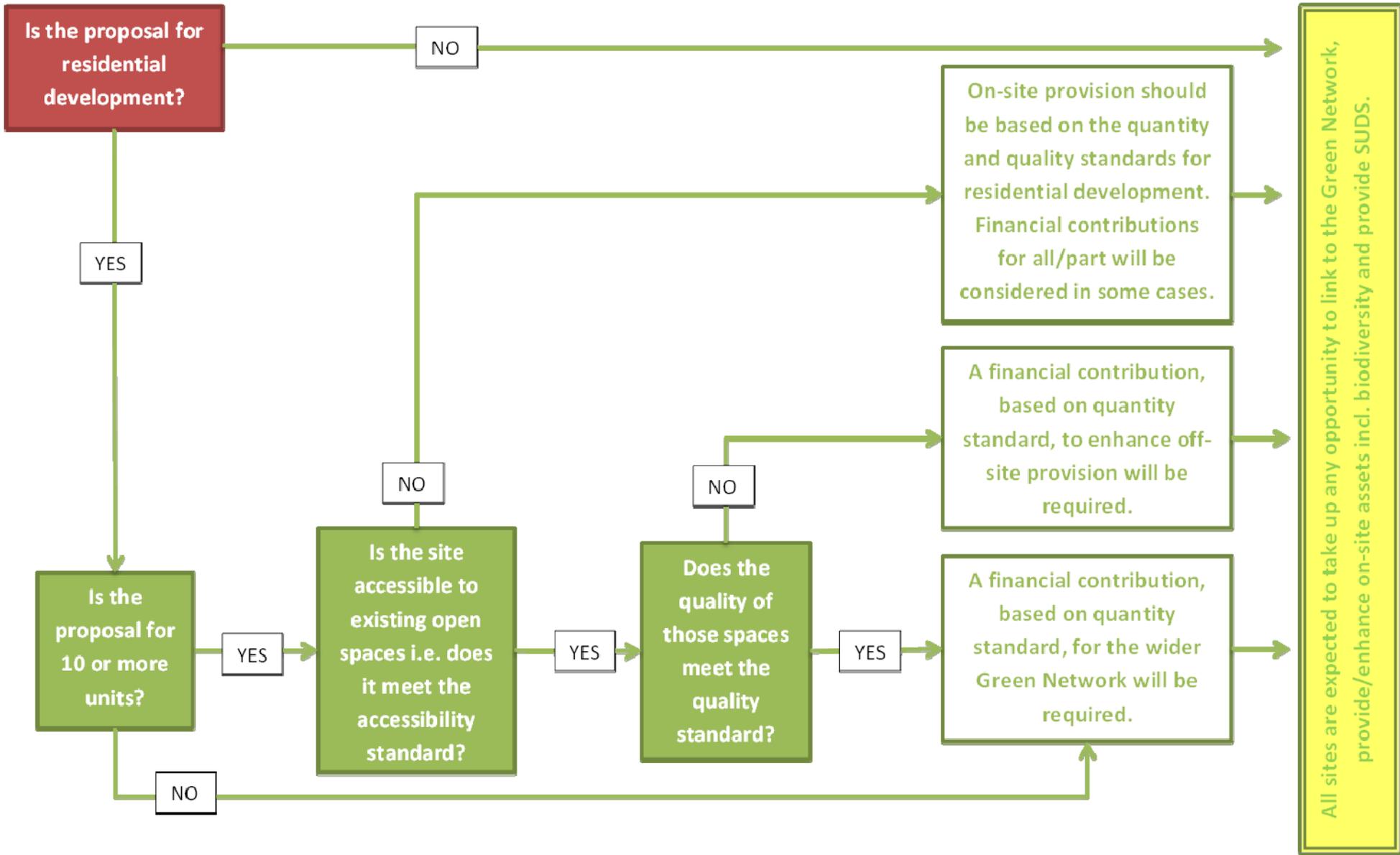
All new housing developments should provide/access 1.5ha of publicly useable space per 1000 people

Everyone will live within a 250m walk of a 0.2ha usable amenity greenspace”, “play space” or “natural/semi-natural greenspaces

All publicly usable open spaces should meet or exceed the threshold score set out in Table 2.

Appendix 2—Developer’s Flow Chart

Developer's Flow Chart



Appendix 3—Assessment Sheets for GI Function and Open Space

Assessment Sheet for GI Function

Functions of green infrastructure		New green infrastructure proposed through this development provides:		
		Major provision	Some provision	No provision
Active travel routes				
Opportunities for play				
Biodiversity				
Sport and recreation				
Landscape setting				
Drainage and flood alleviation				
Community focus				
Food production				
Enterprise opportunities				

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Further Reading

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