Appendix 1 - Table of proposed Council responses to comments received on SG05 - Green Infrastructure and New Development

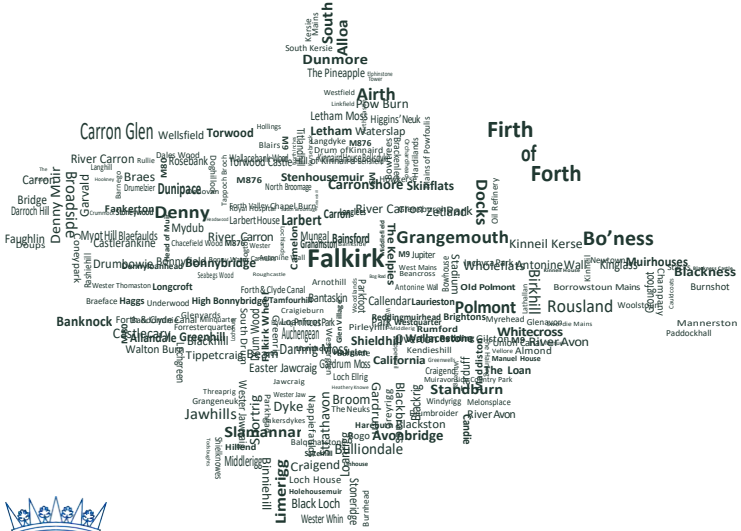
Organisation	Para / Section	Comment	Response
Helen M Scott	11. Management and maintenance	Takes issue with the Council's preference for open space in residential developments to be maintained by an appointed factor. Residents have little control over increases in factor fees, and it is unfair neighbouring residents can use facilities without contributing to the maintenance costs. Residents should get a reduction in Council Tax if they are paying factoring fees.	Comment noted. The Council already maintains a large estate of open space throughout the Council area. Unless costs for maintenance are met in full, the Council generally does not take on responsibility for maintaining new areas in open spaces in private developments due to the complexities, resource issues and long term burdens involved with Council adoption. The Property Factors (Scotland) Act 2011 has improved standards in property factoring, requiring factors to follow a code of conduct when communicating charges to homeowners. Paying factor fees does not qualify for a reduction in Council Tax.
NatureScot	General	Support and welcome the content of SG05. Good use of illustrations and clear definitions/explanations. Welcome the use of local examples rather than stock photos or commonly used examples. Inclusion of marine planning policy is a welcome addition and one that is often overlooked. Strongly support the key principle that water management should be used positively and creatively. Also support the key principles for Wildlife and the principle that existing habitats should be treated as important assets.	Comments noted and welcomed.
Paths for All	General	Welcome SG05. FC can build on their already exemplar approach to green infrastructure –demonstrated by The Helix. Support the use of the Place Standard as a tool for placemaking; the key principles for developments on open space and active travel; and the inclusion of maintenance in SG05.	Comments noted and welcomed.

Historic Environment Scotland	General	Welcome SG05 and the recognition of the strong role that local heritage can play in creating a sense of place. Strategic green infrastructure assets and active travel routes are of cultural significance (Canal network and the Antonine Wall) and we welcome that this has been identified as an important contributor to great places.	Comments noted and welcomed.
Scottish Water	General	No additional comments. Offers thanks for considering previous suggestions and implementing the changes.	Comments noted and welcomed.

Green Infrastructure and New Development

Draft Finalised Supplementary Guidance SG05

May 2021



Falkirk Council

Supplementary Guidance

A suite of 14 supplementary guidance notes (SG's) is currently being produced by the Council in conjunction with LDP2. The number of SGs is reducing from seventeen to fourteen, as three of the adopted SGs are being consolidated to provide a more comprehensive and integrated approach to guidance. The SGs seek to provide more detailed guidance on how particular local development plan policies should be applied in practice.

These SGs form a statutory supplement to LDP2, and are intended to expand upon planning policies and proposals contained in the plan.

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

- SG01 Development in the Countryside
- SG02 Neighbourhood Design
- SG03 Residential Extension and Alterations
- SG04 Shopfronts
- SG05 **Green Infrastructure and New Development**
- SG06 Affordable Housing
- SG07 Biodiversity and Development
- SG08 Local Nature Conservation and Geodiversity Sites
- SG09 Landscape Character Assessment and Landscape Designations
- SG10 Trees and Development
- SG11 Frontiers of the Roman Empire (Antonine Wall) World Heritage Sites
- SG12 Listed Buildings and Unlisted Properties in Conservations Areas
- SG13 Developer Contributions
- SG14 Renewable and Low Carbon Energy

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1 Introduction

2 Setting the scene

3 Green Infrastructure Design Process

4 Well Being: Open Space

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7 Well Being: Landscaping

8 Water: Sustainable Drainage

9 Water: Restoring the Water Environment

10 Wildlife

11 Management and Maintenance

Appendix 1: Green Infrastructure and New Development Checklist

Appendix 2: Local Open Space Audit Template

Appendix 3: Useful Contacts

1. INTRODUCTION

About this Document

Our area is blessed with a diversity of green and blue spaces from street trees, playspaces, wildlife sites through to waterbodies, parks, woodlands and active travel routes. Such spaces are collectively known as ‘green infrastructure’ and, like other forms of physical infrastructure, are critical to the delivery of successful and sustainable places.

Green infrastructure supports many policy agendas at both national and local levels, including placemaking, community health and wellbeing, tourism, biodiversity, economic development and climate change. It can create a strong sense of place, strengthen landscape character and provide attractive places for people to relax, exercise and enjoy nature. When linked to form a wide green and blue network, green infrastructure can encourage active forms of travel, such as walking and wheeling, and improve connectivity for wildlife movement. It can also help us shift to a zero carbon future and manage surface water and flood risk in a sustainable way.

SG05 aims to promote well designed green infrastructure within new development. Specifically, this guidance covers:

- the national and local policy framework supporting and coordinating the provision of green infrastructure in the Falkirk Council area;
- how green infrastructure can be integrated into the design process, including some evaluation tools that can help review and improve green infrastructure provision for new development;
- key principles and good practice for specific types of green infrastructure;
- the process for determining a development’s recreational open space requirements and how financial contributions towards recreational open space will be determined;
- indicative financial sums for compensating the loss of existing open space; and
- particular requirements for the management and maintenance of green infrastructure.

The structure of the SG05 is based on Building with Nature’s accreditation scheme, grouping elements of green infrastructure under the themes of ‘well being, water and wildlife’ to present the key principles and good practice. All parts of the guidance should be read in conjunction with one another given green infrastructure has overlapping roles and functions. Planning policy and additional guidance, relating to green infrastructure, are signposted in this guidance where relevant.

As statutory supplementary guidance, SG05 is part of the development plan and, along with the Falkirk Local Development Plan 2 (LDP2), is a primary consideration in the determination of relevant planning applications. The guidance can be applied to all scales of development from large to small sites and to a variety of developments, including residential, business, commercial and community uses.

Most of the images in this guidance are local, real-life examples of successful green infrastructure and placemaking delivered by collaborative, cross-sectoral working. Some non-local images were sourced from other organisations, and we would like to thank these organisations for the use of their images.

2. SETTING THE SCENE

What is Green Infrastructure?

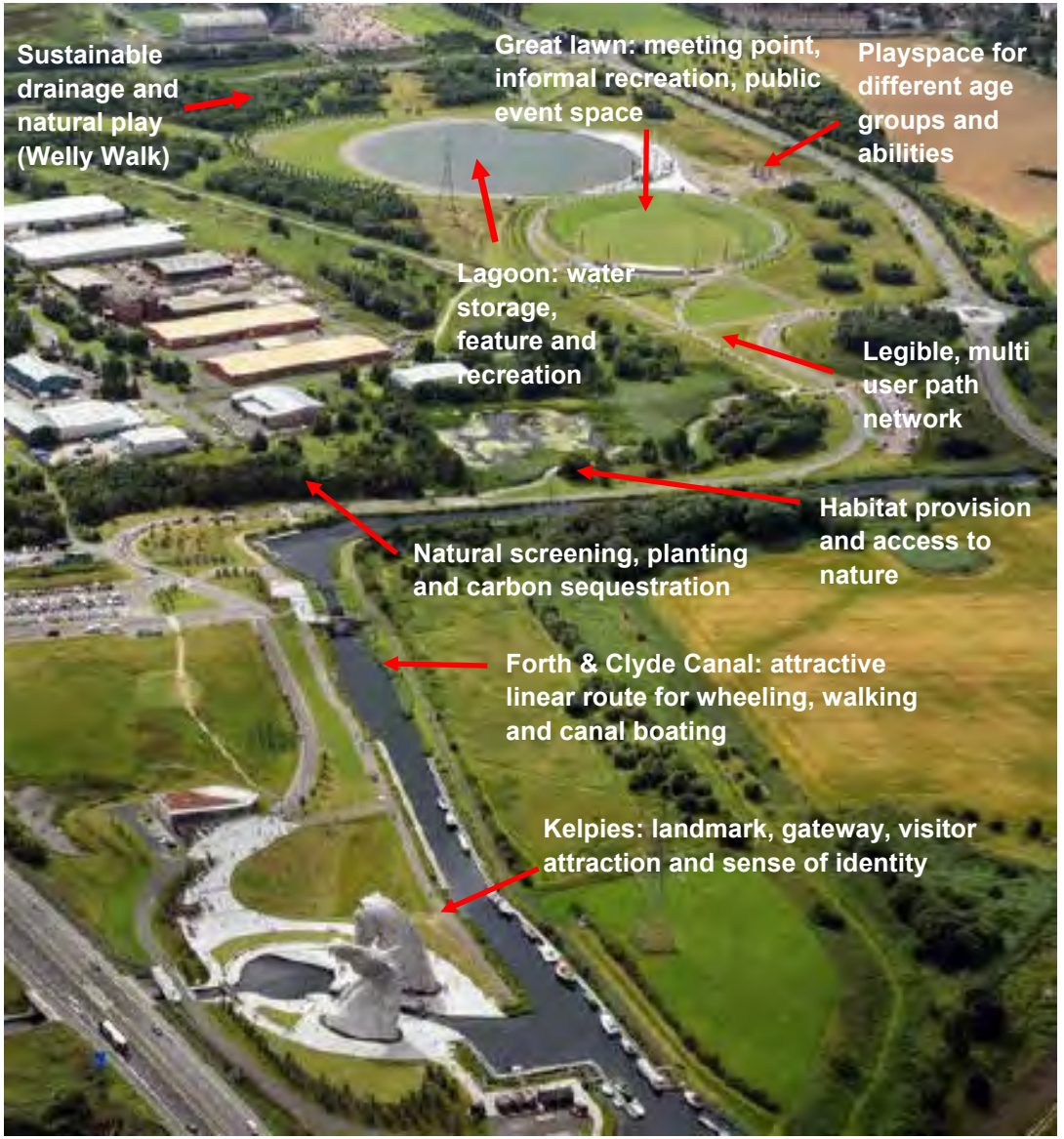
Green infrastructure (or blue and green infrastructure) is a general term for all natural and semi-natural green and blue spaces including:

- Public parks, playing fields, community growing spaces, allotments, sports areas, playspaces, passive open spaces, private gardens, landscaped civic spaces, burial grounds, green roofs and walls, trees, points of cultural/natural interest;
- Networks of natural or semi-natural habitats, such as woodlands, hedgerows, grasslands and peatland;
- Rivers, streams, ponds, lochs, lagoons, wetlands and man-made structures such as reservoirs and sustainable urban drainage systems;
- Cliffs, beaches and marshland; and
- Path networks, canals, river estuaries, road and rail verges.

Multi-functionality and interconnectivity are two important concepts in green infrastructure planning and design. The first term refers to the potential for green and blue spaces to serve different functions. Often, these functions overlap. For example, a river corridor can provide natural flood attenuation and valuable habitats for plants and animals while being an important landscape feature and recreational asset at the same time. Interconnectivity, on the other hand, is about creating an appealing environment that is accessible and easy to move around. The value of spaces can be greatly improved by linking them together into a green and blue network giving communities convenient and attractive access to residential areas, workplaces, community facilities, public transport and other nearby amenities. Falkirk's own green and blue network has been spatially defined in LDP2 and this has been reproduced elsewhere in this supplementary guidance (see Map 1, page 7).

Located between Falkirk and Grangemouth, The Helix is a great example of how a single location successfully incorporates various types of green infrastructure within an interconnected and multifunctional network (Figure 1). Featuring the famous Kelpies, The Helix also acts as an iconic landmark and gateway drawing people from over the world to the Forth and Clyde. Canal and the wider area.

Figure 1 The Helix - Green Infrastructure and Multi-functionality



Green infrastructure operates at different spatial scales of development from private gardens in residential properties through to large scale landscape features (Figure 2).

Figure 2: Green and Blue Network Hierarchy

Strategic Level: landscaped civic spaces, large public parks, country and regional parks, inventory battlefields such as the Battle of Falkirk II, long distance paths, forests, ecological and geodiversity sites, habitat networks, designed landscapes, formal gardens, the Antonine Wall World Heritage Site, Firth of Forth, rivers, the canal network, lochs, peatlands, wetlands etc.

LINKAGES

Neighbourhood: amenity green space, playing fields, sports areas, playspaces, allotments, community growing, active travel routes, burial grounds, urban woodlands, meadows, pocket parks, landscape framework, structure planting, burns, natural ponds, sustainable drainage systems such as large scale retention ponds etc.

LINKAGES

Street: connecting paths, pocket parks, green shelters, amenity planting, linear features such as hedgerows and street trees, hedgehog highways, verges, sustainable drainage systems such as rainwater gardens, swales, permeable paving etc.

LINKAGES

Individual Buildings: bird, bat and bug boxes, private green spaces (e.g. internal atriums, courtyards, rooftops, balconies, gardens and grounds), individual trees and boundary planting, sustainable drainage systems such as green roofs, green walls, rainwater harvesting systems, permeable paving etc.

In new developments, green infrastructure is being used more and more as a sustainable alternative to conventional engineering solutions or 'grey infrastructure' (Figure 3). Figure 4, on the opposite page, summarises some of the benefits associated with green infrastructure.

Figure 3: De-greying Infrastructure

From grey		To green infrastructure
	→	
Road bollards		Street trees
	→	
Traditional roofs		Green/living roofs
	→	
Conventional roads, surface water and sewer drainage		Sustainable drainage systems e.g. green roofs, porous paving, retention ponds, swales etc.

Figure 4: Green Infrastructure Benefits

GREEN INFRASTRUCTURE SUPPORTS

Policy Framework

National Policy

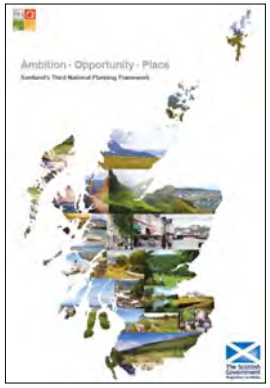
National Planning Framework 3 (NPF3) aims to significantly enhance green infrastructure networks, particularly in and around our settlements. The Central Scotland Green Network (CSGN), of which the Falkirk area is part, is one of 14 National Developments, identified in NPF3 and is regarded by the Scottish Government as a key part of Scotland's long term, sustainable development.

Scottish Planning Policy says planning should protect, enhance and promote green infrastructure, including open space and green networks, as an integral component of successful placemaking. It goes on to state planning's purpose is to:

- consider green infrastructure as an integral element of places from the outset of the planning process;
- assess current and future needs and opportunities for green infrastructure to provide multiple benefits;
- facilitate the provision and long-term, integrated management of green infrastructure and prevent fragmentation; and
- provide for easy and safe access to and within green infrastructure, including core paths and other important routes, within the context of statutory access rights under the Land Reform (Scotland) Act 2003.

Planning Advice Note 65 gives advice on the role of the planning system in protecting and enhancing existing open spaces and providing high quality new spaces. It introduces a typology of open spaces while also highlighting the need for open space audits.

Falkirk Open Space Strategy provides the strategic direction for the management and enhancement of the Council area's open space resource. It is based on a detailed audit and sets a shared vision, and priority actions for improving our parks and open spaces. The quantity, quality and accessibility standards for open space within communities are also stated.



Local Policy

Falkirk Greenspace is an initiative implementing the CSGN across the Council area. It has developed over many years and is driven by its own strategy with the following themes: economic development and place making; tackling vacant and derelict land; outdoor access; woodland; water environment; biodiversity and landscape.

Falkirk Forestry and Woodland Strategy seeks to achieve an expanded and better connected network of high quality woodland by 2055, which will achieve positive outcomes for Falkirk's economy and environment and the health and wellbeing of our communities. It sets out priorities along with descriptions of the opportunities and constraints that should be taken into account within future woodland planning. To support this strategy, the Council has prepared six urban woodland management plans, one each for Bo'ness, Bonnybridge, Denny, Polmont, Falkirk North and Falkirk South. The plans are intended to help secure funding for woodland creation or improvement projects.

Core Paths Plan identifies an integrated network of core paths linking communities with the places that they want to go. The Core Paths Plan was first published by the Council in 2010, and is in the process of being replaced by an updated version.

Dig In - Falkirk Community Food Growing Strategy suggests sites in the area that may be suitable for community growing or allotments. It also gives useful advice on how to get growing and who to approach for guidance and support.

Second Nature: A Biodiversity Action Plan for the Falkirk Council area is the third Biodiversity Action Plan for the Falkirk Council area. It sets priorities for the conservation of local wildlife and provides details on the actions that support these priorities.

Falkirk Local Development Plan 2

LDP2 provides a positive vision of what the Council area should be like by 2040 (Figure 5) with a spatial strategy and policies to achieve it. The plan makes future provision for housing, business, transport, infrastructure, recreation and community facilities giving guidance on where and how this development should take place.

Figure 5: Falkirk LDP2 Vision

"a dynamic and distinctive area at the heart of Central Scotland characterised by a network of **thriving communities** set within high quality greenspaces, and **a growing economy** which is of strategic importance in the national context, providing an attractive, inclusive and **sustainable place** in which to live, work, visit and invest. "

The development of the green network is fundamental to the plan's vision and spatial strategy. It envisages the CSGN in the Council area as an interconnected and multifunctional network of 14 components, linked by corridors as shown on Map 1, overleaf. LDP2 identifies specific opportunities to enhance the different components (Table 1, page 8).

Policy PE13 (Blue and Green Network) states that all new developments will be expected to positively contribute to the improvement and enlargement of Falkirk's green and blue network through the provision of green infrastructure, in particular within the Major Areas of Change. Other relevant planning policies that concern green infrastructure are:

- PE01 - Placemaking
- PE16 - Protection of Open Space
- PE17 - Open Space and New Development
- PE18 - Landscape
- PE19 - Biodiversity and Geodiversity
- PE20 - Trees, Woodland and Hedgerows
- PE21 - Promotion of Forestry and Woodland
- PE22 - The Water Environment
- PE23 - Marine Planning and the Coastal Zone
- PE24 - Flood Management
- IR06 - Active Travel

Other Supplementary Guidance

SG05 is the main 'go to' guidance on green infrastructure provision. However, there are stand alone supplementary guidance documents covering development in the countryside, neighbourhood design, biodiversity, landscape, trees and developer contributions. Readers may need to refer to one or more of these documents (Figure 6) for detailed guidance on a particular aspect of green infrastructure.

Figure 6 Other Relevant Supplementary Guidance

SG01 - Development in the Countryside offers useful advice on how to sensitively fit new development into the countryside.

SG02- Neighbourhood Design Guidance articulates the principles of 'Designing Streets' using successful local examples. It demonstrates how national and local policy on urban design can be applied in the Council area.

SG07 - Biodiversity and Development gives guidance on how to protect and enhance biodiversity in new developments.

SG08 - Local Nature Conservation and Geodiversity Sites provides a detailed overview of the Council's area's diverse wildlife sites, describing their key features and conservation opportunities.

SG09 - Landscape Character Assessment and Landscape helps developers and land managers take appropriate steps to protect, manage and enhance the rural landscapes of the Council area.

SG10 - Trees and Development sets out the considerations for tree removal, planting and maintenance in new developments, and how trees should be protected during construction.

SG13 - Developer Contributions provides guidance for establishing the nature and level of contributions required for green infrastructure including habitat creation, sustainable water and flood management, active travel etc.

Map 1: LDP2 Spatial Strategy - Green and Blue Network

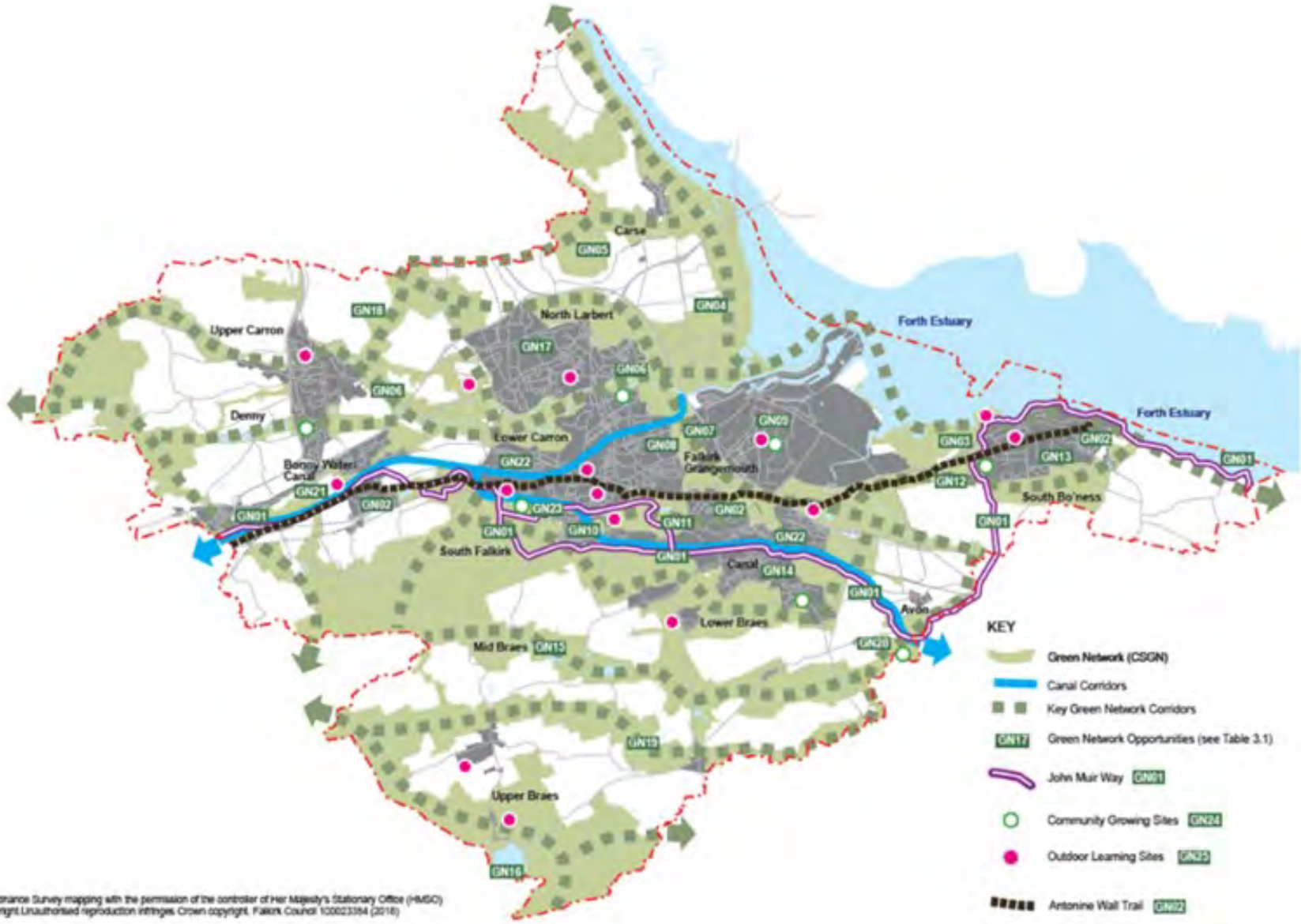


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Table 1: Green and Blue Network Opportunities

Green Network Components	Opportunities		Key Green Network Priorities					
			Biodiversity	Active Travel	Landscape	Climate Change	Place Making	Disadvantaged Communities
Council Wide	GN01	John Muir Way	■	■	■		■	■
	GN02	Antonine Wall Trail		■	■		■	■
Forth Estuary	GN03	Kinneil Kerse	■		■			
	GN04	Bothkennar/Skinflats	■		■			
Carse	GN05	Carse Peatland Restoration	■		■	■		
Upper/Lower Carron	GN06	River Carron Corridor Improvements	■	■			■	■
Falkirk – Grangemouth	GN07	Helix	■	■	■		■	■
	GN08	Helix/Falkirk Town Centre Green Corridor		■	■		■	
	GN09	Zetland Park	■	■	■		■	■
South Falkirk	GN10	Lionthorn Policy Bing	■	■	■		■	■
	GN11	Callendar Park and Wood	■	■	■		■	■
South Bo'ness	GN12	Kinneil Estate	■	■	■		■	■
	GN13	Bo'ness Open Space Corridors	■	■	■		■	■
Lower Braes	GN14	Braes Open Space Corridors	■	■			■	■
Mid/Upper Braes	GN15	Braes Wetland and Peatland Restoration	■			■		
Upper Braes	GN16	Black Loch Access		■				
North Larbert	GN17	Larbert Open Space Corridors	■	■			■	
	GN18	Glenbervie to Denny		■				
Avon	GN19	River Avon Corridor	■	■	■			
	GN20	Muiravonside	■	■	■		■	
Bonny Water	GN21	Bonnyfield Expansion	■	■			■	
Canals	GN22	Falkirk Canal Corridor		■	■		■	■
	GN23	Bantaskine Park	■	■	■		■	
Various	GN24	Community Growing Sites	■			■	■	■
	GN25	Outdoor Learning Sites	■	■			■	■

3. GREEN INFRASTRUCTURE DESIGN PROCESS

1 DESIGN TEAM

Architects Hydrologists
Ecologists Engineers
Planners Arboriculturists
Landscape Architects
Urban Designers

Understand the client's requirements and set key design aims.

Pick the team required for the design elements (green infrastructure, buildings, roads, services etc.) of the development. Members of the team should have a strong placemaking and sustainability ethos. All team members should have appropriate qualifications, experience and accreditation.

The team follows a holistic and multidisciplinary approach considering all the design elements together from the start rather than individually at different stages.

2 RESEARCH & APPRAISE

Pre-application engagement to identify design principles, supporting information and policy requirements. Also engage with relevant key agencies and environmental bodies.

Local Open Space Audit is prepared by Council Officers to indicate recreational open space provision required for development.

Undertake required assessments.

Carry out site appraisal, annotating opportunities and constraints for green infrastructure including active travel routes, habitat retention and creation, path linkages, key views, climate, ground conditions, waterbodies, drainage, built and landscape features etc.

3 CONCEPTUAL DESIGN

Co-create with design team members, brainstorming ideas and coming up with solutions.

Present conceptual design to the Council. Update Local Open Space Audit, if necessary.

Undertake pre-application consultation with the public, if required.

Consider all feedback and refine design.

4 DETAILED DESIGN

Produce information to justify and articulate the detailed design such as planning application drawings, visualisations, cross-sections, design and access statements etc.

Submit the planning application to the Council together with all required supporting information.

Update Local Open Space Audit, if necessary.

The Council considers the planning application, and may require changes to the design.

Design Review Tools

Numerous tools are available to review green infrastructure provision during the design process:

The Green Infrastructure and New Development Checklist, at Appendix 1, summarises the key principles stated in the well being, water and wildlife sections of this guidance. Developers should have regard to these principles from the outset.

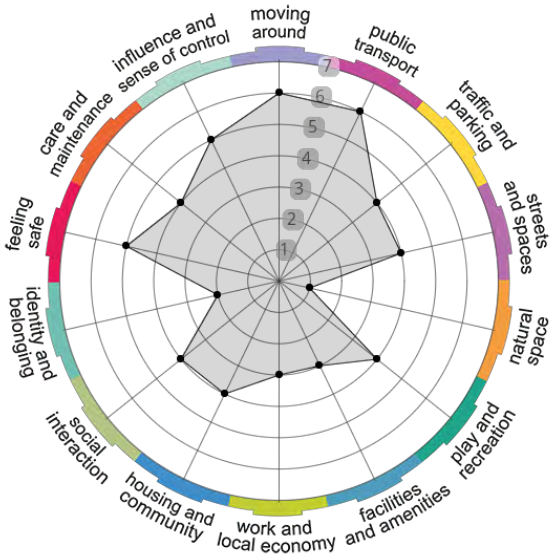
The Place Standard is a free and simple to use tool that can help developers structure conversations with the design team, public, Council officers etc. around the physical elements of a site and surrounding context. It involves scoring these elements on a radar chart which can then be used to pinpoint the site's assets as well as potential improvements within the design and layout. The tool can be found at www.placestandard.scot and was jointly built by NHS Health Scotland, the Scottish Government and Architecture and Design Scotland.

B-Plans can help identify issues with the layout and also options to improve the connectivity and integration of streets, open space, SUDs and other features. Colours are used to show the streets (yellow), buildings (red) and open spaces (green). The B plan, shown far right, features in the Scottish Government's PAN83: master planning.

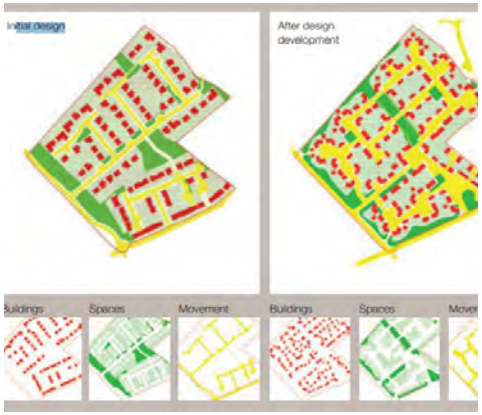
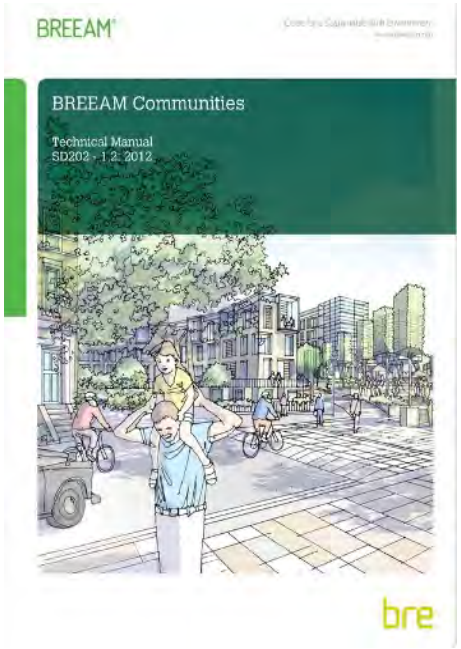
Building with Nature is the UK's first accreditation scheme for green infrastructure in housing and commercial development. Gloucestershire Wildlife Trust and the University of the West of England developed the scheme, which has been rolled out across the UK following successful piloting. It translates research and good practice into 23 standards, which are intended to help developers achieve quality and integrated green infrastructure in their new developments. Visit www.buildingwithnature.org.uk for more information on the accreditation process.

Building Research Establishment Environmental Assessment Method (BREEAM) is a well known approach for appraising the sustainability performance of new developments. The technical BREEAM standards set out individual assessment criteria for particular aspects of green infrastructure such as active travel, ecology, open space and sustainable drainage. The standards are published at www.breeam.com where further information can also be found on the processes and fees involved in BREEAM.

Place Standard



B-Plan



Building with Nature