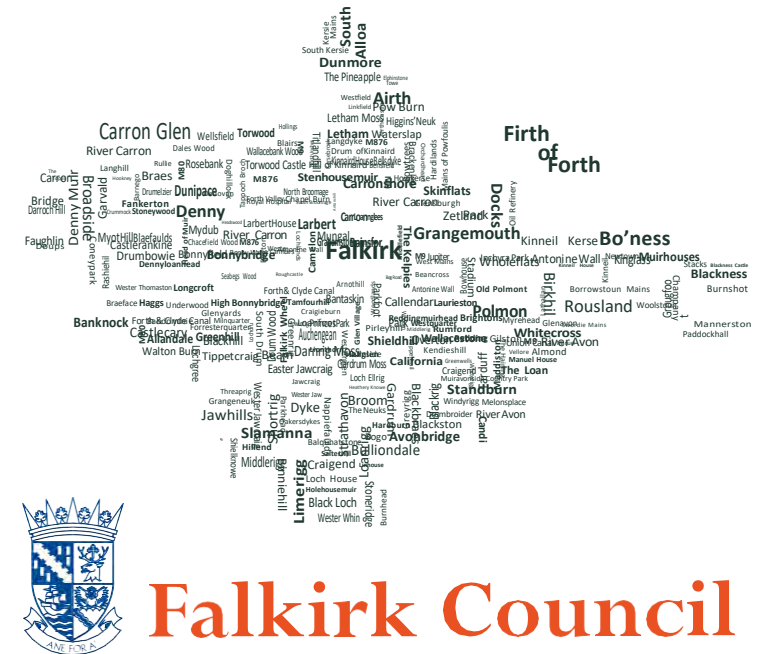


Green Infrastructure and New Development

Supplementary Guidance SG05

June 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.

-  **Development in the Countryside**
-  **Neighbourhood Design**
-  **Residential Extension and Alterations**
-  **Shopfronts**
-  **Green Infrastructure and New Development**
-  **Affordable Housing**
-  **Biodiversity and Development**
-  **Local Nature Conservation and Geodiversity Sites**
-  **Landscape Character Assessment and Landscape Designations**
-  **Trees and Development**
-  **Frontiers of the Roman Empire (Antonine Wall) World Heritage Sites**
-  **Listed Buildings and Unlisted Properties in Conservations Areas**
-  **Developer Contributions**
-  **Renewable and Low Carbon Energy**

CONTENTS

- 1 Introduction
 - 2 Setting the scene
 - 3 Green Infrastructure Design Process
 - 4 Well Being: Open Space
 - 5 Well Being: Active Travel
 - 6 Well Being: Community Growing
 - 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:

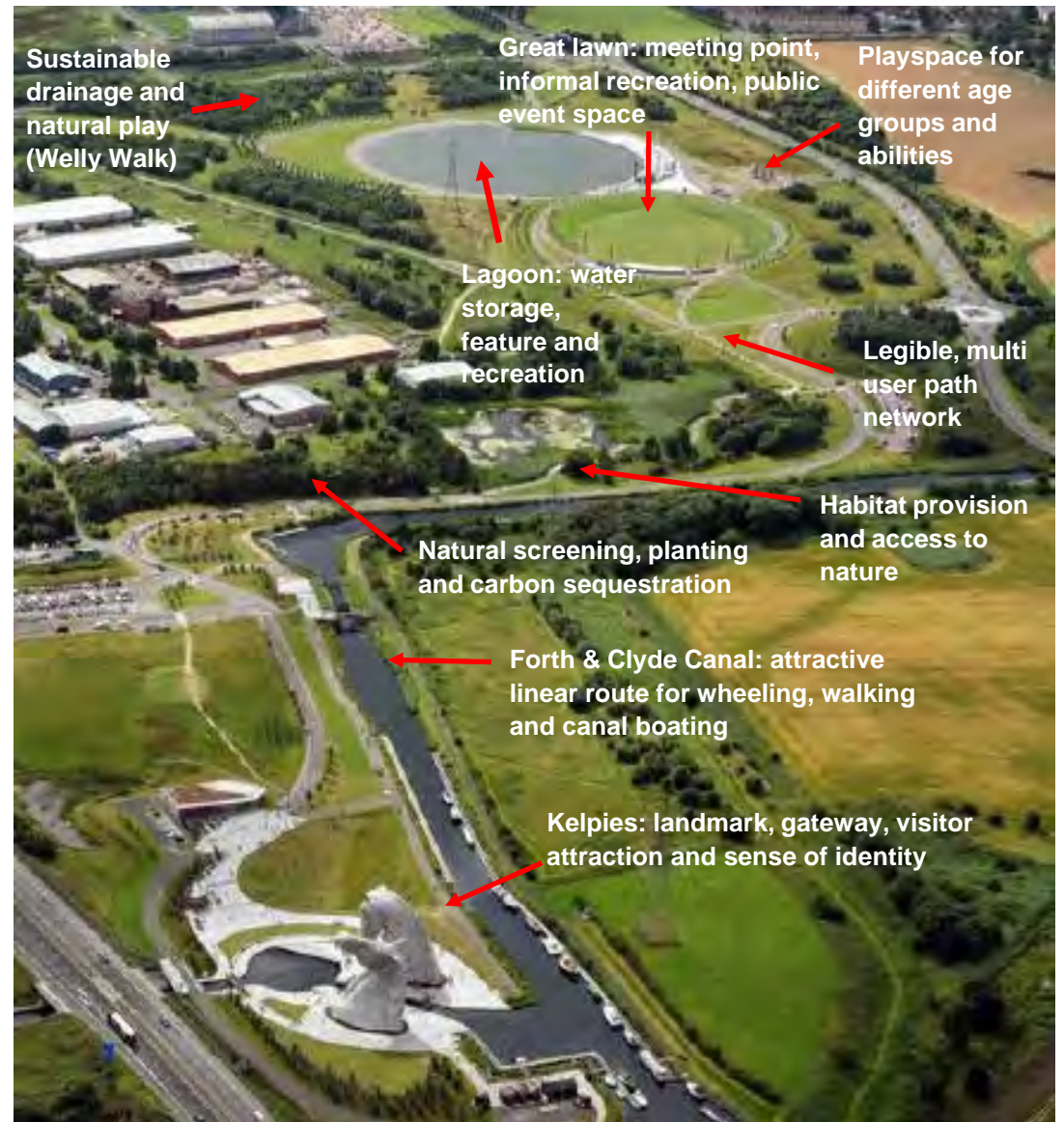
- Public parks, playing fields, community growing spaces, allotments, sports areas, playspaces, passive open spaces, private gardens, landscaped civic spaces, burial grounds, green roofs and walls, trees, points of cultural/natural interest;
- Networks of natural or semi-natural habitats, such as woodlands, 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).

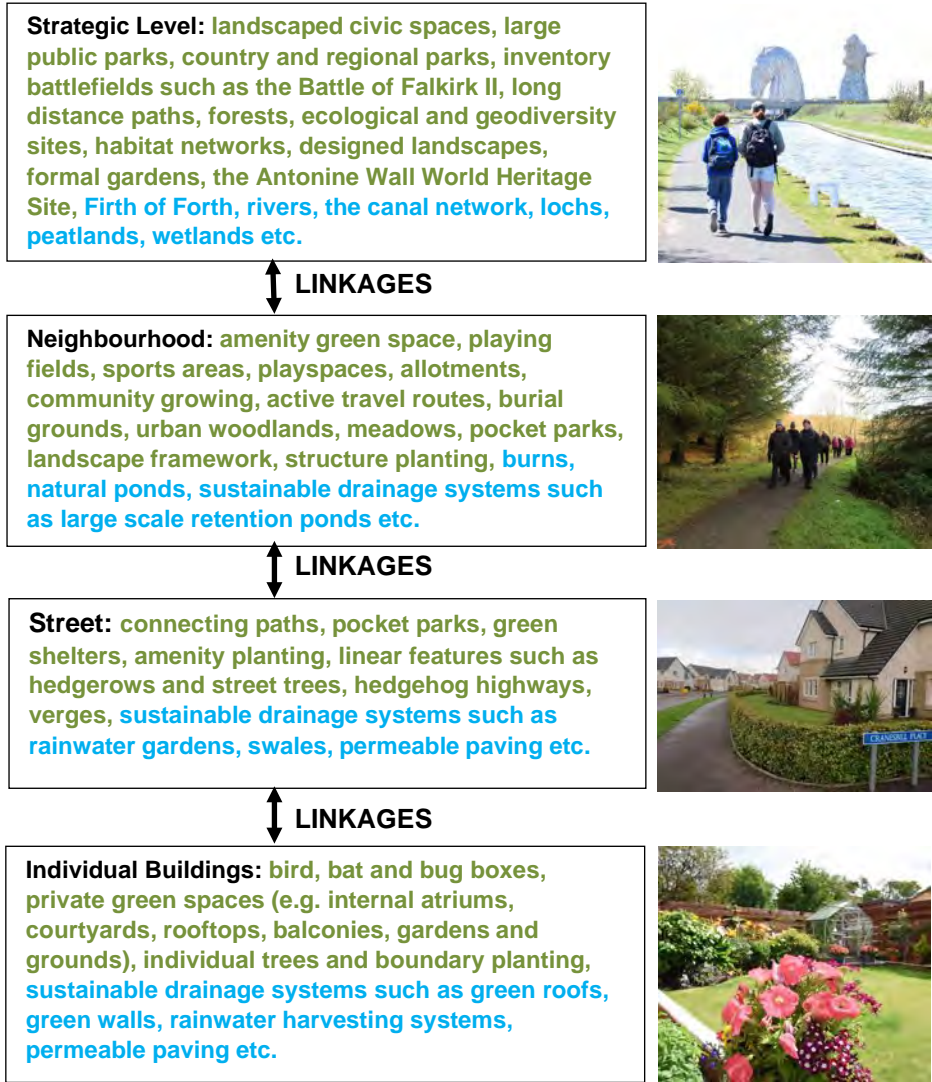
Located between Falkirk and Grangemouth, The Helix is a great example of how a single location successfully incorporates various types of green infrastructure within an interconnected and multifunctional network (Figure 1). Featuring the famous Kelpies, The Helix also acts as an iconic landmark and gateway 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

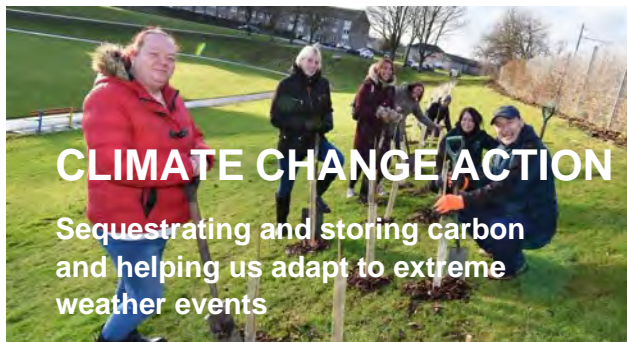


In new developments, green infrastructure is being used more and more as a sustainable alternative to conventional engineering solutions or 'grey infrastructure' (Figure 3). Figure 4, on the opposite page, summarises some of the benefits associated with green infrastructure.

Figure 3: De-greying Infrastructure



Figure 4: Green Infrastructure Benefits



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 separate 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

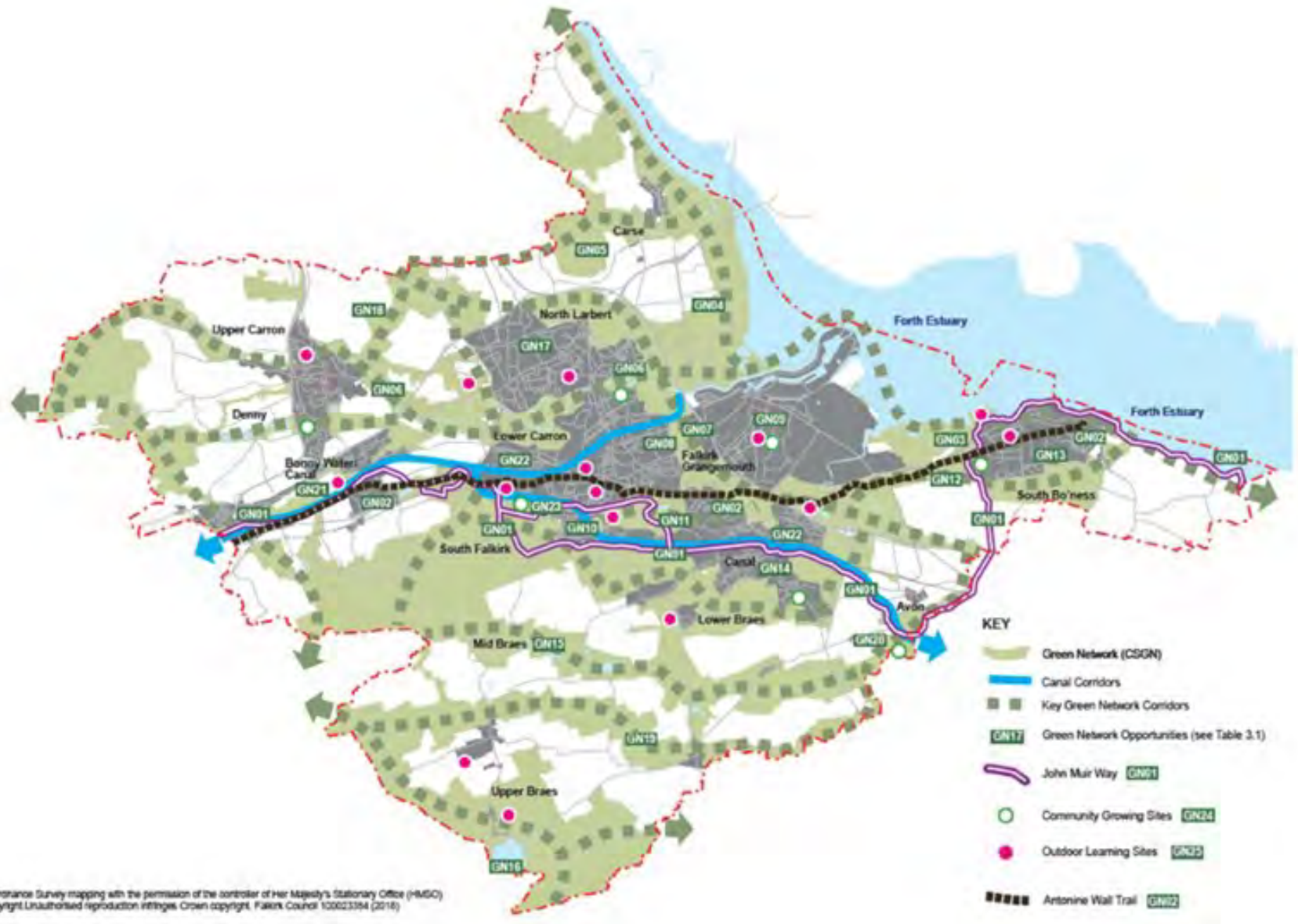


Table 1: Green and Blue Network Opportunities

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.

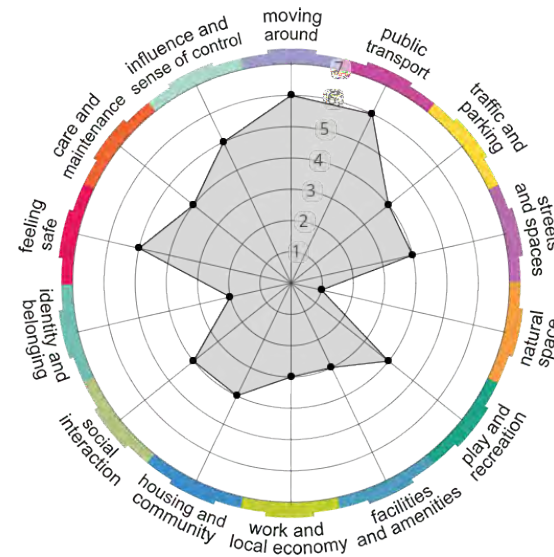
The Place Standard is a free and simple to use tool that can help developers structure conversations with the design team, public, Council officers etc. around the physical elements of a site and surrounding context. It involves scoring these elements on a radar chart which can then be used to pinpoint 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.

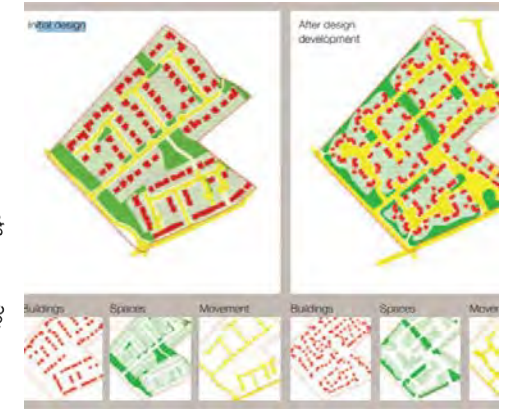
Building with Nature is the UK's first accreditation scheme for green infrastructure in housing and commercial development. Gloucestershire Wildlife Trust and the University of the West of England developed the scheme, which has been rolled out across the UK following successful piloting. It translates 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



4. WELL BEING: OPEN SPACE

Key Principles

- **Development proposals should incorporate multifunctional open space**, as appropriate, to support placemaking (the six qualities of successful places), meet recreational and active travel needs, improve biodiversity, and deliver sustainable water management. The scale and type of open space provided should be commensurate with the size and needs of the development, and the character of the area.
- **Open space should be integrated properly into the development and wider green network at the outset** through a design led approach which uses the site's context and assets sensitively and creatively.
- **Residential development should have access to recreational open space in accordance with the Open Space Strategy's accessibility, quantity, and quality standards.** The adequacy of local recreational provision, and how development proposals will be expected to contribute to that provision will be guided by a local open space audit, using the process explained on pages 12 to 14.
- **Developers are required to compensate for any loss of open space** that would result from their development, if this loss would have a significant adverse effect on the overall recreational provision in the local area. Guidance is given in pages 15 to 16 on how the loss should be compensated.

Key LDP Policies

PE01	Placemaking
PE13	Green and Blue Network
PE16	Protection of Open Space
PE17	Open Space and New Development
INF02	Developer Contributions



Meeting the Recreational Needs of New Residential Development

Access to sport and recreation can enrich people's lives and benefit community health and well-being. Policy PE17 requires that, where recreational open space provision is insufficient to meet the needs of a new residential development, then such deficiencies should be addressed through either the provision of new on-site recreational open space or contributions towards the improvement of off-site open space. The following explains how the Council will establish the requirements for recreational open space.

Step 1 - Apply Exemptions

Size thresholds

The requirement to provide, or contribute to, recreational open space does not apply to the following categories of residential development:

- Proposals for 10 units or fewer, including houses and/or flats; or
- Flatted residential development or conversion of buildings for residential use, of up to 50 units within the town centre boundaries.

In considering whether a proposal qualifies for an exemption under these thresholds, the capacity of the total site of which the proposal is part should be used. This is to prevent avoidance of contributions through the sub-division of sites.

Exemptions for specific categories of residential development and open space

Sheltered or special needs housing and housing exclusively for retirement living are exempt from the requirement to provide or contribute to equipped play spaces or sports areas. Proposed one bedroom dwellings and student accommodation are also exempt from the requirement to provide or contribute to equipped playspaces.

Step 2 - Local Open Space Audit

At the pre-application stage, prior to developing detailed proposals, it is important that developers seek advice from the Council on open space requirements. The Council will then carry out an audit of recreational provision in the local area. This audit will involve an assessment of whether the needs of the development will be met in terms of the accessibility and quality of each of the types of open space provision specified in Figure 7, which is based on the Open Space Strategy. When considering accessibility from a development, the Council will take into account the physical barriers when walking to the open space(s).

The provisions of any site specific development guidance in the LDP, or any approved brief, development framework or masterplan will also be recorded in the audit, and will usually be an overriding consideration in the determining the approach to meeting recreational needs on a site. Such guidance will generally have already taken into account the recreational provision in the locality. The audit will also take into account planned improvements to recreation provision in the locality through the Open Space Strategy or any other investment programme, and the opportunity for proposed developments to contribute to such improvements.

The Council will use the audit to advise the applicant on the types of provision that are deficient, and how such deficiencies can best be addressed. The audit will be shared with the applicant at the pre-application stage to help integrate any required on site provision into the layout and establish what developer contributions in relation to off-site recreational provision may be needed. The audit will be updated accordingly to reflect submitted changes to the layout and unit numbers. **Appendix 2 includes standard template for the audit.**

The recreational open space requirement for applications for planning permission in principle (PPP) will be based on likely dwelling numbers expected from the site. Conditions or a planning obligation may require a recalculation of the recreational open space requirement at a later date where the dwelling numbers change.

Step 3 - Nature of provision

Depending on the results of the audit, the individual circumstances of the development, or the provisions of any other approved guidance, the Council may require:

a) Only on-site recreational provision within the proposed development.

This will generally be the approach:

- i. where there is no existing provision of the requisite size which is accessible to the proposed development using the standards in Figure 7, and on-site provision is a practical and achievable; or
- ii. in large developments which would be expected to meet their own recreational needs.

Where provision is on-site, the indicative scale of provision in relation to the scale of development is indicated in Figure 7 (column 4).

b) Contributions to off-site recreational provision in the vicinity of the proposed development, whether through new provision or improvements to existing provision. This will generally be the approach:

- i. where there is provision in the vicinity that could serve the site, but either the quality or the accessibility standard is not met, and the best solution is to take contributions to improve the provision's quality and/or accessibility; or
- ii. on small, or otherwise physically constrained sites where it is not possible or practical to secure provision on site.

Contributions to off-site provision will be based on the rate(s) per dwelling indicated in Figure 7.

c) Part on-site recreational provision and part off-site contributions. This combined approach of a) and b) involves the developer providing some of the required types of recreational open space on-site while contributing to off-site provision in lieu of the required types of provision that are not provided on-site.

d) No on-site recreational provision or off-site contributions. This will generally be the approach:

- i. where provision within the locality of the site is considered sufficient to meet the needs of the proposed development in terms of the Open Space Strategy's accessibility, quantity and quality standards; and
- ii. the site is not of such a size as to require its own on-site provision.

It should be noted that, even where there is no requirement for formal recreational provision within a site, some amenity open space is still be likely required to meet design and placemaking objectives within a development.

Please also refer to 'SG13 - Developer Contributions' which gives general guidance applicable to any type of contributions including those for off-site recreational open space.



Figure 7: Open space standards and rates for residential development

Open space type	Accessibility: maximum walking distance from site to open space	Quality criteria for open space type	Guidance if provision is on-site	Contribution rate for off-site improvements
Equipped Playspaces for toddlers, juniors and teenagers	800m	Range of good quality equipment (including MUGA) in satisfactory condition with reasonable life expectancy, offering good play value for all age groups. Appropriate surfacing, landscaping, drainage, street furniture and path access is provided. Existing off-site equipment for different age groups may be provided in different locations.	Toddler/junior play provided in most developments. Full range of provision for all ages including MUGA in very large developments.	£600 per house £300 per flat
Parks/Informal Play/ Recreation Space	400m	Open space capable of supporting passive exercise and informal play. Flat kickabout areas sufficiently removed from residential properties to avoid nuisance. Quality path network with appropriate surfacing connecting entrances/facilities and offering opportunities for walks. Range of quality landscaping appropriate to location including woodland, individual trees, shrub beds.	Indicative requirement is 49m ² per house, and 24.5m ² per flat, generally provided in a single space, although in larger developments this space could be complemented with one or more smaller 'pocket parks'.	£800 per house £400 per flat
Sports Areas	1200m	Pitch or pitches are of a tolerable state in terms of grass cover, surface quality, slope gradient, drainage, maintenance regime as defined by pitch classification criteria.	Only the very largest developments are likely to have scope for on-site sports areas. Where a pitch is provided, the dimensions should meet the relevant standards for the activity in question.	£300 per house £150 per flat
Natural Greenspace/ Green Corridors	1200m	Proposals should consider how they can contribute to the network of accessible natural greenspace/green corridors in the vicinity of the site, having regard to LDP2 and any other relevant Council strategy or plan for green infrastructure provision. How this will be achieved will depend on the proposal and site location so provision for natural greenspace and green corridors will be opportunity led rather than through the application of standards. Nevertheless, a contribution will be required for proposals within the vicinity of an area which is covered by an unimplemented Council urban woodland management plan. This contribution will be calculated as £250 per house or £125 per flat, and will be used to improve, or create, public woodlands for the benefit of new and existing communities.		

Compensating the Loss of Recreational Open Space

Policy PE16 states that, where a development involves the loss of an area of open space which will have a significant impact adverse impact on overall recreational provision, this will only be allowed where the loss is compensated by qualitative improvements to other open space in the local area. In judging significance, Falkirk Council will consider the impact on the functional value in terms of how reduced space or infrastructure may restrict activities, or how loss of natural features/views etc. reduces the enjoyment of the space. The assessment would also be guided by national and local planning policy requirements, consultation feedback, the Open Space Strategy and, if relevant and prepared, the Council's pitch strategy.

Depending on the development proposals, compensation may involve on-site enhancement, off site replacement, or a financial payment towards improving a nearby open space. The Council's preference in the majority of cases, however, is likely to be financial payment given in most places the issue is quality rather than quantity of recreational open space provision. Where financial compensation is sought, the appropriate amount will be determined by the Council on a case-by-case basis taking into account the individual circumstances of the planning application. Figure 8, page 16, should be used as a starting point to establish the compensation value for the particular type or types of open space to be lost. It should be noted that the sums stated do not include land acquisition, and other, costs. These costs may need to be added to the compensation value for off-site replacement provision.

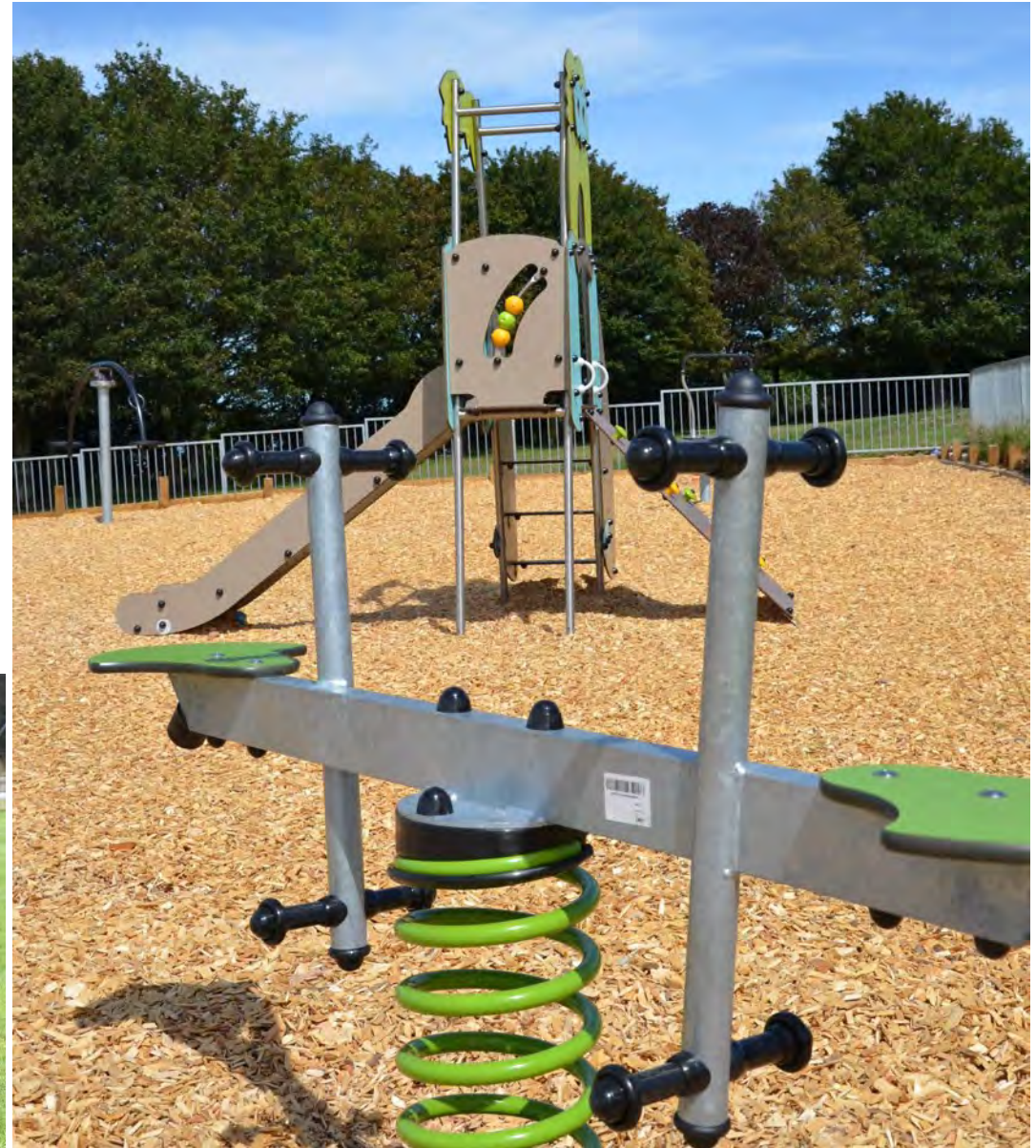


Figure 8 - Approximate compensation

Type of recreational open space		Approximate compensation
Equipped playspace	MUGA	Replacement value of lost provision
	Equipped play areas	Replacement value of lost provision
Public parks, gardens, amenity space, natural/semi natural open space		£21 per sqm lost*
Sports Areas	11-a-side grass turf unlit football pitch (7,420 sqm)	£171,000**
	Tennis court	£40,000 (unlit) or £50,000 (lit)**
	Rugby union grass turf pitch (10,400 sqm)	£239,000**
	Bowling green (1,600 sqm)	£80,000 - £120,000 (for bowling green surface only)**
Community growing/allotment		Replacement value of lost provision

Notes:

*The rate is carried over from SG13 - Open Space and New Development, published July 2015, and is what the Council presently seeks for the loss of passive open space.

** The values are taken from sportscotland but exclude:

- Land acquisition costs
- Project specific costs including access, car parking, utility connections, drainage, maintenance, fencing, changing facilities, addressing ground conditions etc.
- Inflation
- Regional cost variations in materials and labour

Good Practice

Placemaking: Public art, site features, local heritage, landscaping, vistas etc. can be used to foster a strong sense of place and identity within a development's open spaces.



The Drum



Kinnaird Village Park



Foundry Fortune Heritage Trail



Carron Dams

Pocket parks: Pocket parks can create a focus within a development as well as create places for relaxation. Images: The Drum, Bo'ness.



Integrated and multifunctional: It is important that open space is integrated properly into the layout at the outset with positive functions rather than being left over space or added as an afterthought. Images: Lionthorn, Falkirk



Future maintenance: Spaces, including street furniture, signage, paths and landscaping, should be designed to last and for low maintenance. Appropriate long term management and maintenance arrangements should be put in place.



Natural surveillance: Windows should overlook onto well-lit streets, paths and open spaces to create natural surveillance. Open spaces that are visible and linked to the green and blue network provide a sense of security through encouraging activity. Images: Carrongrove, Stoneywood



Road verges: Grassed road verges can enhance the amenity of streets, and help to reinforce the street hierarchy, especially where planted up with street trees. Images: Kinnaird, Larbert (left) and The Drum, Bo'ness (right)



Natural play: Consideration should be given to opportunities for incorporating natural play features into open space such as tree trunks, logs, boulders and fox holes. Images: Kinglass, Bo'ness (left), and Callendar Park, Falkirk (right)



Other Useful Guidance

Designing Streets

Design for Play: A guide to creating successful play spaces

Falkirk Greenspace

Green Infrastructure: Design and Placemaking

Greenspace Scotland

Inclusive Design Hub website

Open Space Strategy

Play Scotland website

SG02 - Neighbourhood Design Guidance

SG13 - Developer Contributions

5. WELL BEING: ACTIVE TRAVEL

Key Principles

- **Active travel provision should be fully integrated into the design process** from the outset rather than retrofitted at a late stage.
- **Development proposals should provide safe, convenient and direct links** to the existing active travel network and to schools, community facilities, local amenities, and public transport.
- **Active travel routes should cater for different types of users** (such as walkers, cyclists and those with limited mobility or sensory impairments) as appropriate.
- **Where appropriate, development proposals should provide additional infrastructure** such as seating, signage, cycle parking, showers etc.
- **Severance or impediments to active travel routes by development must be avoided** or overcome with appropriately designed schemes.
- **Development proposals should be accompanied by an access plan** showing existing and proposed routes, and specification.
- **The specification of new and upgraded routes should be appropriate** to the location, the type of user and the level of anticipated use.

Key LDP Policies

PE01	Placemaking
PE13	Green and Blue Network
PE22	The Water Environment
INF02	Developer Contributions
IR05	Travel Hierarchy and Travel Assessment
IR06	Active Travel
IR07	Bus Travel



Good Practice

Falkirk Access Network: As winner of Britain's Best Walking Neighbourhood in 2019, the Falkirk area has a very extensive hierarchy of routes from the core paths, set out in the Core Paths Plan, down to more minor right of ways, and informal paths. It is critical that that developers demonstrate an understanding of the network and how they can contribute to it. Image: The Helix



Access Plans: These should show the routes of all existing paths, including formal routes and desire lines, on or adjacent to the site; the routes of new paths and how they link into the wider path network, and other facilities; details of proposed path specification; and details of the phasing of path works and future maintenance. Access Plans should be integrated into landscape plans, masterplans and travel plans, produced as part of the transport assessment. Image: Masterplan for Mungal Cauldhame Farm, Falkirk



Path Specification: The specification of paths, including their width, construction, surfacing, drainage and gradient should be tailored to the location, intended users, and likely type and level of use. In most instances, the Council will look for a tarmac surfacing for paths likely to attract even moderate levels of use, since whin dust paths can deteriorate and cause maintenance issues.



The Drum, Bo'ness - main route linking paths and housing



Mungal, Falkirk - informal whin dust path



Bo'ness Foreshore - mown grass path

Attractive Routes: People can be encouraged to walk and cycle by paths set within an attractive setting. Linear open spaces, such as green corridors, can help enhance active travel routes and emphasise existing features like burns, trees, and hedgerows. Images: Lionthorn Community Woodlands, Falkirk (top), Kinnaird, Larbert (middle) and Mungal, Falkirk (bottom).



Legible Routes: Well placed signage can help people make aware of the most direct route to local facilities and public transport connections.



Safe and Secure Routes: Active travel routes should feel safe, having clear sightlines, entrance and exit points while being well-lit and overlooked. Image: Mydub 2, Denny (bottom, left) and Canavan Court/Park, Falkirk (bottom, right)



Direct and Connected Routes: Routes should be direct and, if appropriate, follow natural desire lines. Development should connect seamlessly to active travel routes to form a permeable and logical network. Suitable crossing facilities should be provided where routes meet the public road network. Images: Mungal, Falkirk (top) and Bo'ness -Blackness Foreshore path improvements (bottom)



Before

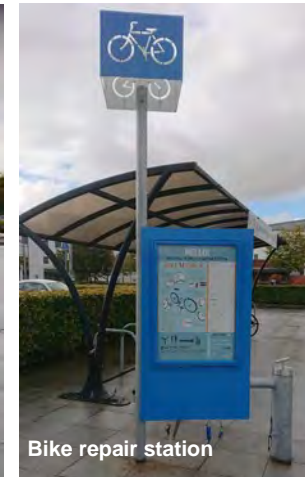


After

Supporting Infrastructure: Bike storage, changing facilities, good drainage, seating, information boards, good maintenance, public art, cleanliness, lighting etc. can contribute to user comfort. Images: Forth Valley Royal Hospital, Larbert (top left to right) and Forth and Clyde Canal, Falkirk (bottom)



Information board



Bike repair station



Forth bikes' e-bike hire



Seating and public art

Inclusive design: Aspects such as path width, gradient, camber, surface, steps, signs, visitor information etc. should be designed to make spaces accessible for the widest range of people as appropriate. Inclusive design is underpinned by the Equalities Act 2010.



Path Diversions: Where an access route is to be temporarily disrupted by development, an alternative route should be provided for the duration of construction works with satisfactory reinstatement on completion. Image: path diversion notice



Other Useful Guidance

Designing Streets

Core Path Plan

Cycling by Design 2010

Falkirk Green Space Strategy

Falkirk Area Disability Access Panel

Inclusive Design Hub website

SUSTRANS

SG02- Neighbourhood Design Guidance

6. WELL BEING: COMMUNITY GROWING

Key Principles

- **Access to community growing space should be explored** as an integral part of the masterplanning process for new residential developments of 200 homes or more. This may involve on-site provision or contributions to off-site space.
- **Options for providing community growing space in a development will depend on a range of considerations** but may include internal courtyards, rooftops, balconies, green walls, allotments and community growing spaces, land within large open spaces, grass verges, grounds of community facilities, and vacant or derelict sites.
- **Demand for community growing space in the locality should be taken into account.** Falkirk Council is required to establish and maintain a list of people requesting an allotment plot in the area. Consulting the Council to establish levels of demand will help establish the type and size of facility needed.
- **The suitability of any particular site for community growing should be carefully assessed,** including such factors as character of the area, access, ground/soil conditions, sun and wind exposure, security, water supply and future management.
- Consideration of how development can contribute to community growing should take account the Council's **Community Food Growing Strategy** and **Allotments Action Plan**.

Key LDP Policies

PE01	Placemaking
PE13	Green and Blue Network
PE17	Open Space and New Development
INF02	Developer Contributions



Good Practice

Dig In - Falkirk Community Food Growing Strategy: This provides an introduction to community food growing in the area and is a useful reference document, giving information on organisations that can offer advice on community growing projects. Image: Dig in, Falkirk High Street Planters



Review delivered projects: Successful case-studies can be a source of inspiration for designers. Image: Carrongrange High School, Grangemouth



Location, Location: Ideally, growing spaces should be south facing and accessible with good soils, drainage, wind shelter and natural surveillance. A reliable water supply is also needed. Images: Kinneil Walled Garden Food Bank Farm, Bo'ness



Co-location: The co-location with open spaces can provide natural surveillance, and flexibility in case demand for community growing changes in future. Image: Muiravonside Community Growing Area



Small growing spaces: Roof spaces, balconies, walls, verges, planters, etc. could provide small spaces for individuals to grow food or flowers, especially where there is limited available space within a site. Image: Dig in, Falkirk High Street Planters.



Other Useful Guidance

- Dig In - Falkirk Community Food Growing Strategy
- Falkirk Allotments Action Plan
- Falkirk Greenspace
- Living Roofs website
- Scotland's allotment site design guidance 2013
- Scottish Allotments and Gardens Society website
- One Brighton - Rooftop Allotments

7. WELL BEING: LANDSCAPING

Key Principles

- A 'landscape led' approach to development should be taken with landscape considered at the conceptual stage to enhance, structure and unify the development, and professional landscape expertise engaged at the outset.
- Landscape plans are an essential part of planning applications, and should be cross referenced in Design Statements. Information in landscape plans should be consistent with other plans submitted.
- Development should achieve a good landscape fit, with existing topography, trees and other features exerting a strong influence on the layout and design.
- Every opportunity for incorporating trees and planting should be taken, recognising their multiple benefits for amenity, wildlife, carbon sequestration, air quality, shelter, shade, surface water management and mitigation of visual impacts.
- Species choice should be carefully considered, having regard to the context and the proposed function of the planting. Planting should be chosen to encourage wildlife, with a preference for native species.

Key LDP Policies

- PE01 Placemaking
- PE13 Green and Blue Network
- PE17 Open Space and New Development
- PE18 Landscape
- PE19 Biodiversity and Geodiversity
- PE20 Trees, Woodland & Hedgerows



Good Practice

Landscape Plans: Prepared by a professional landscape architect, these plans should provide full information on the landscape treatment of the site, showing the design concept and how the landscaping will contribute to green infrastructure. Detailed planting plans, specification of hard landscaping, maintenance schedules, and phasing plans will also be required.



Incorporating existing trees:

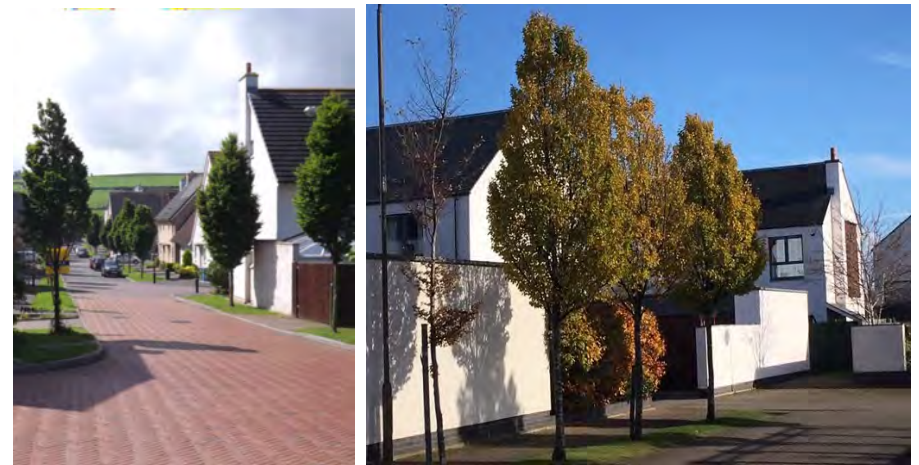
Existing mature trees and hedgerows should be integrated into the development, but care is needed to ensure root systems are protected. Further guidance on trees surveys and tree protection is provided in SG10 - Trees and Development. Image: Kinnaird, Larbert



Amenity planting: This can enhance the character and identity of green spaces within the development, providing structure and definition for the space and seasonal colour. Images: Carrongrove, Stonewood



Street Trees: Street trees help to provide structure and unity to a development, and can help to give identity and formality to main streets and boulevards. Images: The Drum, Bo'ness



Contrast: A mixture of mown and wild areas can achieve an attractive, distinctive contrast. Sculptural elements (like the seating shown below) can add visual diversity and interest to open spaces. Images: Maggie's Centre, Larbert



Colour: The use of seasonal colour in planting schemes can enhance their interest and impact. Image: Forth Valley Royal Hospital, Larbert



Hedges: Hedging provides a softer and more attractive form of enclosure than walls and fences. It can be used to screen the visual impact of car parks. Image: Forth Valley Royal Hospital, Larbert



Planting for wildlife: Trees, and woodland, meadows and other natural planting enhance the biodiversity value of development, providing habitat for a wide variety of species. Larger and linked areas are of much greater value than isolated pockets of habitat. Image: Camelon Park meadow, Falkirk (below right and middle) and Grangepans meadow, Bo'ness (below left).

Before



After



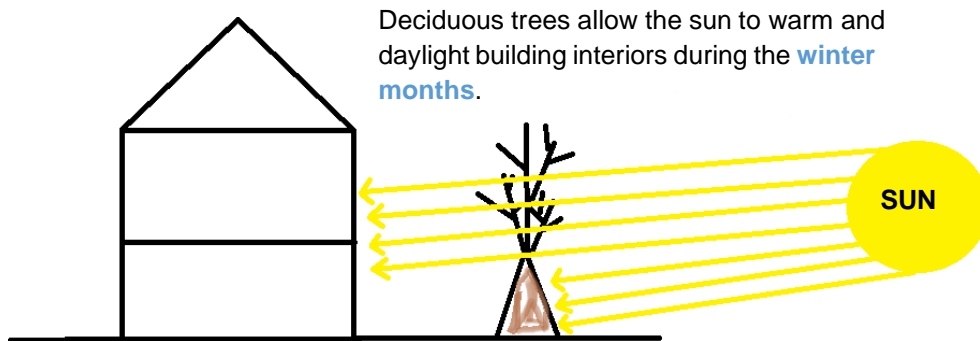
Design for future growth: Tree location and choice should allow for future canopy, trunk and root growth. The trees shown below have been deliberately chosen and planted to achieve an attractive rhythm. Images: Glenbervie, Larbert



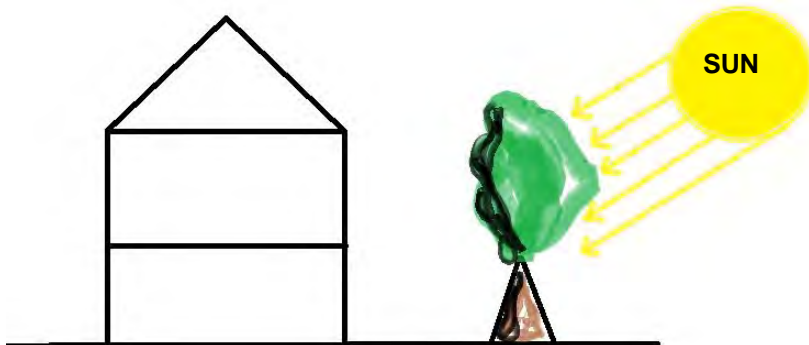
Structure Planting: Structure planting is an essential tool in integrating large new developments into the landscape, particularly on the periphery of the urban area to soften the urban-rural transition. Planting will normally require to be 10-15 metres in depth to achieve the necessary effect. Images: new planting, Kinglass, Bo'ness (top left), mature planting, The Drum, Bo'ness (top right) and planting integrated with the path network, Mungal, Falkirk (bottom)



Moderating Climate and Air Quality: Suitably located planting can have positive effects on the microclimate within developments, providing shelter and shade. It can also have beneficial effects on air quality, particularly in urban situations, and contribute to carbon sequestration.



Deciduous trees shade building interiors from direct sunlight and help prevent overheating during the **summer months**.



Leaf loss: The images, below, illustrate how natural screening can change seasonally with deciduous planting due to leaf loss. Appropriately chosen and placed evergreens can reinforce deciduous planting as well as provide natural variation and effective all year round screening.



Other Useful Guidance

BS 5837:2012 'Trees in relation to design, demolition and construction'

Landscape and Urban Design for Bats and Biodiversity

Royal Horticultural Society

Second Nature: A Biodiversity Action for Falkirk Council area

SG01 - Development in the Countryside

SG02- Neighbourhood Design Guidance

SG07 - Biodiversity and Development

SG09 - Landscape Character Assessment and Landscape

SG10 - Trees and Development

8. WATER: SUSTAINABLE DRAINAGE

Key Principles

- **The management of surface water and flood risk is a fundamental consideration in site planning**, and should be considered at the outset of the design process. Developers and designers should have an understanding of the site's hydrology and the space needed to deal with these issues.
- **Water and its management should be used positively and creatively**, to improve the amenity and sense of place, and to contribute to the wider green/blue network. It should be fully integrated with the strategy for landscape and open space. It should not be regarded purely as an engineering exercise, and should avoid overly engineered solutions.
- **All developments should incorporate requirements for sustainable urban drainage system (SUDS)**, which will be set out in the drainage strategy, having regard to the four 'pillars' of SUDS design, the SUDS management train, the range of available SUDS techniques, and the relevant policy and design guidance, as referred to on the following pages.
- **At the outset, developers should be mindful of Scottish Water's Surface Water Policy**. Scottish Water's most preferred solution is rainwater storage and use, and will only consider drainage to a combined sewer under exceptional circumstances.

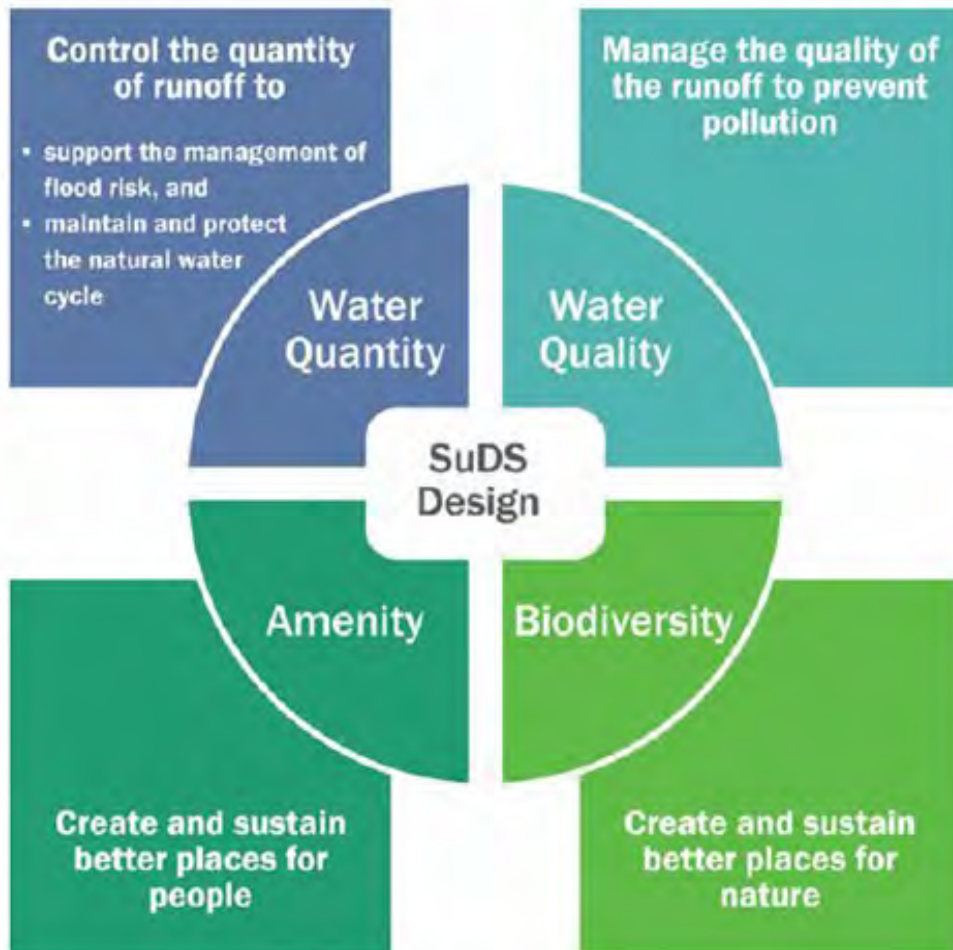
Key LDP Policies

- PE01 Placemaking
- PE12 Canals
- PE13 Green and Blue Network
- PE19 Biodiversity and Geodiversity
- PE22 The Water Environment
- PE24 Flood Management
- IR02 Developer Contributions
- IR10 Drainage Infrastructure



Good Practice

Four pillars of SUDS design: Schemes should replicate the natural drainage as closely as possible, maximising the benefits for water quantity, water quality, biodiversity and amenity. Each category should have an equal footing in the design process. Image: B Woods Ballard *et al* (2015), *The SuDS Manual*, CIRIA C753, London (ISBN: 978-086017-760-9), Go to CIRIA.org



SUDS management train: SUDS should not be considered as individual items but as an interconnected system where different SUDS components are linked and used to manage the flow and water quality of run-off in stages close to the surface as much as possible. Different SUDS components should be integrated at every scale of development from individual buildings to large areas of open space. The management train provides resilience in the SUDS system enabling it to still work after one component fails. The first 5mm of surface water run off (or first flush) carries the vast majority of pollutants. It is important to intercept this early in the management train to prevent pollution entering receiving water such as streams and rivers. Image: Stephen Dickie *et al* (2010), *Planning for SUDS - making it happen*, CIRIA C687 (ISBN 978-0-86017-687), Go to CIRIA.org



Range of SUDS components: The following table summarises the various types of SUDS from constructed ponds through to trees. Visit susdrain.org for useful case-studies and advice on each type.

Component	Brief Description
Constructed ponds and wetlands	Permanent pools of water which are used to store and treat surface run-off. Landscaped to improve pollutant removal and enhance wildlife habitat.
Bioretention areas	Shallow landscaped areas with engineered gravel and soil layers which convey, filter and treat water.
Extended Detention Basins	Vegetated basins designed to detain a certain volume of runoff as well as providing water quality treatment.
Filter Drains and Perforated Pipes	Surface water from the edge of paved areas flows into shallow stone filled trenches. The water is filtered and conveyed to other parts of the site. A slotted or perforated pipe may be built into the base of the trench to collect and convey surface water.
Filter Strips	Wide, gently sloping areas of grass or other dense vegetation that allow conveyance and infiltration (if suitable).
Green roofs	Vegetation covering a building's roof. Green roofs are laid over a drainage layer to create a living surface which intercepts, stores and absorbs water.
Infiltration systems	Designed to collect and store runoff and enables water to infiltrate into the ground. Infiltration basins may be landscaped to provide aesthetic and amenity value.
Pervious paving	Allows rainwater to infiltrate through the surface into an underlying storage layer, where water is stored before infiltration into the ground.
Rainwater harvesting systems	Used to collect and store run-off from roofs or paved surfaces.
Swales	Broad, shallow channels covered by grass or other suitable vegetation. Swales are designed to convey and/or store runoff, and can allow infiltration of water into the ground (if ground conditions allow).
Trees	Trees planted within specially designed pits, planters or structural soils to collect, store and treat surface water run-off.



Integrated design: SUDS should be fully integrated into the layout and the green and blue network. Fronting buildings onto attractive SUDS features can create a pleasing outlook as well as a focal point within the development. Image: Lionthorn, Falkirk



Technical Guidance: SUDS schemes should comply with the CIRIA SuDS Manual (C753) and, where the scheme is to be vested by Scottish Water, Sewers for Scotland (current edition). SUDS that are intended to drain water from an adopted road should be designed in accordance with SUDS for Roads.



Multi-functional: Using SUDS as a placemaking tool, and keeping water management above the ground, can enhance the surrounding environment and achieve a range of benefits. Bertha Park, Perth is a good example of integrating attractive SUDS with other functions including play provision, biodiversity, active travel and housing. Image: Bertha Park, Perth



SUDS landscaping: Appropriate marginal planting can help to integrate ponds into the landscape, create habitat and encourage wildlife. Image: Carrongrove, Stoneywood



Mixture: Developments typically have a SUDS scheme, usually a pond or basin at the bottom of the site. Using a mixture of SUDS such as ponds, swales, green roofs, trees, rainwater gardens etc. throughout the site can help create an attractive and linked green and blue network, mimicking nature and the SUDS management train. Images: Commonwealth Games Athletes' Village, Glasgow



Water storage and reuse: Rain water harvesting systems can be a relatively simple way of storing surface run-off from the roof of a development. They can provide an alternative source of non-drinking water for garden use, toilet flushing, car washing and even some industrial processes. The example shown here is the 100 litre 'prestige wall mount water butt' from Freeflush Limited. Other manufacturers, designs and capacities are available.



Shapes and slopes: Natural shapes and slopes can achieve a natural feel within the design of SUDS ponds/basins (Mungal Park, Falkirk, top and below left). Overly rigid shapes and very steep slopes should be avoided as these can make ponds/basins look over-engineered and, in some cases, resemble a crater with low amenity value (Redding, top and below right).



Access for maintenance: Where access to ponds and basins is necessary for maintenance, access tracks should be unobtrusive and integrate with the open space of which they are part, for example through the use of reinforced grass systems. Images: Carrongrove, Stonewood



Enclosures for SUDS basins and ponds: In low safety risk schemes, consider soft landscaping as a natural alternative to fencing. Transition planting around the margins can act as an effective visual cue deterring people from the water edge (Bertha Park, Perth, below left). Fencing, if needed, should be sited, designed and finished to be as inconspicuous as possible. Low hedging (Lionthorn, Falkirk, below right) can help soften the appearance of fencing while still maintaining views of the water area for natural surveillance.



Retrofitting: De-greying infrastructure through rainwater gardens can help tackle surface water flooding and pollution problems at an early stage as well as soften the surrounding built environment. Image: Ribblesdale Road, Sherwood (Nottingham City Council)



Further guidance

10,000 Raingardens for Scotland website

CIRIA SuDS Manual (C753)

Falkirk Council Planning Application Advice on Flood Risk and Surface Water Drainage

Forth Estuary and Forth Flood Risk Management Strategies and Plans

Forth Area River Basin Management Plan

NatureScot website

PAN61: Planning and Sustainable Urban Drainage Systems

Scottish Water's Surface Water Policy

SEPA guidance and advice notes for planning

Sewers for Scotland (current edition)

SG07 - Biodiversity and Development

SUDS for Roads

SUDSWP's Water Assessment and Drainage assessment Guide

SUSDRAIN website

Water, People, Places - A guide for master planning sustainable drainage into developments

Urban Design London's Designing Rain Gardens: A Practical Guide

9. WATER: RESTORING THE WATER ENVIRONMENT

Key Principles

- **Development should safeguard, and, where possible, enhance the water environment.** Improvements to the water environment may be achieved by development for example through deculverting, remeandering, removing redundant structures or barriers to fish passage, and enhancing bankside habitat.
- **An appropriately sized buffer should be provided** between development and a waterbody to maintain natural fluvial processes and to protect the water environment.
- **Unnecessary engineering works in the water environment should be avoided** including new culverts, bridges, watercourse diversions, bank modifications or dams.
- **New or enhanced public access to a waterbody should be provided**, where appropriate, to allow access for a wide range of users.

Key LDP Policies

- PE01 Placemaking
- PE13 Green and Blue Network
- PE19 Biodiversity and Geodiversity
- PE22 The Water Environment
- PE24 Flood Management
- IR02 Developer Contributions
- IR10 Drainage Infrastructure



Good Practice

River access in an urban setting: Some locations provide opportunities to improve active travel links to nearby rivers and waterbodies, connecting people with nature and the wider green and blue network. Images: canal path at Canavan Court/Park, Falkirk (below left) and Commonwealth Games Athletes' Village, Glasgow (below right)



Buffer Strips: A buffer strip is an area of permanent vegetation between development and a watercourse. It can provide many environmental benefits from habitat connectivity, better water quality through to reduced soil erosion and improved flood risk management. The table below provides minimum widths for a buffer strip based on the width of the watercourse. Depending on site conditions, some strips may need to be wider than the relevant minimum buffer width stated. A buffer of at least 3m may be required for ditches.

Width of watercourse (measured between the top of banks)	Minimum width of buffer strip (either side of the watercourse)
Less than 1m	6m
1-5m	12m
5-10m	15m
10m+	20m+

Deculverting: Culverts can contribute to local flood risk, becoming blocked and/or quickly conveying water downstream. They have low ecological and amenity value being constructed from concrete channels with little daylight. Deculverting can restore a natural flow regime, benefitting sustainable flood management, placemaking and biodiversity. Images: Bog Burn, former British Leyland site, Bathgate, West Lothian (SEPA).



Wildlife ditches, ponds and wetlands: These can help create important aquatic and semi aquatic habitats for native species as well as contribute to sustainable water management and amenity. Image: Jupiter Urban Wildlife Centre, Scottish Wildlife Trust, Grangemouth



Regeneration: Zetland Park's paddling pool is to be transformed into a new wildlife feature as part of Heritage Lottery funded plans to regenerate the park. The project is an innovative example of using the public realm to create an attractive water space for both wildlife and people. Image credit: LUC



Removing barriers: The removal of an old weir and creation of a fish ladder with a new hydro scheme on the River Carron as part of the redevelopment of the Carrongrove site in Stoneywood has improved upstream access for salmon and sea trout.



Other Useful Guidance

CIRIA SuDS Manual (C753)

Forth Estuary and Forth Flood Risk Management Strategies and Plans

Forth Area River Basin Management Plan

SG07 - Biodiversity and Development

SEPA's guidance and advice notes for planning, in particular the 'Background Paper on the Water Environment'

River Restoration and Biodiversity - Nature-Based Solutions for Restoring the Rivers of the UK and Republic of Ireland

Rivers by Design - Rethinking development and restoration

10. WILDLIFE

Key Principles

- **Development proposals should actively seek to enrich biodiversity in and around development sites. SG07** Biodiversity and Development provides a detailed guide on the ways to support biodiversity.
- **Site audits, survey work, and an understanding of the Local Biodiversity Action Plan** is important. This will highlight opportunities for both protection and enhancement.
- **Existing habitats should be treated as important assets, and integrated into the landscape design.** The 5 stage approach outlined in SG07 - protect, enhance, mitigate, compensate and manage - should be followed.
- **Opportunities to create new habitat within open space, SUDS areas and planting should be maximised.** Landscape treatments, species and management regimes should be chosen to encourage wildlife.
- **Designs should provide for wildlife corridors, buffers and 'stepping stones'** that allow routes for species movement and migration.

Relevant LDP Policies

- PE13 Green and Blue Network
- PE17 Open Space and New Development
- PE18 Landscape
- PE19 Biodiversity and Geodiversity
- PE20 Trees, Woodland and Hedgerows
- PE22 The Water Environment



Good Practice

Hierarchy of biodiversity conservation: The five stage approach to biodiversity conservation provides the basis for ensuring that wildlife is properly considered within site planning. Images: SG07 Biodiversity and Development



Overall Aim:	
To ensure that species, habitats, sites and networks that are of national or local ecological importance are protected and that our wider biodiversity is maintained and enhanced.	
Biodiversity Objectives:	
Protect	Protect our existing ecologically important species, habitats, sites and habitat networks before, during and after development.
Enhance	Pursue opportunities to improve the ecological value of all or part of the development site. Creating quality green infrastructure benefits people as well as biodiversity. Consider aiming for Biodiversity Net Gain.
Mitigate	Minimise negative impacts on biodiversity through appropriate mitigation measures.
Compensate	Provide compensatory biodiversity creation or enhancement, where development is permitted and negative impacts on key biodiversity features cannot be avoided.
Manage/ Maintain	Ensure the long-term protection and quality of environmental features through appropriate design and the development and implementation of biodiversity management plans, where necessary.

Initial site audit: The audit can help identify opportunities and constraints for biodiversity at an early stage. Image: SG07 Biodiversity and Development



Opportunities for New Habitat Creation within Development Sites

Woodland: Structure planting and parkland trees in open space provide opportunities for creating an attractive woodland habitat, supporting a wide variety of species from birds to butterflies. Images: The Helix



Opportunities for New Habitat Creation within Development Sites

Wetland: SUDS and surface water management provide ideal opportunities for wetland creation, but features must be carefully designed to support biodiversity. Image: The Helix



Hedgerows: Hedgerows are valuable resource for wildlife, providing habitats for nesting and feeding. They can also function as movement corridors for small animals. Image: The Helix



Wildflower meadow: Grassland that is not needed for active play can be given over to wildflower meadow, bringing colour and variety to otherwise sterile spaces, supporting pollinating insects and reducing maintenance costs. Image: Westquarter Glen, Laurieston, Falkirk

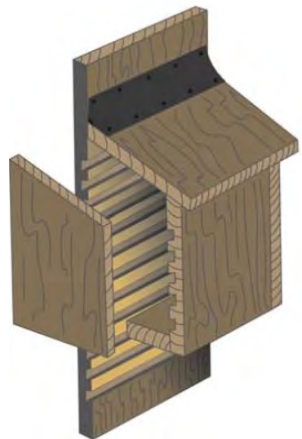


Accommodating Wildlife within Development Sites

Bat, bird or bug boxes: Boxes (or purpose made bat/bird bricks) are an effective way of encouraging wildlife being relatively inexpensive and simple to install. Advice should be sought on the most appropriate design for the specific location.



Bird Box



Bat Box



Habitat piles and loggeries: logs and habitat piles can create a good and simple home for invertebrates, benefitting our ecosystem.



Control invasive non-native species (INNS) INNS are a significant problem, disrupting habitats and ecosystems in the Council area. See SG07 Biodiversity and Development and www.falkirk.gov.uk for further advice, regarding INNS control.



11. MANAGEMENT AND MAINTENANCE

Management and Maintenance Plans

Good management and maintenance arrangements are necessary to ensure the open space environment remains attractive and fit for purpose during the lifetime of the development. The design of all open spaces, including play areas, should take into account how these spaces will be managed and maintained in the future.

Falkirk Council considers maintenance issues during the assessment of planning applications and will, if necessary, incorporate long term management and maintenance requirements in the planning permission or associated planning obligation. The requirements may involve submission of a Landscape Management and Maintenance Plan for the Council's approval prior to the development commencing. The content of the plan will be specific to the development, but should include the following information as a minimum:

- Plan period - this should cover the lifetime of the development
- The overall vision for the open space areas i.e. what are they intended to achieve in design terms
- Full details of the maintenance responsibility for the open space areas
- A3 plans of the approved landscape plans and specifications
- A3 plans delineating areas of ownership and maintenance responsibility for all aspects of open space in the development
- Management objectives for all aspects of open space
- Maintenance schedules for all aspects of open space including:
 - ◊ Paths and hard surfacing
 - ◊ Soft landscaped areas including trees, hedgerows, grassed areas, amenity shrub planting etc.
 - ◊ Walls and fences
 - ◊ Play areas
 - ◊ Natural or built conservation features
 - ◊ Water features
 - ◊ Street furniture
 - ◊ Drainage systems (cross referenced to the drainage strategy)
- The schedules should state the maintenance tasks, their frequency and duration.
- A Biodiversity Management Plan, and Biosecurity plan, if required.
- Procedures for replacement of decommissioned, broken or failed play facilities equipment and unadopted street furniture. Replacement play facilities equipment must be of a similar or higher play value.

Maintenance Responsibility

Residential Development

Falkirk Council's preferred approach is that the developer makes robust factoring arrangements for the open spaces within the new residential development. This approach will involve the developer appointing the factor initially and imposing a title deed condition on the homeowners requiring them to contribute to the upkeep of the open spaces on a shared basis.

Non Residential Uses

For non-residential uses, such as employment, retail or leisure, the management and maintenance of open space will remain with the freeholder to arrange. Nevertheless, planning conditions and/or a planning obligation may be required to ensure adequate provision is made for open space maintenance over the lifetime of the development.



SUDS Maintenance

Sustainable drainage systems (SUDS) should be regularly inspected and maintained to ensure they continue to function properly within a development. The appropriate responsible party for SUDS maintenance should be established first of all as the responsible party will have particular requirements that need to be taken into account within the design of the SUDS scheme. The details of SUDS maintenance should be covered in the drainage strategy and cross referenced in the Landscape Management and Maintenance Plan, where appropriate. Maintenance arrangements will be dependent on the type of SUDS and also the nature of landscaping chosen.

Within the Curtilage

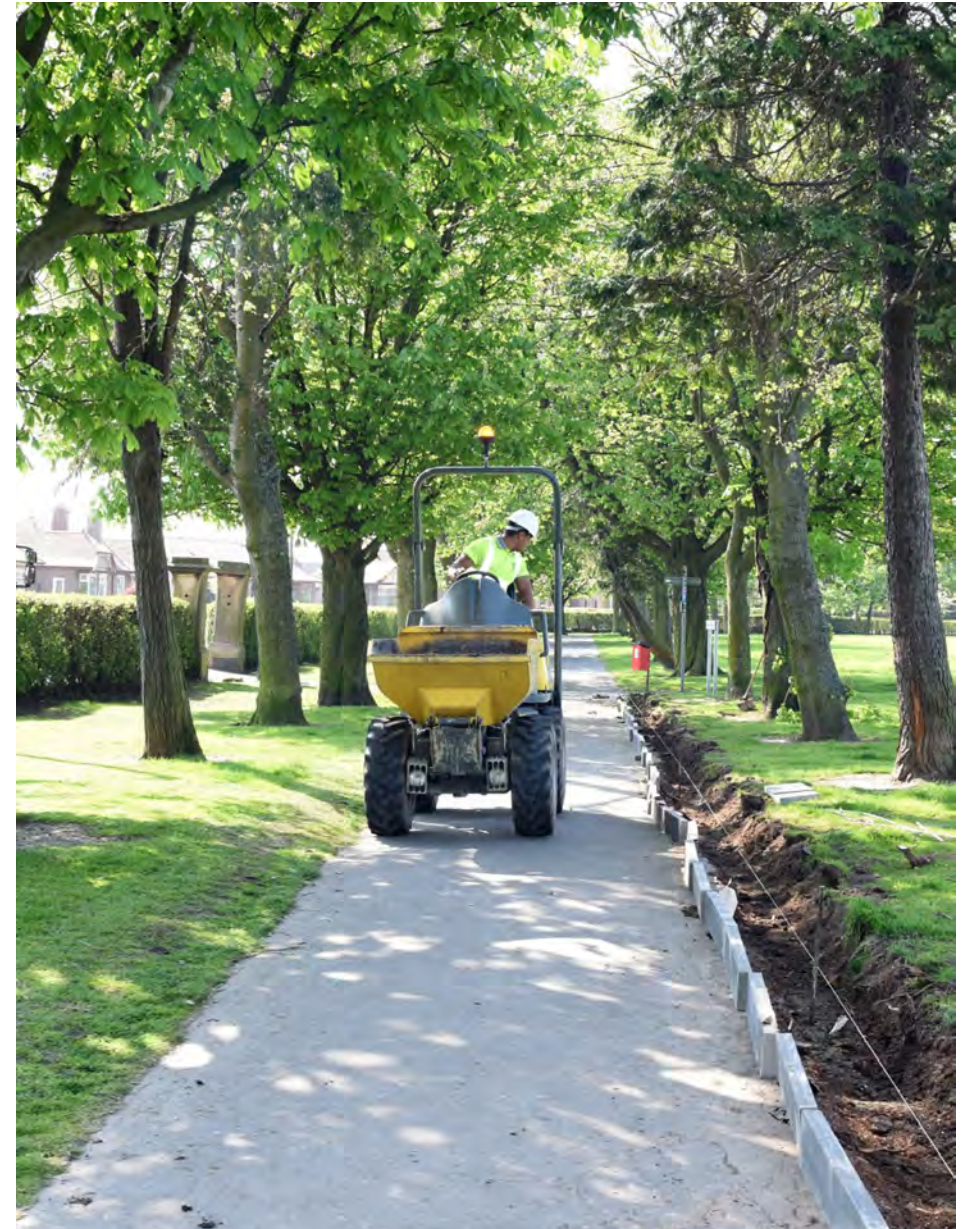
Property owners are responsible for the maintenance of SUDS within the curtilage of their private property. Developers should make property owners aware of their burden of responsibility and ensure suitable arrangements are in place for ongoing maintenance throughout the lifetime of the development. The arrangements will also need to be agreed with the relevant entity and confirmed with the Council.

Outside the Curtilage

Scottish Water will only vest particular types of 'public' SUDS such as retention basins and ponds providing they meet the specifications as detailed in the current edition of Sewers for Scotland. Nevertheless, this should not automatically discount the incorporation of other SUDS components (such as swales or porous paving) that Scottish Water will not vest. It may be appropriate for property owners or another body to take on the responsibility for maintaining these components. Early discussion with Scottish Water, SEPA and the Council is strongly recommended as this will establish the right approach to sustainable drainage at the outset.

SUDS draining surface water from an adopted road are maintained by the Roads Authority, after adoption, or by Scottish Water after vesting. Nevertheless, the adoption of the road can only happen if the road is offered to the Roads Authority for adoption and has been constructed to the authority's specifications. Detailed guidance on road SUDS is given in 'SUDS for Roads'.

Falkirk Council is working towards a collaborative framework with Scottish Water that will enable the surface water drained from Council adopted roads and the roofs and curtilages of buildings to be accommodated within a shared SUDS with maintenance responsibilities split between the Council and Scottish Water. The framework will take the form of a memorandum of understanding made under Section 7 of the Sewerage (Scotland) Act 1968, and could help minimise costs to the Council, Scottish Water and developers around SUDS provision.



APPENDIX 1: GREEN INFRASTRUCTURE AND NEW DEVELOPMENT CHECKLIST

	Compliance (Yes/No/Not)	Comments
Process		
Design team assembled with appropriate qualifications, experience and accreditation.		
Site appraisal carried out to appropriate level		
Pre-application engagement with relevant stakeholders		
Pre-application discussions on conceptual design carried out		
Planning applications submitted with necessary green infrastructure supporting information		
Well Being: Open Space		
Appropriate multifunctional open space incorporated in design		
Open space properly integrated into layout		
Recreational needs of development provided for in terms of different categories of provision (playspace, parks, sports areas, natural greenspace/green corridors, guided by local open space audit)		
Any loss of open space compensated appropriately		
Well Being: Active Travel		
Active travel provision integrated into development providing access to active travel network and local facilities		
Active travel links are safe, convenient and direct		
Active travel links cater for different types of users		
Additional infrastructure is provided where appropriate		
Severance/impediments to existing active routes is avoided		
Specification of routes appropriate to level of use, users, and location		
Access plan produced and submitted		

Well Being: Landscaping		
Landscape led approach taken		
Landscape plan produced which is consistent with other plans		
Development achieves a good landscape fit		
Trees and planting incorporated into proposals, designed to achieve multiple benefits		
Species choice appropriate		
Water: Sustainable Drainage		
Surface water management and flood risk considered at the outset of the design process		
Water used positively and creatively within the layout		
SUDS requirements incorporated, following relevant guidance		
Scottish Water's Surface Water Policy taken into account		
Water: Water Environment		
Water environment safeguarded and enhanced where opportunities arise		
Appropriate buffers provided between development and any water bodies		
Unnecessary engineering works in the water environment avoided		
Enhanced public access provided to water bodies provided where appropriate		
Wildlife		
Biodiversity enriched in and around the site		
Approach informed by site audits, survey work and LBAP		
Existing habitats integrated into landscape design following the five stage approach		
Opportunities to create new habitat have been maximised		
Wildlife corridors, buffers and stepping stones created or safeguarded		
Management and Maintenance		
Common areas such as playspaces, connecting paths, landscaped areas etc. have been designed to be well managed and maintained		
Landscape Management and Maintenance Plan (LMMP) submitted with all required information		
SUDS maintenance arrangements set out within the drainage strategy and cross referenced to the LMMP where appropriate		

APPENDIX 2: LOCAL OPEN SPACE AUDIT TEMPLATE

About the Development

Application/Enquiry Reference Number	
Applicant	
Location	
Description of Development	
Site History	

Local Open Spaces

Name of open space	Open Space Audit Ref	Typologies	Size	Distance from site	Accessibility Issues

Playspace Assessment

Name of Playspace	Size	Accessibility (min 800m)	Equipment/Surfacing	Quality Assessment

Relevant Open Space Strategy Provisions/Planned Investment

Development Framework/Brief/Masterplan Requirements (if relevant)

Provision Proposed within Site (if relevant)

Summary

Recommendations

Parks/Informal Play/Recreation Assessment

Name of Park/Open Space	Size	Accessibility (min 400m)	Kickabout/Informal Play	Quality Assessment

<p>Relevant Open Space Strategy Provisions/Planned Investment</p>
<p>Development Framework/Brief/Masterplan Requirements (if relevant)</p>
<p>Provision Proposed within Site (if relevant)</p>
<p>Summary</p>
<p>Recommendations</p>

Sports Area Assessment

Name of Sports Area	Size	Accessibility (min 800m)	Changing Facilities	Quality Assessment

Relevant Open Space Strategy Provisions/Planned Investment

Development Framework/Brief/Masterplan Requirements (if relevant)

Provision Proposed within Site (if relevant)

Summary

Recommendations

APPENDIX 3 USEFUL CONTACTS

For advice on this supplementary guidance or the Falkirk Local Development Plan 2, contact:

**Development Plan Team
Planning & Environment Unit
Development Services
Falkirk Council
Abbotsford House
David's Loan
Falkirk FK2 7YZ
Telephone: 01324 504720
Email: ldp@falkirk.gov.uk**

For information on planning applications or to arrange pre-application discussions, contact:

**Development Management Unit
Development Services
Falkirk Council
Abbotsford House
David's Loan
Falkirk FK2 7YZ
Telephone: 01324 504748
Email: dc@falkirk.gov.uk**

