GREEN INFRASTRUCTURE

Local Development Plan

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Adopted August 2015

Contents

1. Introduction and Purpose of SG

1.1 A good quality environment is an essential element of successful, healthy and sustainable communities. Clackmannanshire's natural environment comprises a diverse range of habitats from coastal mudflats to native woodland and high moorland. This green infrastructure can help to mitigate the effects of climate change and is a key part of the landscape setting of our towns and villages. It makes Clackmannanshire an attractive place to live and work in and provides opportunities for people to enjoy the outdoors, with benefits to health and well being.

1.2 The purpose of this Supplementary Guidance is to -

- ensure that developers, the public, land and property owners are aware of the contribution that green infrastructure can make to achieving a successful place,
- raise awareness of the role of green infrastructure in contributing to the delivery of better place outcomes and improved community well being,
- raise awareness of the potential risks to and impacts on the natural environment from development through direct and indirect pressures,
- raise awareness of the potential of development proposals to enhance green infrastructure and biodiversity,
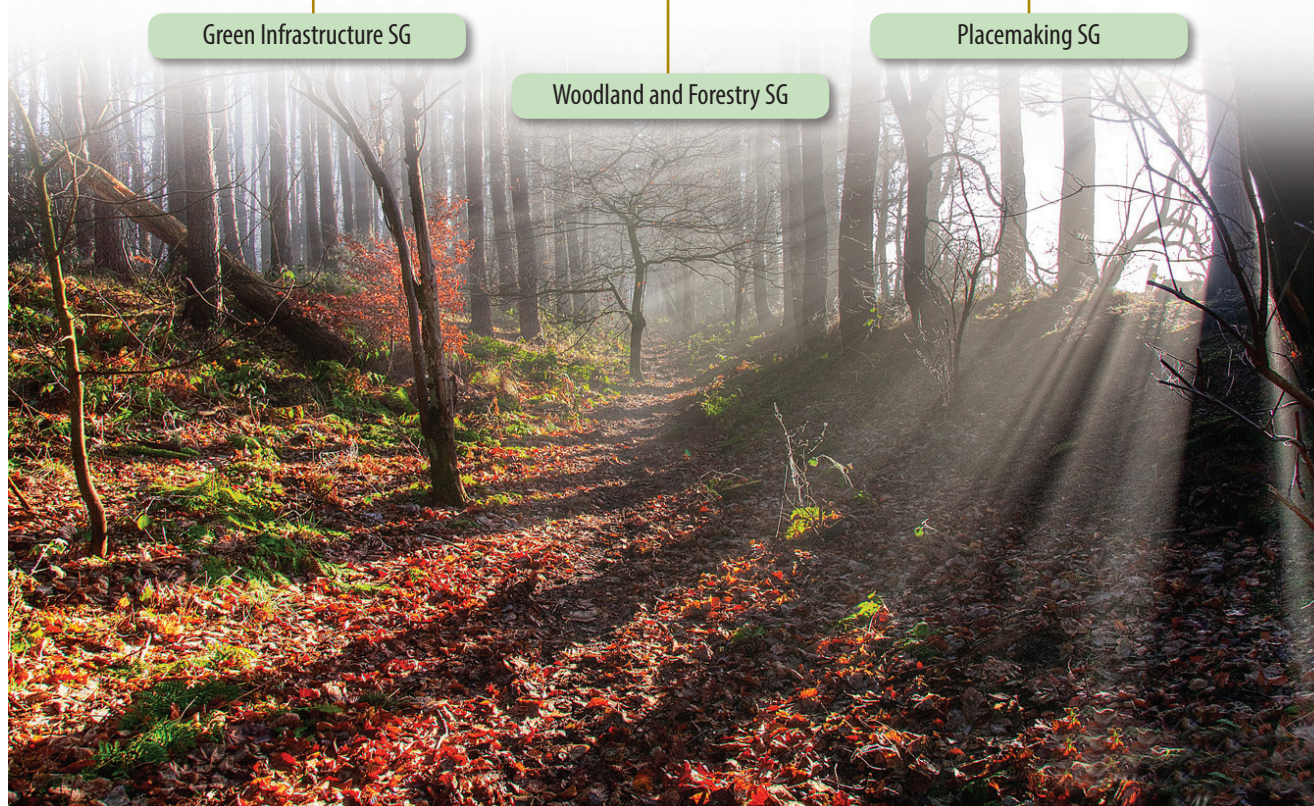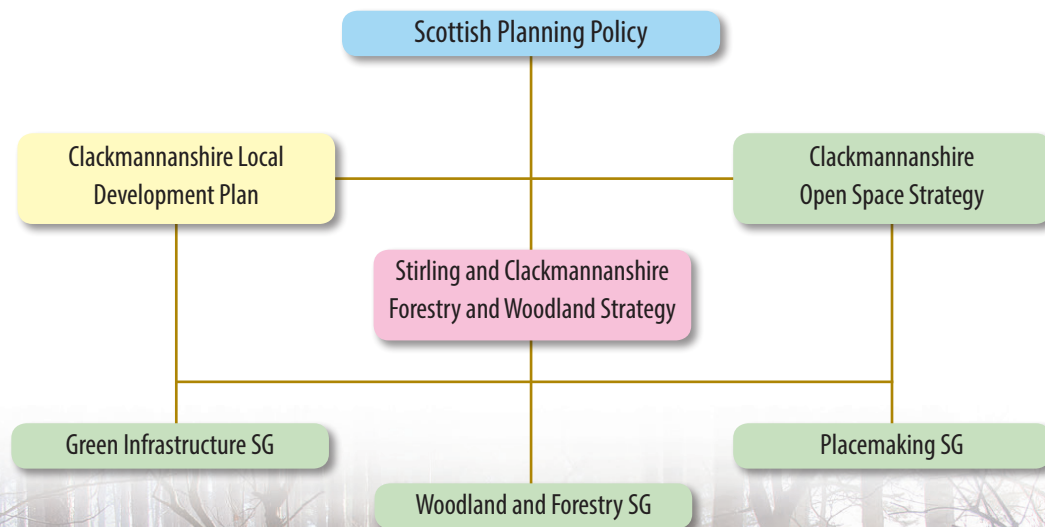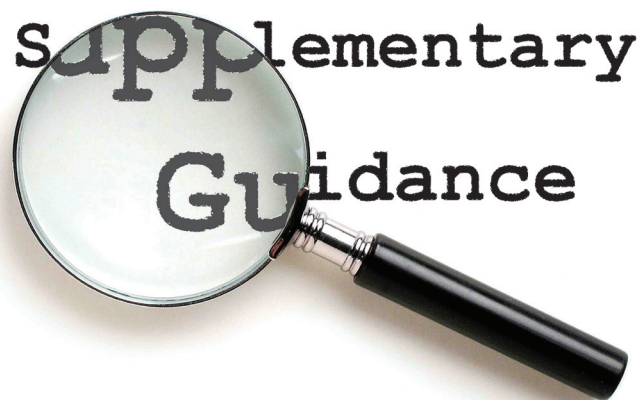- provide guidance on the incorporation of open space into the design of planning proposals.

1.3 This SG supports Local Development Plan's Vision that "the Plan will have significantly contributed to the realisation of the principles of the Central Scotland Green Network, a national planning priority, changing the appearance of Clackmannanshire for the better with more opportunities for healthy outdoor recreation, expansion of woodland cover and strengthening of habitat and outdoor access networks". This SG also particularly supports Strategic Objective 3 in the Plan (Environmental Sustainability) which is "to deliver a sustainable pattern of development that supports community cohesion, reduces greenhouse gas emissions, supports waste minimisation and ensures that new development consistently contributes to environmental protection and enhancement"; and Strategic Objective 6 (Natural Environment) which seeks "to protect and enhance Clackmannanshire's natural heritage, regenerate our natural environment and support the strategic objectives of the Central Scotland Green Network".

1.4 The SG is one of a suite of documents, promoting the importance and role of green infrastructure in providing a quality environment to live in, detailed on page 3.

1.5 A number of policies in Section 7 of the Plan (Environmental Assets) are supported by the information in this SG and a list of these policies can be found in section 4 of this SG.

1.6 The Placemaking SG sets out the Council's approach to placemaking in the planning of new developments in Clackmannanshire and identifies the main challenges that require to be addressed in order to achieve high quality layout and design in new developments. The provision of well-designed green infrastructure is an essential component of placemaking. Green infrastructure can help strengthen the identity, character and distinctiveness of new development areas, while providing a wide range of environmental, social and health benefits for residents. The Placemaking SG explains how good green infrastructure can enhance and improve new places and how it should be considered as part of the design process.

1.7 The Woodland and Forestry SG includes advice on the management of existing trees and woodland in development areas and explains their value in creating high-quality new places. It explains the value of introducing new trees and woodlands and provides advice on the range of benefits trees and woodland can provide including addressing climate change, improving the water environment, providing habitat and boosting biodiversity, and creating recreational opportunities. Woodland can also offer economic benefits both in terms of the timber industry and tourism. The Woodland and Forestry SG is in preparation and will be available in 2014.

1.8 The Clackmannanshire Open Space Strategy is of key importance in supporting the delivery of greenspaces as Clackmannanshire's 'green' lungs. It lays down a Clackmannanshire Standard for a range of accessible green infrastructure from parks and amenity open space to woodlands and cycle routes for existing and proposed green infrastructure. It's purpose is to ensure that we achieve an appropriate quantity and quality of greenspace across Clackmannanshire.

Scottish Planning Policy

Clackmannanshire Local Development Plan

Clackmannanshire Open Space Strategy

Stirling and Clackmannanshire Forestry and Woodland Strategy

Green Infrastructure SG

Placemaking SG

Woodland and Forestry SG

2. What is Green Infrastructure?

2.1   The European Commission defines green infrastructure as:

"the use of ecosystems, green spaces and water in strategic land use planning to deliver environmental and quality of life benefits. It includes parks, open spaces, playing fields, woodlands, wetlands, road verges, allotments and private gardens. Green infrastructure can contribute to climate change mitigation and adaptation, natural disaster risk mitigation, protection against flooding and erosion as well as biodiversity conservation."

2.2   Green infrastructure incorporates not only greenspace such as parks, woodlands, open space, and private gardens but also blue infrastructure such as ponds, lochs, wetlands, drainage features and other watercourses.

Benefits

2.3   The table on page 5 outlines the key benefits that green infrastructure can deliver

Improving the perceived quality and identity of places	▶ Reinforcing landscape character and improving the setting of places and local identity ▶ Improving physical connections between places ▶ Assisting in the management of growth and directing growth to the most appropriate locations, particularly in green belt areas
Stimulating the economy	▶ Helping to provide an attractive setting for new development, and to encourage investment and retention of existing businesses ▶ Encouraging growth in population and employment by improving the image of Clackmannanshire
Adapting places to better withstand the physical effects of climate change	▶ Allowing for climate change adaptation through flood alleviation and by cooling as a result of the provision of heat islands ▶ Sustainable management of surface water to prevent flooding ▶ Providing shelter and protection from extreme weather
Water management	▶ Managing surface water run-off (SUDS) ▶ Creating areas for flood attenuation ▶ Wetland creation to improve bio-diversity
Encouraging sustainable lifestyles and mitigating environmental impacts	▶ Providing places for community food production in allotments, community gardens and growing spaces ▶ Helping reduce greenhouse gas emissions by providing high quality facilities for and encouraging active travel (e.g. by provision of routes such as the Devon Way and Menstrie Branch Line Path) ▶ Supplying locally sourced timber, biomass and other bio-fuels to help replace fossil fuels ▶ Provision of carbon storage and sequestration in vegetation
Providing recreational opportunities and promoting healthier lifestyles	▶ Improved health and well-being: lowering stress levels and providing the opportunity for physical exercise ▶ Providing recreational opportunities including play and sport
Maintaining and enhancing biodiversity	▶ Provision of wildlife habitat and wildlife corridors (as part of a network) for species movement ▶ Through active management, to improve the quality of habitat and help reverse the decline in our biodiversity
Providing educational opportunities	▶ Delivering opportunities for environmental education ▶ Providing access to nature ▶ Creating opportunities for participation, volunteering and apprenticeships to improve the environment and develop ecological and environmental skills
Improving the environmental performance of places	▶ Encouraging the use of green structures such as bunds and mounds, and green walls and roofs, to improve noise attenuation and energy efficiency while also boosting biodiversity and improving water management ▶ Providing green waste recycling through composting ▶ Providing shelter planting for buildings, helping to improve energy efficiency, and also for open spaces ▶ Improving air quality through filtration of pollutants by trees and other vegetation
Improving community cohesion	▶ Providing opportunities to understand the cultural and natural heritage ▶ Providing improved connections between places ▶ Creating space for interaction and social events

2.4   Many of these key benefits highlight the importance of Clackmannanshire's green infrastructure to provide **ecosystem services** (see Glossary). These are services provided by nature which we often take for granted or are unaware of but on which life depends. They include processes such as pollination of plants by insects, filtration of water and decomposition of wastes. Natural resources are finite but yet the clean air, water and air on which we depend for our health and quality of life depend on them. Our economy also depends on the natural environment to source raw materials such as minerals, timber, food and water. Energy production depends on sourcing fuel or water from the natural environment.

Delph Pond clear up

2.5   It is clear that Clackmannanshire's green infrastructure is delivering a wide range of environmental, social and economic benefits. Good quality and well-managed green infrastructure has a particularly important role in supporting the economy of the area. It makes the local area more attractive to business investors, attracting inward investment and helping retain existing businesses. Clackmannanshire's natural environment is also attractive to tourists and visitors, bringing increased visitor spend and improving the area's profile. It also provides opportunities for job creation, particularly in food production, forestry and tourism. This provides a wide range of benefits beyond the 'green' agenda. The local development plan policies have been developed to protect and enhance green infrastructure and realise the benefits it brings for the communities and the economy of Clackmannanshire.

2.6   Recent public interest in growing your own food, together with more strategic concerns from local and national government regarding food security, has led to increased demand for community growing projects. Growing your own food has a number of benefits: keeping food bills lower; improved freshness and flavour; reduced food miles; increased food security; and the positive role of gardening in reducing stress levels and increasing physical activity. The Council will support the development of growing spaces in accordance with guidance produced by the Scottish Allotments and Gardens Society on the designing and development of new and existing allotments and growing spaces (http://www.sags.org.uk/docs/ScotlandAllotmentDesignGuide.pdf).

Green Infrastructure Elements

2.7   The table on the next page details the varied green infrastructure elements in Clackmannanshire and the multiple benefits that each can deliver.

Green Infrastructure Element	Community Benefit - Existing or Potential
Urban Parks, Playing Fields + Open Spaces	Formal & Informal Recreation, Social places, Biodiversity, Urban Cooling, Surface water management, Sense of Place, Education, Amenity
Private Gardens & Allotments	Social Places, Food Production, Biodiversity, Amenity
Core Path Network (see Core Path Plan)	Active Travel, Informal Recreation, Biodiversity/wildlife corridors
Special Landscape Areas (see Local Development Plan)	Sense of place, Biodiversity, Informal Recreation
Woodland, trees and hedgerows	Biodiversity/wildlife habitats, Education, Informal Recreation, Sense of Place, Urban cooling, Surface Water Management. Bio Fuels, Timber
Ponds and Wetlands	Biodiversity/wildlife habitats, Education, Surface Water/Flood Risk Management
River Corridors and their Flood Plains	Biodiversity/wildlife habitats, Flood Risk Management, Sense of Place, Informal Recreation
SUDS	Biodiversity, Education, Amenity
Natural & Semi Natural Open Spaces (see Open Space Strategy)	Biodiversity/wildlife habitats, Education, Informal Recreation

3. What is a Green Network?

3.1 Green infrastructure is at its most valuable when it is well connected, for example through green corridors linking biodiversity rich areas and enabling wildlife movement over wider areas. The resulting Green Network can also provide important recreational links between and around our communities. The greatest benefits are derived when areas of green infrastructure are designed and managed as a multi-functional resource which is capable of delivering a wide range of benefits helping to boost quality of life, provide ecosystem services, and support sustainable economic growth. Connecting green infrastructure together to form 'green networks' can deliver a wide range of multiple benefits. This process is outlined in the diagram below.

THE BENEFITS OF MAXIMISING THE VALUE OF OPENSPACE AND CREATING GREEN NETWORKS

SINGLE USE

These are individual open spaces designed with a single purpose.

Maximising single uses
i.e. combining

Consider how you maximise the use of a single space by combining with, or adding, other uses.

MULTIPLE USE

These are individual open spaces designed to achieve multiple benefits and uses.

Maximising multiple uses
i.e. connecting

With the use of open space maximised to its full potential, the aim is to look for opportunities to connect other spaces, to create a green network. If a single use open space cannot be maximised any further, it can still be linked with surrounding multi-functional open space.

INCREASING VALUE

For example:

Single open spaces can include:
• Play parks for children .
• Allotments for food production.
• Kick-about areas for recreation.

For example:

Ensure that environmental sustainability can be built into the design such as:
• SUDS
• Shelter
• Bio-diversity
As well as social and physical uses.

For example:

A grass kick-about area with storm water storage capacity and bio-diverse planting providing shelter and a high-quality landscaped setting for built development.

For example:

To create a multifunctional green network, spaces can be linked together via paths, drainage corridors, woodland and other uses, providing for wider habitat connectivity, active travel routes and other strategic benefits.

Green Infrastructure: Design and Placemaking - Scottish Government (November 2011)

3.2   Green Networks are connected areas of green infrastructure that together form an integrated and multi-functional network. The linking together of natural, semi-natural and man-made open spaces, including leisure and recreational facilities to create an interconnected network provides opportunities for physical activity, increases accessibility within settlements and to the surrounding countryside while enhancing habitats and the quality of the external environment. Green networks provide attractive settings for daily life, enhance the distinctive local identities for our settlements and can help guide future development proposals. They can also enhance the perception of areas and increase their attractiveness for developers, house buyers and businesses, offering easy access to parks, playgrounds and the countryside . Green networks can strengthen the benefits of green infrastructure by further improving health and well-being, enhancing bio-diversity, helping to mitigate against and adapt to climate change, providing business and educational opportunities, encouraging tourism and promoting sustainable use of scarce land resources.

3.3   Green networks are not an environmental 'add on' but an essential component of a successful place. Delivering successful places is a key purpose of the planning system.

4.   Planning Policy

4.1   Scottish Planning Policy (SPP) sets out the Scottish Government's policy on land use planning. The SPP and additional design guidance described below are material planning considerations in planning applications and appeals. They also provide the basis for a more detailed series of Planning Advice Notes (PANs) dealing with more detailed design issues. The SPP states that:

"Local development plans should seek to enhance existing and promote the creation of new green infrastructure, which may include retrofitting. They should do this through a design-led approach, applying standards which facilitate appropriate provision, addressing deficits or surpluses within the local context. The standards delivered through a design-led approach should result in a proposal that is appropriate to place, including connections to other green infrastructure assets. Supplementary guidance or master plans may be used to achieve this."   (SPP, paragraph 225).

4.2   The SPP is supported by additional design guidance relevant to green infrastructure, contained in Designing Places, Designing Streets and Green Infrastructure: Design and Placemaking.

4.3   *Designing Places* (2001) sets out government aspirations for design and the role of the planning system in delivering these. The aim of the document is to demystify urban design and to demonstrate how the value of design can contribute to the quality of our lives.

4.4   Designing Streets supports Designing Places and provides policy guidance for street design The emphasis of the guidance on street design is towards place-making and away from a system focused upon the dominance of motor vehicles.

4.5   Green Infrastructure: Design and Placemaking provides an overview of the policy context of green infrastructure as well as setting out deign issues and techniques to integrate green infrastructure into placemaking at all scales. The document looks at design considerations from site appraisal through to developing designs that can deliver sustainable and successful communities and places. It looks at incorporating green infrastructure thinking within site specific development plans and briefs.

4.6   Scottish Government policy is supported by a series of Planning Advice Notes (PANs) which provide detailed advice of relevance to the delivery of green infrastructure through development planning and management:

GREEN INFRASTRUCTURE

DESIGN AND PLACEMAKING

PAN 60 'Planning for Natural Heritage' provides guidance on how development and the planning system can contribute to the conservation, enhancement, enjoyment and understanding of the natural environment. Planning has a key role in safeguarding landscape and wildlife as well as offering opportunities to further enhance the natural heritage and create high quality environments for living and working.

PAN 65 'Planning and Open Space' is of particular importance as it offers guidance in relation to open space audits and strategies to feed into the development plan process, including a set of typologies for greenspace which the Council have adopted in the development of the Open Space Strategy as well as promoting effective links between the planning, design and management of open space.

PAN 67 'Housing Quality' aims to achieve improved layout and quality in new housing developments and was prepared in association with a wide range of representatives from consultants and from Homes for Scotland.

PAN 68 'Design Statements' aims to ensure that both applicants and planning authorities are clear about the preparation and structure of design statements that have a key role within the planning process.
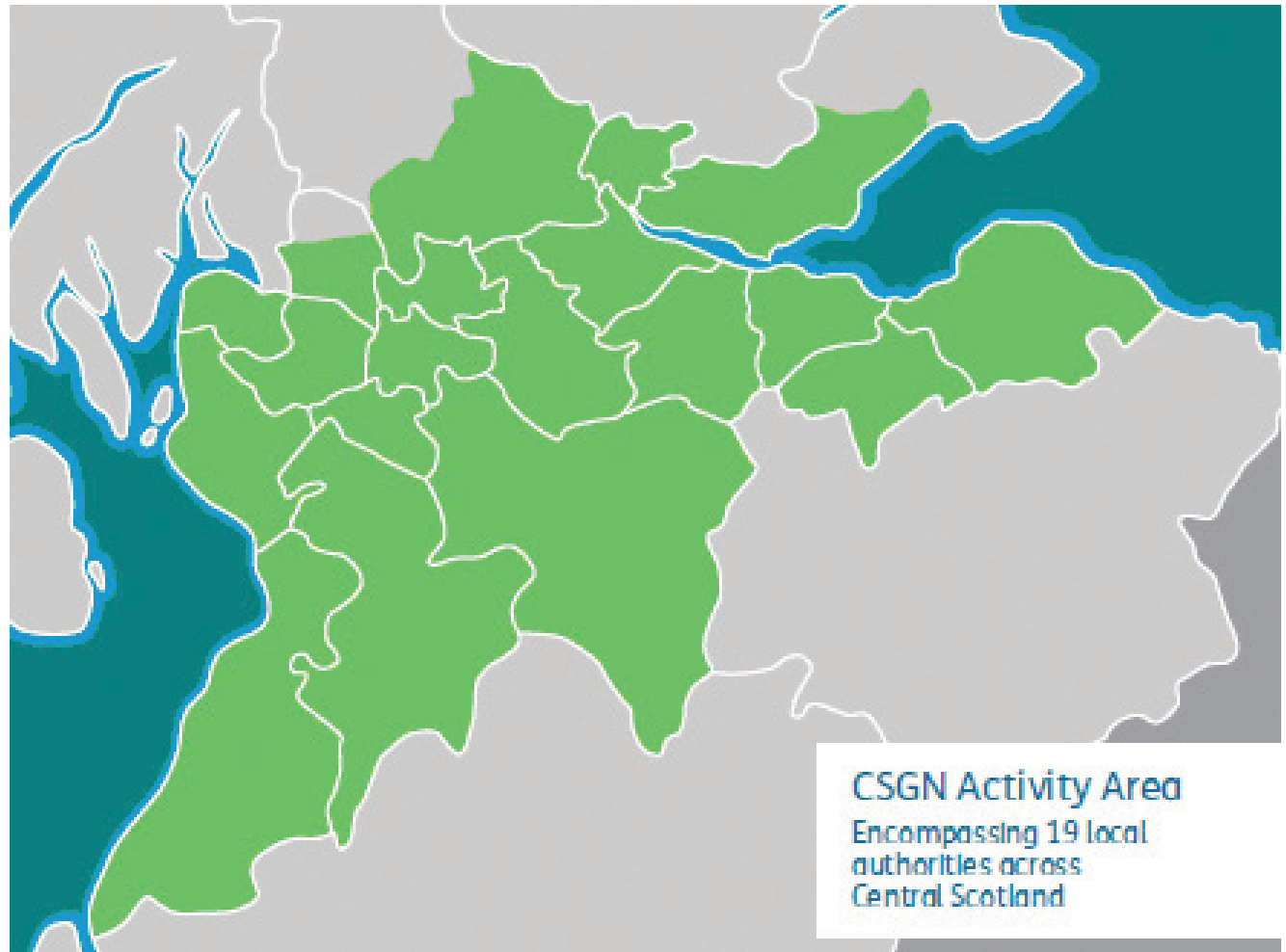
PAN 83 'Masterplanning' aims to promote masterplanning to create better places that include quality environments, good transport connections and energy efficient homes. It explains how to achieve more consistency in the presentation of masterplans and it contains a range of exemplar case studies. The process from beginning to end is covered - from understanding a need then preparing, creating, processing and implementing a masterplan.

4.7   The Clackmannanshire Local Development Plan includes a number of policies to protect and enhance green infrastructure which are listed opposite:

▶ **EA1 – Clackmannanshire Green Network:** Supports the implementation of the Central Scotland Green Network by ensuring that new development contributes to its objectives where possible. It ensures that the connectivity, quality and extent of the network are enhanced where practical and protects against reduction of these unless adequate mitigation is in place.

▶ **EA2 – Habitat Networks and Biodiversity:** Encourages the protection and enhancement of biodiversity and habitat networks.

▶ **EA3 – Protection of Designated Sites and Protected Species:** Aims to protect designated sites and protected species and requires an ecological appraisal where these interests may be detrimentally affected.

▶ **EA4 – Landscape Quality:** Sets a framework for the protection and enhancement of the quality and distinctive character of Clackmannanshire's landscape and to protect the Special Landscape Areas.

▶ **EA6 - Woodlands and Forestry:** Aims to protect and expand Clackmannanshire's woodland resources in accord with the Woodland and Forestry Strategy and CSGN's principles.

▶ **EA 7 – Hedgerows, Trees and Tree Preservation Orders:** Aims to retain trees, woodland and hedgerows that make a positive contribution to local amenity. Planting required to replace any loss of trees, woodland or hedgerows resulting to development.

▶ **EA8 - Green Belt:** Restricts development in the designated area and where it is permitted it will be required to enhance the quality and distinctive character of the local landscape.

5. Central Scotland Green Network

5.1   The Central Scotland Green Network is one of 14 national priority projects contained in the National Planning Framework(2) (see Glossary), considered by ministers to form a central element of the strategy for Scotland's long-term development. As one of these developments, CSGN has the purpose of delivering a step change in the quality of Central Scotland's environment for the benefit of people, landscape and nature. The area covered by CSGN extends from Fife and East Lothian in the east to South Ayrshire in the west – the extent of the area is shown in the map below.

5.2   CSGN's ambition is to make Central Scotland a more attractive place to live in; do business and visit; help to absorb CO_2; enhance biodiversity and promote active travel and healthier lifestyles. This will be delivered by public bodies, landowners, developers and third sector bodies working in partnership to increase woodland cover, enhance off road access routes, enhance greenspaces within and outwith urban areas and offer increased opportunities for formal and informal recreation. To guide the partnership approach CSGN has developed 5 themes to tie in with the Governments objectives.

CSGN Activity Area
Encompassing 19 local authorities across Central Scotland

Central Scotland Green Network

Theme	Objective	Outcomes
A place for growth	An environment for sustainable economic growth	◗ Businesses want to be based in Central Scotland ◗ Increased levels of economic activity, competitiveness and employment ◗ Increased levels of enterprise and creativity ◗ A strong 'green industry' sector ◗ Increased levels of tourism
A place in balance	An environment more in balance, one that will support Central Scotland to thrive in a changing climate	◗ An environment that can adapt to climate change ◗ Communities which function well and can cope with change ◗ Properly maintained natural resources cost less to maintain ◗ Natural resources are valued and managed ◗ A region in greater carbon balance
A place to feel good	An environment which supports healthy lifestyles and good physical and mental well-being	◗ People feel good about their physical surroundings ◗ More people use and enjoy outdoor spaces ◗ Improved levels of physical and mental well-being ◗ A reduction in health inequalities ◗ A reduction in cases of preventable health problems
A place to belong	An environment that people can enjoy and where they choose to live and bring up their families	◗ People want to live here and move here because "...it's a great place to live..." ◗ People feel safe in and have pride in their surroundings ◗ People feel that they live in communities, not in isolation ◗ People are involved in volunteering and in community action ◗ More people taking part in, and appreciating, cultural activities

5.3 The Council acknowledges the importance of CSGN to deliver an enhanced environment for residents, investors and visitors which helps meet the challenges posed by climate change and was one of the first authorities to sign the CSGN Declaration. Working with partners is the key to delivering the network both within Clackmannanshire and with our neighbouring authorities. To date, a range of partnership projects have been undertaken supporting CSGN objectives such as improving access to and with Gartmorn Dam Country Park, enhancement of the Devon Way, and woodland studies in conjunction with Stirling. The objectives of OLP and IFLI also contribute to the CSGN objectives.

6. Clackmannanshire Green Network

6.1 The Clackmannanshire Local Development Plan acknowledges the multifunctional benefits of the green network for Clackmannanshire's economy and environment and the vital role it has to play in delivering a high quality of life for the area's residents. The Clackmannanshire Local Development Plan has identified a strategic green network, to support the plan's vision, which includes the following elements -

◗ Core Paths
◗ Woodland
◗ Green Belt
◗ Urban parks and open spaces including allotments and community growing spaces
◗ River corridors and their flood plains
◗ Special Landscape Areas
◗ Designated Sites (SSSIs & Inventory of Designed Landscapes and Gardens)
◗ Gartmorn Dam Country Park
◗ Black Devon Wetlands
◗ Ochils Woodland Park

The Green Network map is contained in the LDP and can be viewed on the web at: www.clacksweb.org.uk

6.2 This network builds on the Clackmannanshire Green Infrastructure Mapping (CGIM) Study funded by the CSGN Development Fund for Clackmannanshire Council, Clackmannanshire Alliance, Forestry Commission Scotland, Action for Change and NHS Forth Valley (2010). The CGIM study set out a vision to guide investment in future greenspace, focusing on green infrastructure, community well-being and health. In this context, CGIM highlights the following issues of importance:

◗ Climate Change Adaptation
◗ Flood Risk Management
◗ Active Leisure
◗ Transport
◗ Food Production
◗ Health -Physical & Mental - Age Structure
◗ Deprivation

6.3 The designation of a Clackmannanshire Green Network not only supports Scottish Planning Policy. CGIM further justifies its importance by highlighting the importance of the green infrastructure resource present in Clackmannanshire to address the risks to community well-being and its potential to enhance community well-being. The study highlights the strategic significance of Gartmorn Dam Country Park, Ochils Woodland Park and the Black Devon Wetlands. However, it highlights the fact that these assets along with lesser strategic assets have no existing coherent framework to promote their enhancement through recognition of their multi-functional nature and the value of improving their connectivity with the wider green network. For example, the Devon Way from Alloa to Dollar was developed over a number of years under a number of funding regimes which usually had a single objective such as countryside access or active travel. However, it is now recognised as having a muliti-functional role including:

◗ Active travel route between Eastern Hillfoots and Alloa
◗ Non-traffic access to Community Health Facility
◗ Urban and rural green space for informal recreation
◗ Wildlife Corridor and local biodiversity resource
◗ Visitor resource

6.4 The Green Network is therefore important as a means of delivering a number of community planning objectives including health, biodiversity, leisure and carbon management and its future management will reflect these, and relevant future, Community Planning objectives.

6.5 Clackmannanshire benefits from a comprehensive path network with the extensive range of core paths being particularly important (see Clackmannanshire Core Paths Plan 2009 and amendments – available at http://www.clacksweb.org.uk/site/documents/countryside/clackmannanshirecouncilcorepathsplan). The path network has an important role in enabling access between communities and linking key areas of open space, as well as providing wildlife corridors. Rivers and their corridors are also an important element providing settings for our communities, wildlife corridors, leisure opportunities as well as space for flood mitigation to protect our settlements.

CSGN Project - Devon Way, Alloa - Sunnyside School pupils planting trees and shrubs

Green Network Principles

6.6 Local Development Plan policy EA1 seeks to protect and enhance the defined Clackmannanshire Green Network with development proposals being required to contribute to the network and demonstrably enhance it. Where specific opportunities for the enhancement of the Green Network are identified in relation to individual sites, requirements are set out in the LDP Schedule of Sites.

Policy EA1 - Clackmannanshire Green Network

6.7 The aim of this policy is to support the implementation of the Central Scotland Green Network by ensuring that new development contributes to its objectives where possible.

6.8 Wherever possible, new development should contribute to Green Network principles and objectives and objectives as set out in this Plan and the Green Network SG and demonstrably enhance the Clackmannanshire Green Network. The Council will assess the potential impact of all new development proposals on the Green Network to ensure that they comply with the principles set out in the Green Network SG.

6.9 All new development will be expected to contribute to the enhancement of the connectivity, quality and/or extent of the network, except where this is impractical. Proposals for new development must demonstrate how this has been incorporated into the proposed design of the development, or alternatively how enhancement will be achieved through off-site provision. Development resulting in any reduction in the connectivity, quality or extent of the network will not be permitted unless adequate proposals for mitigation can be agreed with the Council.

6.10 While the nature of the contribution to the Green Network will vary as a consequence of site size and location the following principles should be adhered to in all cases:

◗ A full assessment of Green Network assets on the site and in the vicinity of the site must be undertaken.

◗ The nature and value of green network assets both running through the site and in the vicinity of the site should be considered. This should be undertaken as part of the contextual assessment of the site setting explained in the Placemaking SG.

◗ Assessment for protected species if required.

◗ Incorporation of assets into the design of the development and ensuring that the site design supports multi-functional green infrastructure and strengthens the Green Network locally e.g. core path through the site developed into a linear open space with recreational and biodiversity benefits.

◗ Enhancement of assets e.g. deculverting and naturalisation of burns to delivery amenity, biodiversity and flood management benefits.

◗ Utilising green assets on site margins to incorporate development into the landscape.

◗ Green Network connectivity is a fundamental asset which developments should enhance and only in exceptional circumstances be severed. If this occurs proposals should involve appropriate mitigation measures as part of the submission.

◗ The fundamental principle embodied in Policy EA1 is that there is an expectation that all new development will enhance the Green Network, delivering a considerably stronger and better connected network than existed before the development was carried out.

◗ Community involvement. Give local people a chance to share their knowledge and shape design.

Gartmorn Dam

Clackmannanshire's Strategic Green Network Projects

CIGM has highlighted the strategic significance of Gartmorn Dam Country Park, Ochils Woodland Park and the Black Devon Wetlands as accessible localities to the majority of Clackmannanshire's population with the ability to deliver on community well-being in terms of amenity, health, informal recreation, volunteering and biodiversity. The Council, in partnership with local and national bodies, has already undertaken works on these sites and will be endeavouring to further develop these resources. Proposals at Gartmorn Dam will be guided by the contents of the Gartmorn Dam Green Hub study which envisaged the development of the Country Park as a local green hub as part of the CSGN, balancing biodiversity with recreational pressures. Development in the vicinity of these localities should ensure that accessibility and natural connectivity are not adversely impacted with these attributes being enhanced wherever possible.

The Council has already undertaken significant works to enhance the network such as extending and enhancing the core path network, implementing a programme of environmental improvement works as part of the Ochils Landscape Partnership, enhancing access and undertaking woodland projects at Gartmorn Dam, Ochils Woodland Park, Back Wood, Clackmannan, Gean Park and Arnsbrae in Alloa. These works have been undertaken in partnership with a variety of external bodies including the Forestry Commission Scotland, Central Scotland Forest Trust and the Heritage Lottery Fund. The Council is a partner in the Inner Forth Landscape Initiative which proposes enhancements to access, natural and built heritage in the southern part of Clackmannanshire.

Habitats and Biodiversity

6.11   Green Infrastructure while important for the setting and amenity of our settlements provides vital functions for nature conservation and biodiversity. Linked green infrastructure networks act as wildlife corridors enabling species movement. Developers as part of their site assessment process are expected to consider the existing habitat resource and the potential to enhance the habitat network. The requirements of Policy EA2 must be fully addressed in all new development:

Policy EA2 - Habitat Networks and Biodiversity

6.12   This policy aims to encourage the protection and enhancement of biodiversity and habitat networks by safeguarding the integrity of features of the landscape which are important because of their linear and continuous structure or function as intermediate sites for the movement of both fauna and flora.

6.13   All development proposals will be expected to fulfil all of the following criteria:

◗ maximise the potential of their development to contribute positively to biodiversity conservation and enhancement (and seek mitigation for any adverse impacts of development);

◗ protect and enhance existing habitat networks in or adjacent to the development site;

◗ mitigate any negative impacts on habitats, species or network connectivity either resulting from the development or as a result of the cumulative effects of developments locally;

◗ identify opportunities to strengthen the existing habitat network by creating new habitat links.

6.14   Wherever possible, development proposals should contribute to the objectives of the Clackmannanshire Biodiversity Action Plan; and the ongoing improvement of habitat networks and the Clackmannanshire Green Network, in accordance with the Green Network SG. Where there is, in the Council's opinion, a potential adverse effect upon local biodiversity, the developer will be required to submit an Ecological Appraisal (See Glossary) of the development, which will be considered before the proposal is determined. There will be a presumption against development that is likely to have a detrimental impact on the function of our habitat networks unless adequate provision can be made on or off site to maintain species populations, create or enhance comparable habitats and/or improve network connectivity elsewhere such that overall there is an expected net increase in biodiversity.

7. Green Belt

7.1 SPP identifies three key purposes for designating land as Green Belt –

◗ direct planned growth to the most appropriate locations and support regeneration;
◗ protect and enhance the quality, character, landscape setting and identity of settlements; and
◗ protect and give access to open space within and around settlements.

7.2 As part of the preparation of the Local Development Plan, the Council commissioned a review of the existing Clackmannanshire Green Belt taking account of the key purposes of green belt designation in the SPP. The study also considered the role of the Clackmannanshire Green Belt as part of the strategy to deliver the objectives of the Central Scotland Green Network in Clackmannanshire. The SPP is clear that: "an effectively managed green belt can be an important resource for access to the countryside, providing a range of opportunities for outdoor recreation, education and tourism, and for protecting and enhancing biodiversity, the landscape and the historic environment. However, it is not a designation designed to safeguard natural heritage resources. Wherever possible, green networks within settlements should extend into the green belt." The study considered these opportunities in relation to the role and extent of the Clackmannanshire Green Belt.
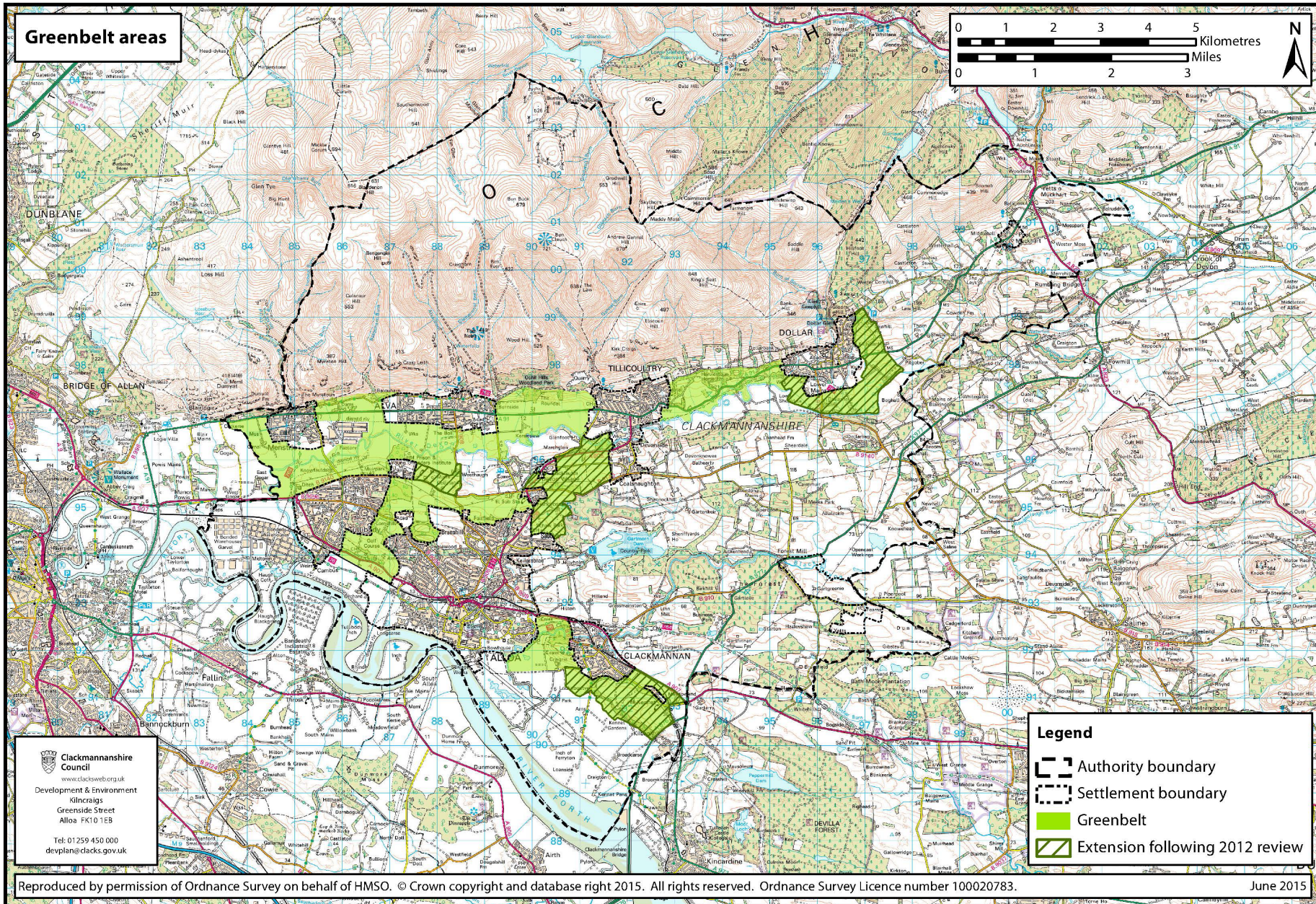

Alva Green Belt

7.3 The review proposed the expansion of the green belt in areas around Clackmannan and Dollar as well as introducing green belt between Sauchie and Devonside. These alterations to the existing green belt have taken account of the local landscape and will assist in managing development and directing growth to appropriate locations as well as ensuring that in the long term the identity and landscape of our towns are protected. The Green Belt will play an important role in delivering the objectives of the SPP and CSGN.

7.4 In the urbanised areas of Clackmannanshire the green belt is an essential element of the Green Network containing a wide variety of land uses, including agriculture, woodland, rivers and their flood plains and significant parts of the core path network which provide active travel routes as well as opportunities for informal recreation. Local Development Plan Policy EA8 seeks to retain the integrity of the green belt and promotes its enhancement.

7.5 Clackmannanshire's settlements generally have good access to the countryside with green belt being an important element in ensuring existing levels of access are maintained and where appropriate are enhanced. This will involve the Council in monitoring the footpath network to ensure that access is maintained and, where opportunities exist, undertake works or support works being undertaken by landowners and other stakeholders to enhance the network. Path works will be guided by the Core Path Plan and the opportunity for paths to connect to the countryside and neighbouring communities as well as taking into account the wider biodiversity, health and climate change agendas.

7.6 Woodlands are an important biodiversity element in the Green Belt and their management and extension can support the delivery of the Clackmannanshire Local Biodiversity Action Plan as well as the wider health and climate change agendas. There is also some potential for timber production for energy and construction.

7.7 In all proposals within or adjacent to the Green Belt the Council will require developers to take account of the existing green infrastructure ensuring that this is not diminished and that clear proposals for its enhancement are incorporated into all proposals. Designers should pay particular attention to the Clackmannanshire Core Path Plan and Clackmannanshire Local Biodiversity Action Plan as well as IHN data for the locality, Forth Area Management Plan (see Water SG) and the Forth District Flood Risk Management Plan, when available.

Greenbelt areas

0	1	2	3	4	5	
						Kilometres

0	1	2	3	
				Miles

N

DUNBLANE

BRIDGE OF ALLAN

DOLLAR

TILLICOULTRY

CLACKMANNANSHIRE

ALLOA

CLACKMANNAN

DEVILLA FOREST

RIVER FORTH

Clackmannanshire Council
www.clacksweb.org.uk

Development & Environment
Kilncraigs
Greenside Street
Alloa FK10 1EB

Tel: 01259 450 000
devplan@clacks.gov.uk

Legend

⬚	Authority boundary
⬚	Settlement boundary
▤	Greenbelt
▨	Extension following 2012 review

June 2015

7.8 The Green Belt study highlighted the potential of green belt to deliver a number of related green infrastructure measures including the following –

◗ increased woodland cover.
◗ promotion of woodland management for longevity.
◗ addressing inaccessibility to countryside, where existing provision is poor, in combination with habitat enhancement and improving connection between settlements.
◗ restoration of riverbanks to increase biodiversity and habitat connectivity, including riparian scrub.
◗ flood mitigation measures including wetlands.
◗ enhancing links to Gartmorn Dam.
◗ creation of circular routes around settlements.
◗ structural planting, including hedgerows, in the Devon floodplain to enhance landscape character and benefit habitat networks.
◗ improved signage.
◗ improve settlement boundary definition through enhancement and diversification of habitats.

7.9 The Council encourages landowners and other stakeholders to have due regard to the Green Belt resource when they are considering undertaking works in this area and may be able to offer assistance and support for appropriate projects.

8. Design Guidance

8.1 Development proposals have the potential to undermine as well as offering enhancement of Clackmannanshire's green infrastructure resource. Planning policies outlined above have been developed to ensure that due regard is paid to our green resources with their incorporation into development proposals.

8.2 Layout design should ensure that connections to the green infrastructure outwith the site and the potential to enhance these assets are, where appropriate included in the submitted proposals for development applications.

8.3 Green infrastructure is as important as grey infrastructure (buildings and roads) in the creation of well designed environments. Individual green elements provide benefits in their own right but these benefits are greatly enhanced by linking two or more elements on site and the adjoining locality.

8.4 Green infrastructure should be considered form the outset. Layout design should respond to the assets and opportunities within and outwith the site as outlined in the design process set out in section 9.

8.5 The Clackmannanshire Local Development Plan policies have been prepared taking into account a range of relevant plans and strategies, including those detailed below, and these should be referred to in design proposals which involve green infrastructure.

Related Plans and Strategies

Clackmannanshire Biodiversity Action Plan

Forth Area Management Plan

Clackmannanshire Green Infrastructure Mapping

Gartmorn Dam Green Hub Study

Clackmannanshire Open Space Audit and Strategy

Clackmannanshire Core Path Plan

9. Design Process

Site and Context Appraisal

9.1 A first step in the consideration of green infrastructure's role in a potential development site should be based on appraisal of the site and its context identity and connections. This section follows through to the wider design issues detailed in the Placemaking SG and should be utilised in conjunction with this document to inform the layout design for new developments.

Context

◗ **Topography** - Potential to incorporate infrastructure such as drainage
◗ **Location and Surrounds** - Relationship to the localities green infrastructure
◗ Views into and out of the site
◗ Hydrology and Drainage
◗ **Natural Features** - Safeguarding for incorporation into development
◗ **Microclimate** - Exposure, Shelter, Orientation, Wind, Sun

Identity

◗ Landscape Character
◗ Blue and Green corridors
◗ Greenspaces/Green Belt
◗ Flora and Fauna - with special regard to protected species (badgers, bats, otters, etc.)
◗ Wildlife Habitats

Connection

◗ Habitat networks - green/blue corridors for the movement of wildlife
◗ Safe pedestrian/cycle movement within and links to external network

9.2 The process detailed below, including diagrams, correlates to the Design Process section of the Placemaking SG and should be read in conjunction with this SG with the follow through of the appraisal of green assets to grey assets to inform the final layout design.

9.3 The appraisal should be proportionate to the scale of the proposed development and be utilised to inform the layout design as detailed in the Design Process section of Placemaking SG. Recording the various green space elements within the development site and adjacent area ensures that appropriate options to maximise green infrastructure benefits and connectivity are achieved. The Council expects that a planning submission should include the following:

◗ Context plan including green elements detailed above
◗ Site plan detailing green infrastructure on site
◗ Ecological assessment if required
◗ Layout plan clearly detailing the green infrastructure on site and connections to wider green network
◗ Mitigation proposals if green network elements are subject to fragmentation
◗ Open space assessment in relation to Clackmannanshire Standard

9.4 Landscaping associated with development proposals should utilise native trees and shrubs or those which will benefit biodiversity. Layout designs should, wherever possible, contribute to the improvement of green infrastructure and minimise any adverse impacts.

9.5 Development proposals which would adversely affect the Green Network require to include comprehensive mitigation measures to ensure the continued existance of the local network. Such measures could be off site.

Clackmannanshire Standard

9.6 The provision and access to open space is a fundamental consideration for residential proposals and in this regard a Clackmannanshire Standard has been developed as part of the Clackmannanshire Open Space Strategy. This has been designed to ensure that there is a consistent approach to the provision of quality open space throughout Clackmannanshire.
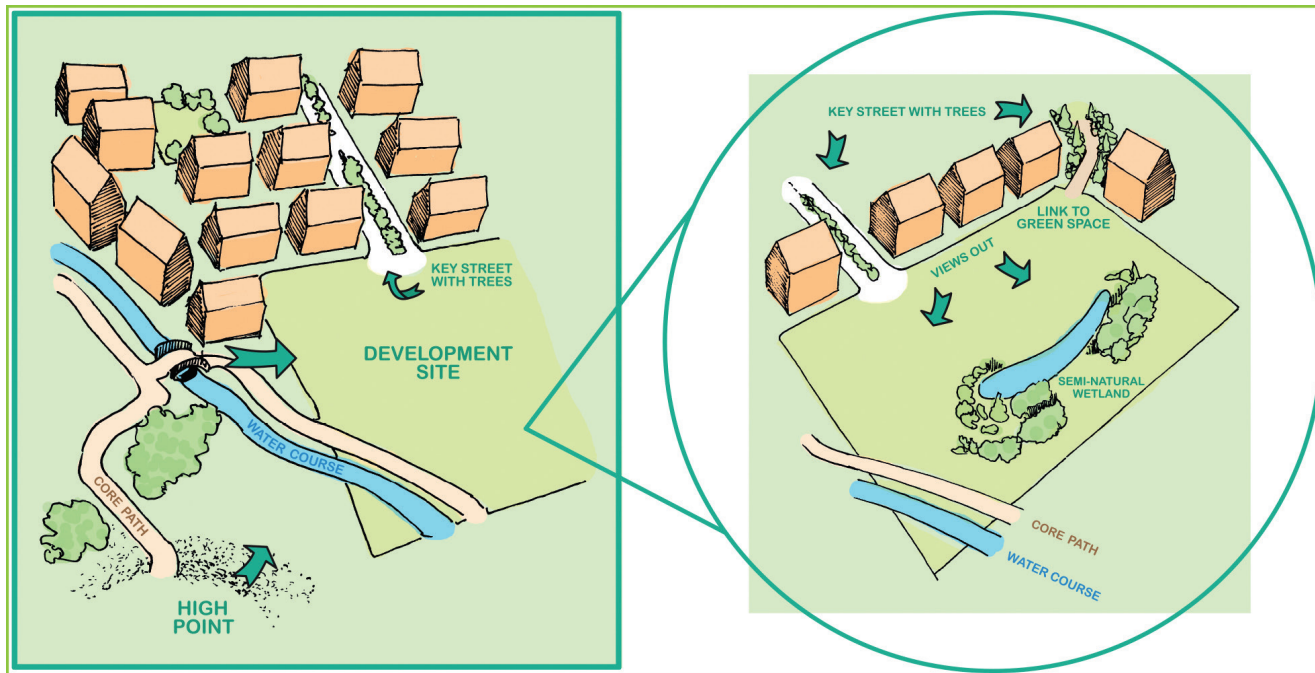
Site Context Appraisal diagram below shows the context area outside the development site. Locational details of green network components –

- views in and out of site
- core paths and other path networks
- open space (green and civic)
- green belt
- habitats
- water courses
- designated sites (see glossary)
- topography and landscape character

Following the context appraisal the development site's green infrastructure should be appraised so that the nature of the on site resources are documented which could link both within the site and beyond to the wider green infrastructure. See diagram below. Development site appraisal shows:
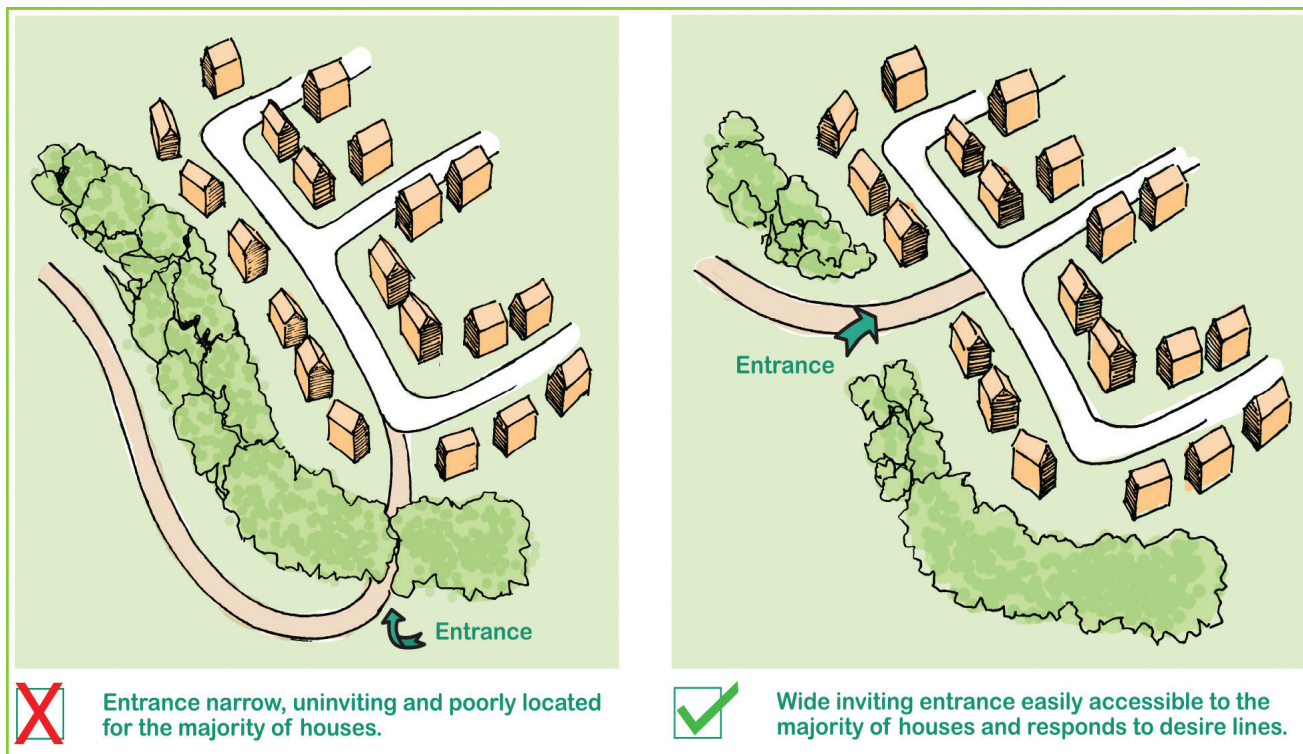
- topography(high points/low points/slope orientation)
- views out of and within the site
- habitats and existing vegetation
- woodland/mature trees
- core paths/local paths and desire lines
- prevailing wind direction
- water course and drainage

10. Paths

10.1 Paths are an important element of green infrastructure providing active transport routes between communities, work places, schools and leisure facilities as well as wildlife corridors. They also provide ready access to the countryside for informal recreation and offer opportunities for health lifestyles to address the health agenda. They can be viewed as the arteries of the green network and the element most used by public. It is therefore important that path connections and their relationship to the existing green infrastructure on and off site is considered from the start of the site design process. Design requires to consider potential desire lines, topography, informal policing and interface between paths and development. Poor design approaches can result in anti social behaviour, abandoned paths, desire lines impinging on planned green spaces and breaks in the green network. Linkages into and through the Green Belt are especially important assets to be protected and enhanced providing immediate access to the countryside from our settlements.
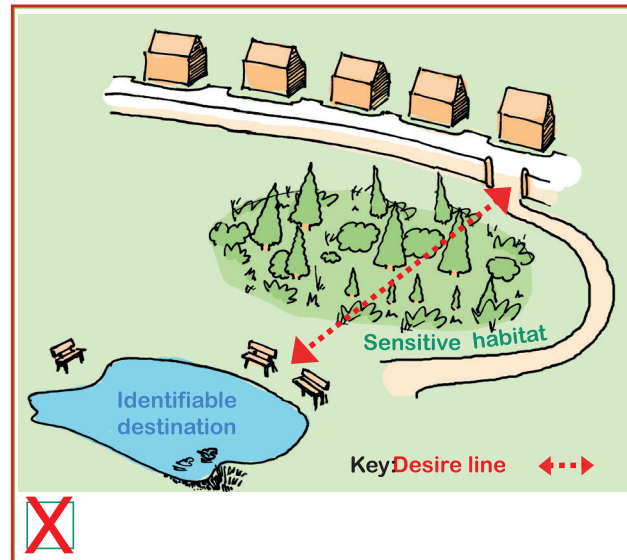

✗ Entrance narrow, uninviting and poorly located for the majority of houses.

✓ Wide inviting entrance easily accessible to the majority of houses and responds to desire lines.

AVOID

◗ Narrow path corridors and entrances hemmed in by high fencing
◗ Paths remote from green infrastructure
◗ Paths with steep gradients
◗ Obscured entrances to paths by trees and shrubs

DO

◗ Wide path corridors and open entrances to accommodate all non vehicular users with 'green' edges
◗ Integrate paths into existing and proposed green infrastructure
◗ Paths with easy gradients
◗ Follow desire lines
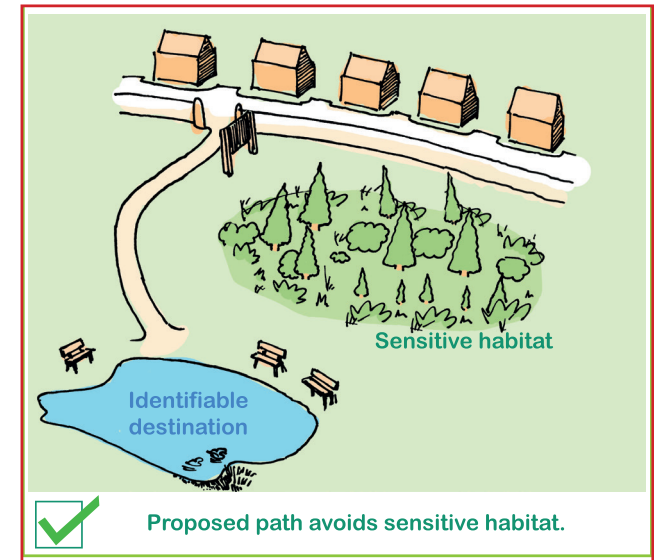◗ Design for informal policing

11. Sensitive Habitats

11.1 An important aspect of a green network approach is the enabling of species movement and the retention of habitat for species to enable them to thrive, as well as creating landscapes and spaces for public enjoyment. Habitats and their species can be subject to significant impacts through pressures created by developments such as noise, other nuisance and the potential for new access routes. In order to avoid these potential impacts an ecological appraisal or survey of the site and its context should be undertaken to indentify sensitive habitats. This analysis will enable the nature of threat to the habitat to be determined e.g. trampling, noise, drainage, etc. with a design approach being developed to avoid the risk. Policy EA3 sets out cases where ecological appraisal is required but developers are encouraged to carry out voluntary ecological appraisals or ecological surveys in other cases where this would offer the benefit of maximising the biodiversity value of new development and inform mitigation of any negative impacts of new development on biodiversity.

Key Desire line

Proposed path avoids sensitive habitat.

AVOID

◗ Leaving identifiable desire lines on the ground
◗ Fencing in sensitive habitat
◗ Over protection of habitat i.e. keep out signs
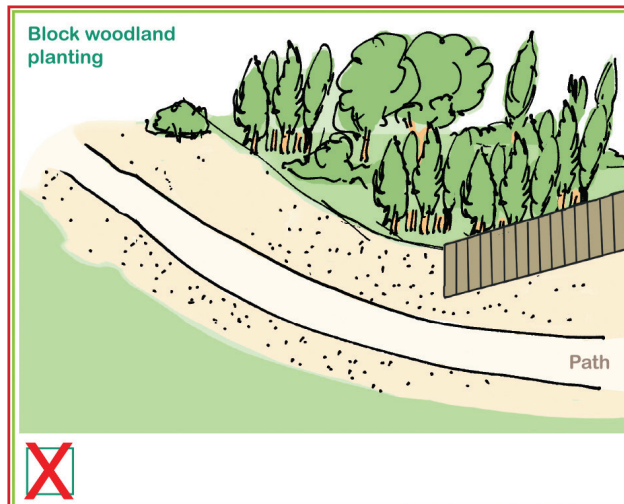◗ Path entrances directly in line with/adjacent to sensitive habitat

DO

◗ Design routes to avoid breeding/nesting areas sensitive to disturbance
◗ Use interpretation to encourage responsible access and understanding of habitat
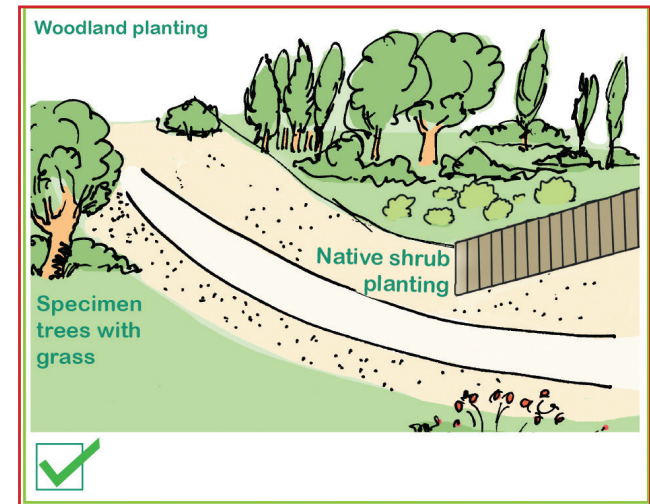◗ Use low impact path designs and materials

12. Woodland and Hedgerows

12.1 Woodland and hedgerows are important elements throughout Clackmannanshire and help define the sense of place. They provide landscape settings for settlements and can provide an attractive landscape framework for new developments. They also provide important green corridors for wildlife, biodiversity reservoirs, contribute to local amenity and can also help address climate change through water take up, shade and urban cooling. Development proposals can have adverse impacts on these natural landscape elements which if given due consideration will be beneficial in terms of water management, place making and general amenity. Particular attention requires to be given to trees and hedgerows in the Green Belt where they are likely to be subject to access pressure. This can be detrimental to their role in defining the landscape setting of Clackmannanshire's settlements and consequently careful consideration requires to be given to their management to ensure that their role is not diminished. Management measures should ensure that the access routes and appropriate leisure activities can be accommodated without detriment to the resource and include replanting with native species to retain their biodiversity value.

Block woodland planting

Path

Woodland planting

Native shrub planting

Specimen trees with grass

AVOID

◗ Dissecting woodland and hedgerows
◗ Hard elements abutting onto woodlands and hedgerows
◗ Ornamental species in disparate groups especially in countryside locations
◗ Mass planting of evergreens on site boundaries
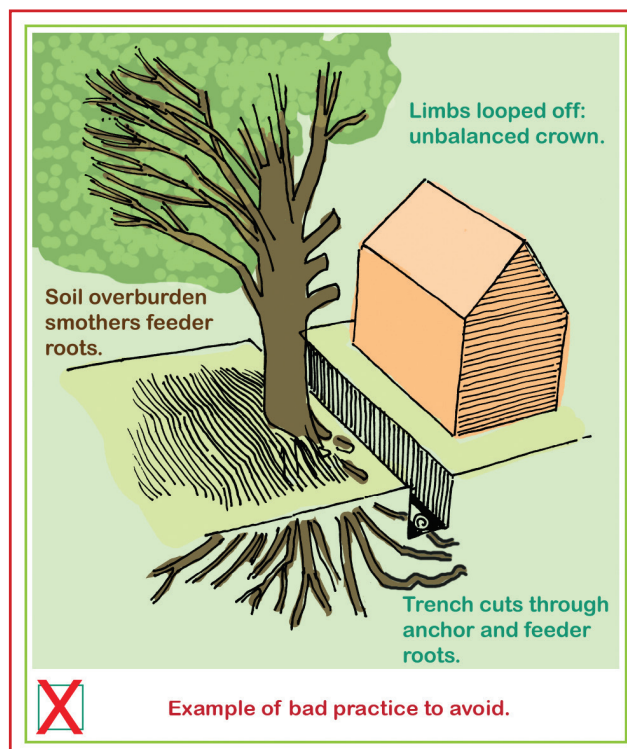◗ Planting which obscures natural surveillance

DO

◗ Incorporate woodland and hedgerows into layout
◗ Allow for a buffer strip between woodland and development
◗ Plant species that benefit wildlife to connect site's green infrastructure to that in its locality
◗ Retain and reinforce shelter belts
◗ Install protective fencing around woodland and hedgerows during construction works

13. Trees

13.1 Individual trees and small groups of trees are important landscape and biodiversity resources and in some cases could have cultural significance as remnants of designed landscape. In developed areas they offer a number of environmental services in relation to air quality, urban cooling through providing shade and also surface water management, in addition to general amenity. It is therefore important that existing trees and proposed tree planting are given due consideration in the design process as they offer a number of advantages to occupiers that cannot be easily or cost efficiently delivered by other means. Tree works should not be undertaken during the nesting season.

13.2 The Council has the power, under planning legislation, to designate Tree Preservation Orders (TPO). TPOs may be made where it appears expedient to the Council in the interests of amenity to make provision for the preservation of trees and woodlands. The making of a TPO prohibits the felling, lopping, topping or uprooting of the trees without the consent of the Council. Trees in conservation areas have a similar degree of protection where tree works require to be notified in advance to the Council for consideration.

Limbs looped off: unbalanced crown.

Soil overburden smothers feeder roots.

Trench cuts through anchor and feeder roots.

Example of bad practice to avoid.

AVOID

- Rows of fast growing conifers
- Damage to existing trees through lack of protection or works within their canopies
- Limb lopping to unbalance crown
- Tree planting under power and telephone lines
- Altering the ground level around existing trees
- Planting to obscure visibility or informal surveillance
- Limes and Sycamores in parking areas to prevent sap staining

DO

- Tree planting in natural groups
- Tree species which will enhance the wildlife and biodiversity by providing nesting areas, food material and shelter
- Areas for dense screening and fast growth planted with whips mixed with standard trees
- Standard trees for gardens or enclosed spaces
- Heavy standards as specimen trees for public spaces and scale
- Protection of trees to BS 5837 during construction period
- Root containment for trees/shrubs adjacent to roads, pavements & car parks
- Allow ample room for trees to grow to their full potential

Sources of Further Information

Scottish Government

◗ Scottish Planning Policy
◗ Designing Places
◗ Designing Streets
◗ Green Infrastructure: Design and Placemaking
◗ PAN 60 Planning for Natural Heritage
◗ PAN 65 Planning and Open Space
◗ PAN 67 Housing Quality
◗ PAN 68 Design Statements
◗ PAN 83 Masterplanning

SNH

◗ Green Networks in Development Planning

Greenspace Scotland

◗ Developing the Role of Greenspace in Climate Change Mitigation and Adaptation

CSGN

◗ CSGN Vision

Glossary

Designated Sites - These are sites which are designated for their natural heritage value. There are three levels of designation:

◗ International - Also referred to as Natura sites - Special Protection Areas (SPA) and Special Areas of Conservation (SAC) - Firth of Forth has such a designation.
◗ National - Sites of Special Scientific Interest (SSSI) - Dollar Glen and the Alloa Inches are so designated.
◗ Local - Local Nature Reserve (LNR) - Gartmorn Dam is a LNR.

Full details of the designated sites are available on SNH website (http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/)

Ecological Appraisal - ecological appraisal is a methodology to establish the ecological assets on a development site and its locality. This is undertaken through surveying to establish a baseline of habitats and species, including protected species. This is followed by an evaluation of the ecological features and identification of the potential impacts on these features and recommendations for mitigation and enhancement and possible requirement for further survey work. (refer to CIEEM guidance: http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/GPEA/GPEA_April_2013.pdf)

Ecosystem Services - ecosystem services are the benefits that people obtain from the natural environment through ecosystem processes. They include services such as flood and coastal protection, climate regulation, food and timber production, waste breakdown and detoxification, air quality, water for drinking, energy and industrial processes, soils and landscape and biodiversity.