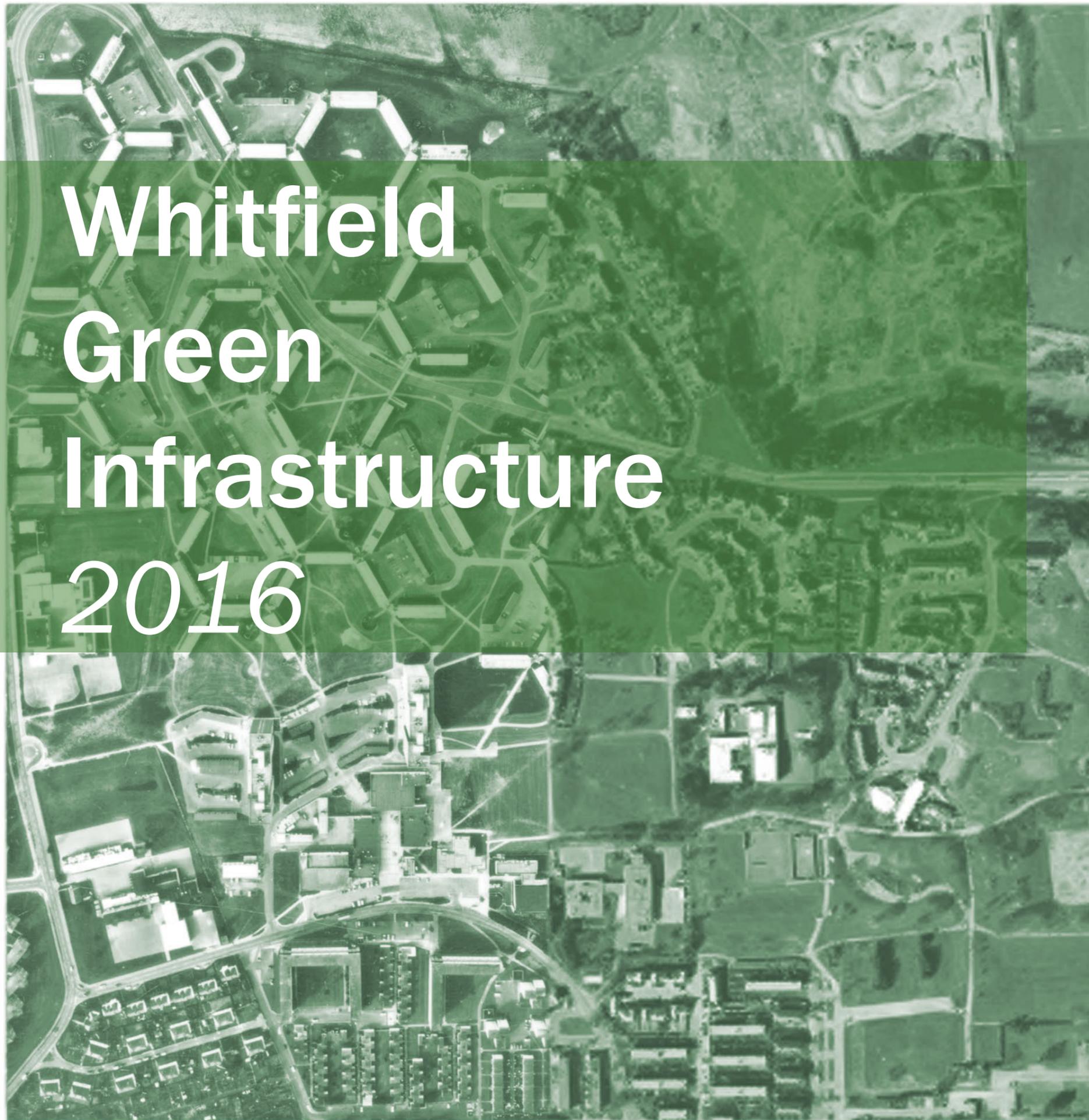


# Whitfield Green Infrastructure 2016





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# 1 Introduction

## 1.1 Context & Purpose

A key outcome of the regeneration activity in Whitfield is to improve the environment for the local residents and to improve the economic status of the area by making it a more attractive place to live and work.

This guidance documents sits alongside the Whitfield Planning Framework 2015, which positively guides the creation and enhancement of green infrastructure within Whitfield. It is not intended to replace national guidance or legislation but seeks to promote good practice and set out key principles for new development within the area. The document will highlight opportunities for developers, the community and the local authority to create, enhance and preserve green infrastructure within Whitfield.

This document has been prepared by the Council's Development Plans and Regeneration Team with input from the Forestry Officer and Environmental Management Officers.

The key principles within the document are based on existing national and local policy and guidance including:

- *National Planning Framework (NPF3)*
- *Scottish Planning Policy (SPP)*
- *Scottish Government Green Infrastructure: Design and Placemaking*
- *Dundee Single Outcome Agreement*
- *North East Local Community Plan 2012-2017*
- *Dundee Local Development Plan 2014*
- *Developer Contributions Supplementary Guidance*
- *Dundee Green Network Planning Guidance*

Two key documents in terms of the design and delivery of green infrastructure is the *Scottish Government Green Infrastructure: Design and Placemaking* and the recently approved *Dundee Green Network Guidance*.

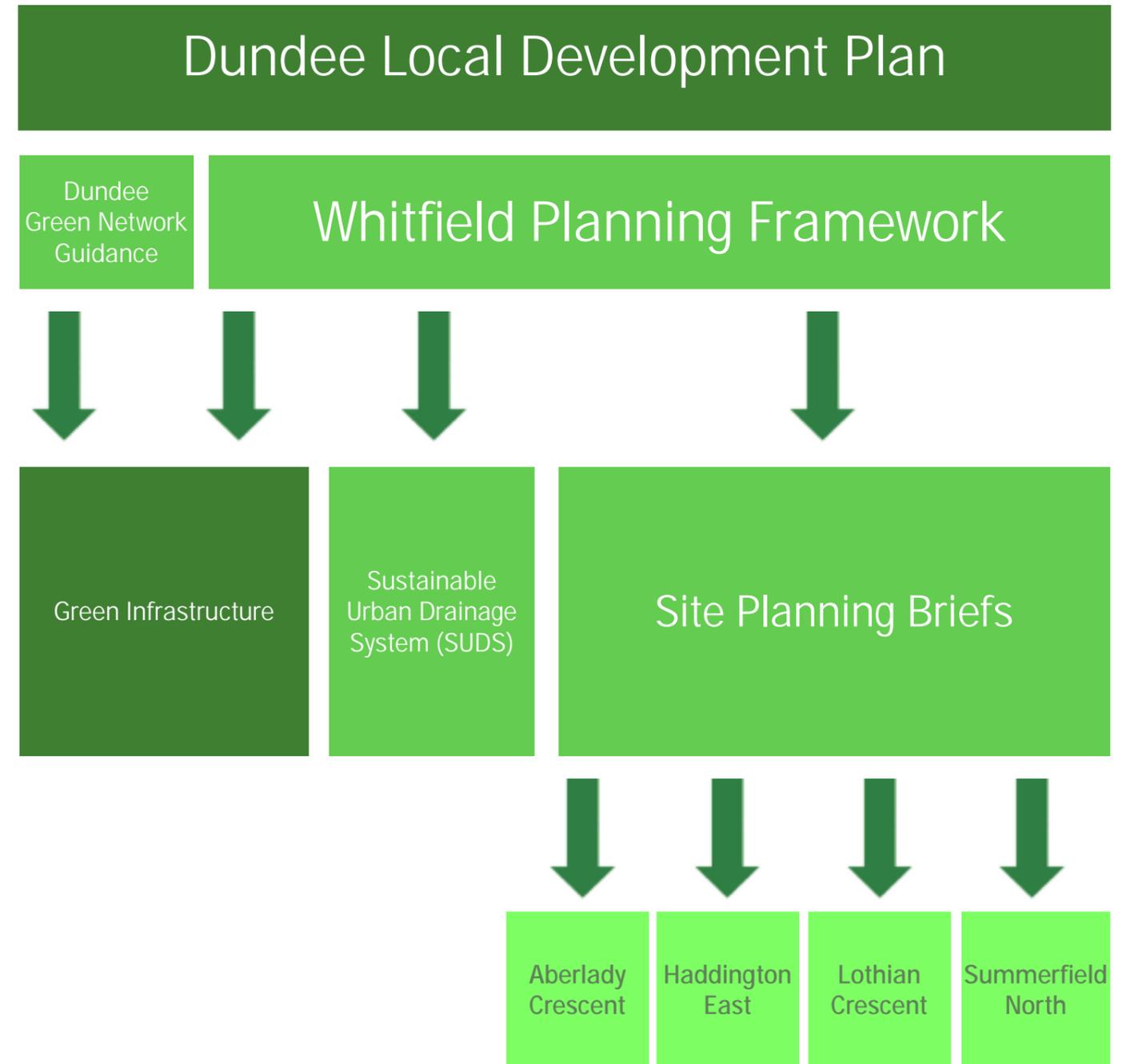


Figure 01: Diagram showing the hierarchy of documents that support the Strategy.

# 1.2 Green Infrastructure: Design and Placemaking

The Scottish Government's *Green Infrastructure: Design & Placemaking document (2011)* sets out the 'six qualities of a successful place' to be taken into consideration when developing a green infrastructure masterplan:

Green Infrastructure should...

1. Be Distinctive
  - Reinforce landscape character and identity
  - Use unique design features
  - Create a 'sense of place'
2. Be Welcoming
  - Include entrance and gateway features
  - Make it easy to find your way around
  - Create places with a positive image
3. Be Safe & Pleasant
  - Create places with a positive image
  - Address risks through design
  - Deliver quality through design and maintenance
4. Be Easy to Move Around
  - Enhance and build upon existing green networks
  - Make connections for people
  - Make connections for wildlife
5. Be Resource Efficient
  - Implement SUDS and manage water resources
  - Use materials sustainably
  - Save energy by considering the local microclimate
  - Use renewable energy sources
6. Be Adaptable
  - Create multi-functional open spaces
  - Create opportunities for productive landscapes



Figure 02: Examples of how these 6 qualities could be incorporated into whitfield.



## 1.3 Dundee Green Network Planning Guidance

The Dundee Green Network Planning Guidance has been prepared to identify the opportunities throughout Dundee to connect green infrastructure through a green network. In the North East of Dundee the green network incorporates the Dighty and Fithie Corridors and identifies green infrastructure such as Middleton Community woodland and the green circular as key assets. A number of development principles have been identified that should be applied to development within Whitfield as follows:

Protect and enhance Dundee's green and blue assets	Improve the Quality of Place	Enable Climate Change Adaption	Facilitate people to leave healthier lives
<p>Consider the multifunctional principles of green infrastructure as an integral part of the design process.</p> <p>Consider how the scheme will integrate with existing green network assets.</p> <p>Green infrastructure offers opportunities for new biodiversity friendly spaces – explore opportunities for interpretation to help raise awareness and understanding in the community.</p> <p>Protect existing nature conservation interest sites.</p>	<p>Consider green and blue infrastructure elements early in the design process.</p> <p>Consider how the scheme will integrate with existing green network area assets.</p> <p>Explore opportunities to connect to the wider green network.</p> <p>Design should consider individual site attributes and reflect the local character.</p> <p>Provide a range of high quality places appropriate to identified local need.</p> <p>Green infrastructure design should aim to deliver on the six qualities inherent to successful places recognised by the Scottish Government (see section 1.2 above).</p>	<p>Consider green infrastructure elements as an integral part of the design process including green roofs, green walls, tree planting, SUDS and rain gardens.</p> <p>SUDS ponds and wetlands should be designed to respond to site topography, character and scale in accordance with best practice guidance prepared by the Council.</p> <p>SUDS design should encourage biodiversity and create a positive landscape setting for communities.</p>	<p>Consider green infrastructure elements such as green corridors, footpaths and cycleways, allotments and recreational areas as an integral part of the design process.</p> <p>Consider how the scheme will integrate with existing green network assets, including the core path network, greenways and the Green Circular.</p> <p>Explore opportunities to connect to the wider green network.</p> <p>Provide a range of high quality places appropriate to identified local need.</p> <p>Design should be safe and welcoming and should encourage sense of community ownership.</p>

# 2 Whitfield's Green Infrastructure Network

## 2.1 Whitfield's Green Infrastructure Network

● Green space ● Trees ● Housing Sites ● Potential Tree Planting

As part of the legacy of the now demolished multi-storey housing in Whitfield, there is now an extensive, yet fragmented network of green infrastructure. Many of the open spaces, landscaping and play areas that once served the multi-storey blocks have been retained, and the vacant housing sites have been grassed over awaiting redevelopment.

There are also green assets just beyond the boundary of the estate that can be used and enjoyed by residents although the links to these are often of poorer quality and may actually discourage use. These are comprised of Middleton Woods, the Dighty Water and the Green Circular cycleway.

The locations of these spaces is shown in Figure 3.

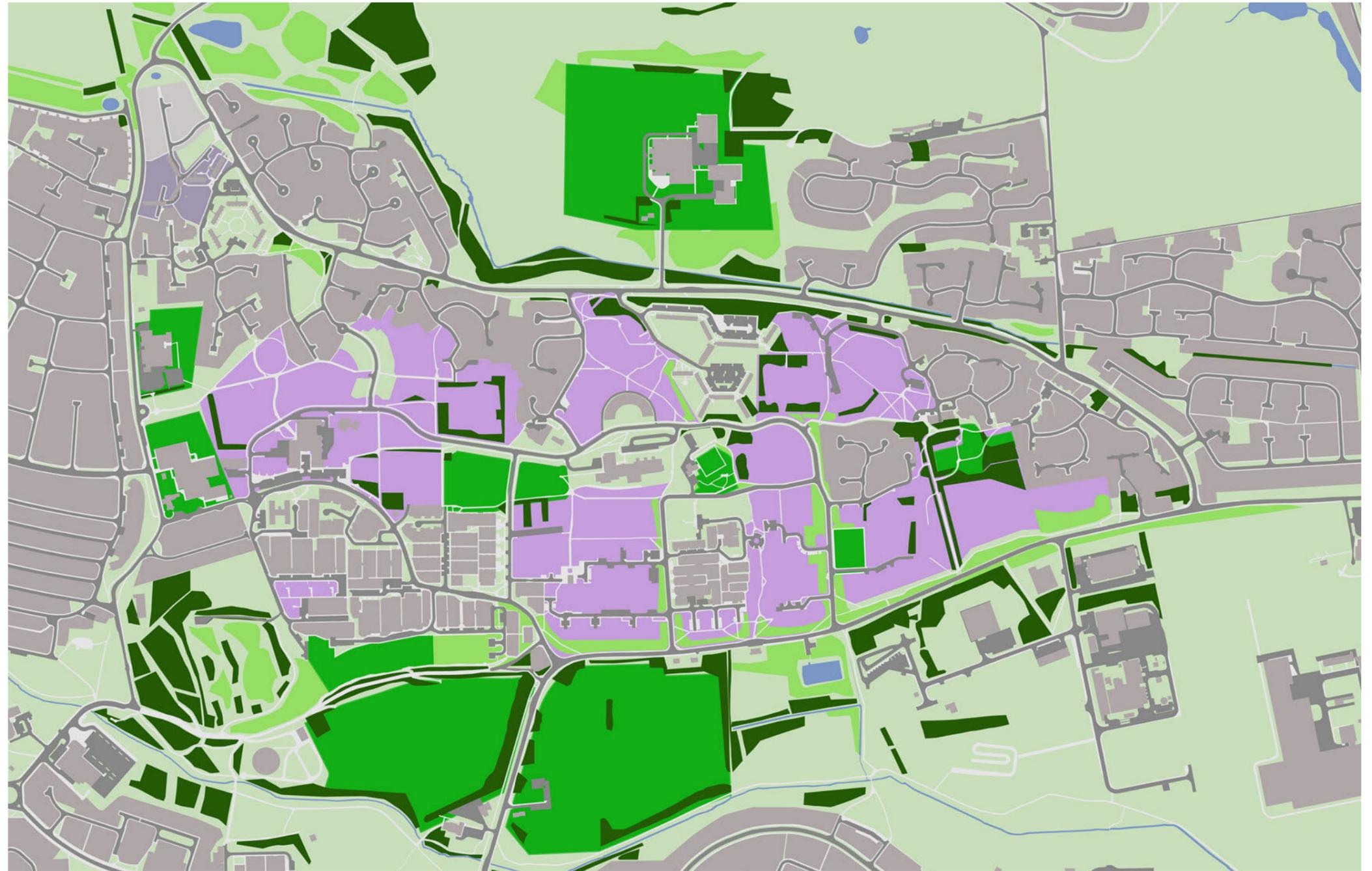


Figure 03: Map showing existing green spaces, trees and woodland within Whitfield.



## 2.2 Key Assets and Opportunities

### 2.2.1 Open Space and Play Areas

Whitfield is characterised by its large areas of open space and mature trees. Many of the areas of open space have been as a result of the demolition programme within the area, and in terms of the current population are surplus and underutilised. Consideration needs to be given to the provision of useable open space which has a function within the community as well as the enhancement of existing public open space.

The following four key principles from the Whitfield Planning Framework should be followed in order to achieve a high standard of accessible public open space:

- Development will take place within a hierarchy of accessible public open spaces;
- Housing shall provide natural surveillance;
- There should be a clear distinction between public and private space; and
- In conjunction with Dundee City Council, developers will create a management and maintenance regime to look after all public open space and public realm.



Figure 04: Map showing the location of existing and proposed play spaces in Whitfield.

## 2.2.2 Play Areas

Dundee's Outdoor Play and Youth Area Strategy (2009) were used to identify the location and type (Local Areas for Play (LAP) and Local/Neighbourhood Equipped Areas for Play (LEAPs/NEAPs)) of provision that would be anticipated within Whitfield, which is shown in Figure 9 (further detail can be found in the Whitfield Planning Framework). The strategy for the provision of play areas is currently under review and may impact on what and where play areas are provided in the future. Early engagement with Neighbourhood Services (contact details can be found at the end of this document) on the requirements for open space will be required in considering the layout of development within the area.



## 2.2.3 Existing Open Space

There are a number of well established play areas and areas of formal open space within Whitfield as identified on Figure 3. These areas are vital green infrastructure within Whitfield and with enhancement and improved accessibility to these assets they could make a positive contribution to the green network.

Developers will be encouraged to improve connectivity within their development to provide links to existing assets through provision of safe green routes for pedestrian and cycle use. Consideration will be given on a case by case whether a development site should provide open space on site or make a developer contribution to the enhancement of existing spaces which are considered more useable and accessible to the community. The use of developer contributions is discussed further in Section 3.3 of this document.

The following projects have recently been implemented to enhance and improve areas of play and open space to benefit the community. Opportunities to provide waymarking and improve access to these assets should be encouraged.





## 2.2.4 Whitfield Green

The Whitfield Development Group (WDG) on behalf of the community secured funding for the redevelopment and enhancement of Whitfield Green. This community-led project saw the provision of enhanced play equipment, a dog agility area, new seating, an outdoor gym and improved landscaping and was officially opened in October 2015. Whitfield Green makes a vital contribution to green infrastructure within the area and is a key community asset.



## 2.2.5 Whitfield Avenue

Through the Vacant and Derelict Land Fund a post-demolition site on Whitfield Avenue was identified as an area for environmental improvements. The area was underutilised as open space and had limited scope for residential development, therefore in consultation with the community an environmental improvement scheme was proposed including a new off pathway, seating, trim trail play equipment, tree planting and wildflower meadow.





## 2.3 Trees and Woodland

Woodlands are fundamental to overall green infrastructure of Dundee providing habitat for woodland flora and fauna; diverse open spaces for public enjoyment; and contribute to the visual amenity of a city.

Dundee City Council has already implemented some advanced tree planting throughout the area to contribute to the green network and improve the image and attractiveness of development sites. Where opportunities arise developers will be encouraged to provide advanced greening of sites to provide a landscape framework for future development.

Tree planting and retention is considered an essential part of the regeneration work within the area providing points of interest and natural screening.

There are a variety of opportunities for tree planting in Whitfield, including the following:

- Trees in open spaces – provide variety and identity as well as enhance or restore biodiversity. Open spaces can be linked through the planting of trees, shrubs or grass verges to provide habitat networks within a development site as well as the wider network beyond the site boundary.

- Tree belts – provide shelter and frame local neighbourhoods whilst contributing to and providing wildlife corridors that integrate habitat networks.
- Tree groups – provide visual interest within development sites and areas of multifunctional greenspace.
- Replacement tree planting - in line with the North East Local Community Plan where existing trees are to be removed developers will be required to plant new trees at a 3:1 ratio.

Discussion with Planning Officers, Environmental Management Officers and the Forestry Officer at an early design stage should be carried out to ensure that the type of tree is appropriate and the location seeks to contribute to the wider green network in providing a green corridor connecting the areas of open space.





## 2.3.1 Street Trees

Encouragement will be given to the planting of street trees within developments within Whitfield. Street trees have been incorporated in to recent housing development within the area and have proven to provide an attractive streetscape such as that on Summerfield Avenue.

The benefits associated with planting street trees include:

- Shading and cooling effects from canopies.
- Improvements in air quality due to production of oxygen and absorption of pollutants.
- They are visually pleasing and contribute to an overall sense of 'character'.
- Improvements to health and wellbeing of residents, including positive psychological benefits.
- Promotion of biodiversity and creation of habitats for different species.
- Reduction in energy consumptions for nearby buildings due to sheltering effects.

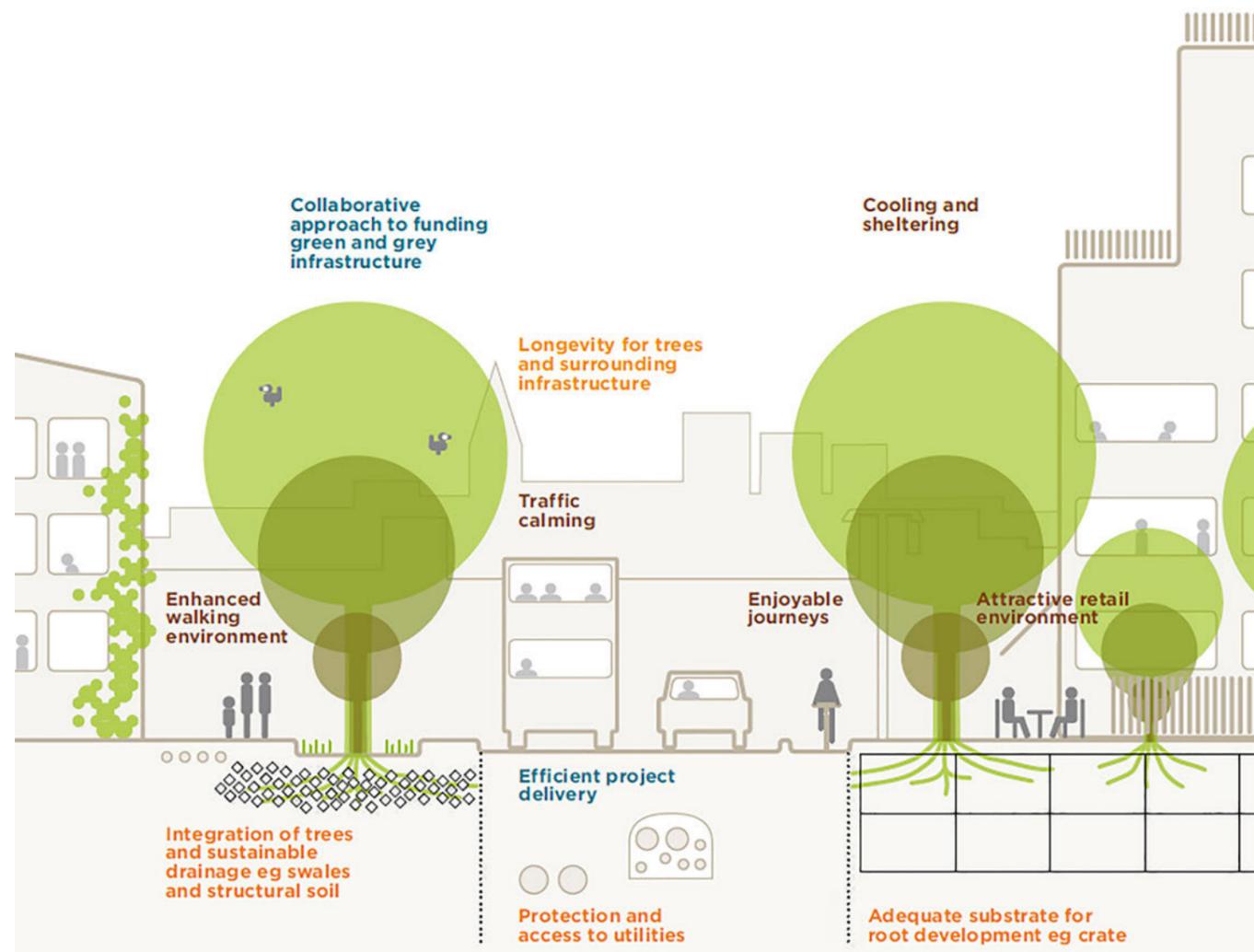


Figure 05: Diagram showing some of the benefits of integrating street trees.  
Source: *Trees in hard Landscapes: A Guide for Delivery* (2014)



Figure 06: Example of successfully implemented street trees in Ardler



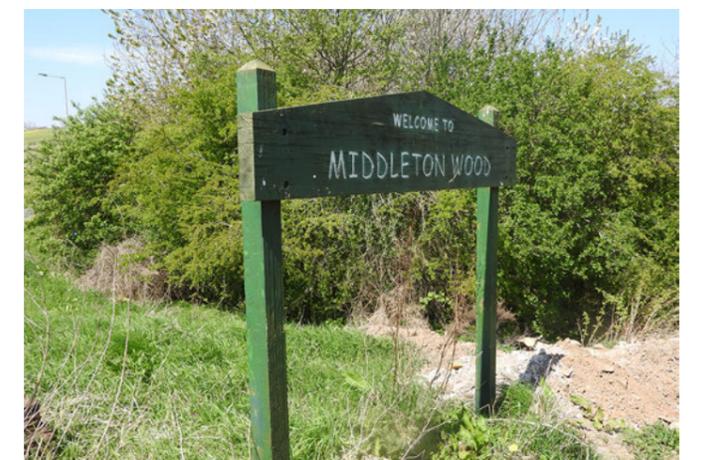
## 2.3.2 Community Woodland

Middleton Community Woodland is located immediately to the north of Whitfield and is considered a key green asset within the area not only providing trees but a nature area for wildlife, for public use, local participation and nature study.

Accessibility to the woods is limited, with car access from Duntrune Road to the north although the car park is no longer accessible. Pedestrian access is either along the south side of Duntrune Road or through a path way to the north of Carberry Crescent.

The North East Local Community Plan (2012) identified a need for increasing protected routes through the area and further extending the woodland. Improving current access from Whitfield via adequate foot and cycle paths should also be a priority.

There is an opportunity to consider how access could be improved. With limited access off Duntrune Road, consideration should be given to an alternative and enhanced entrance that would link in to the wider path network.





## 2.4 Green Corridors

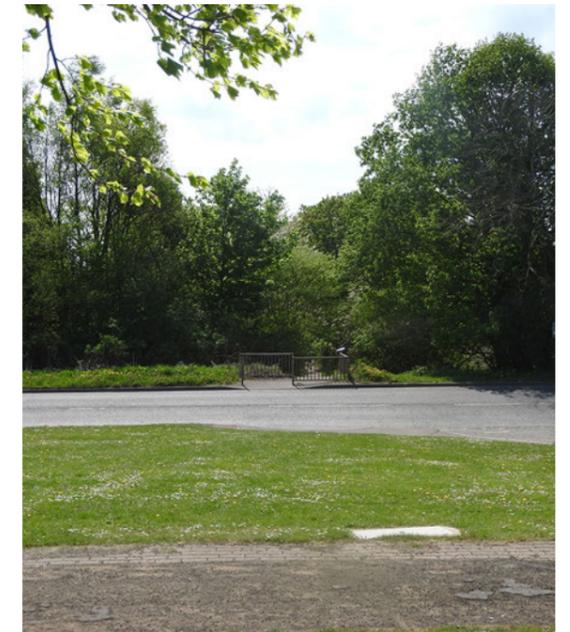
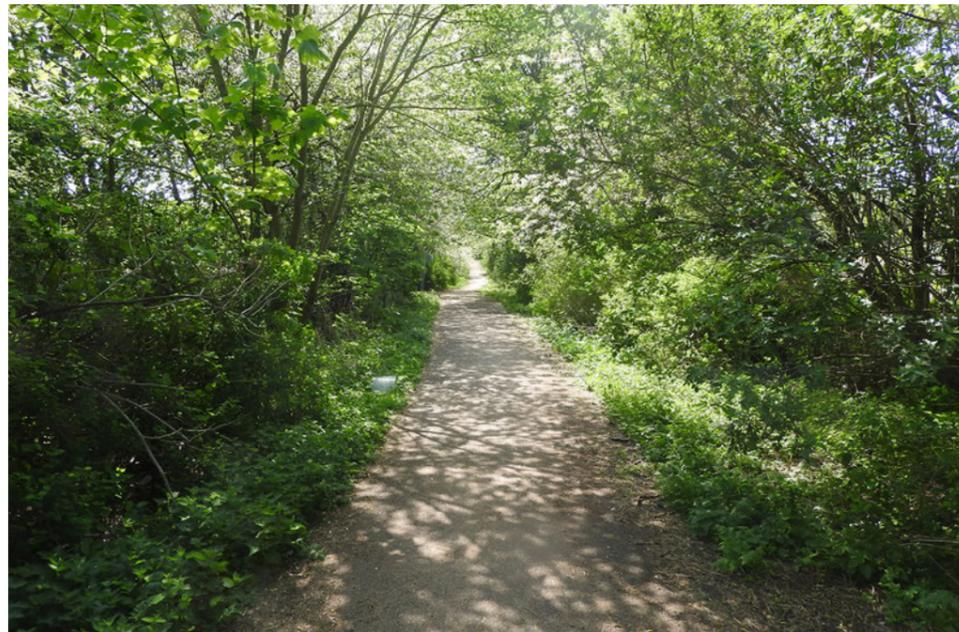
### 2.4.1 Dighty Wildlife Corridor

The Dighty forms part of the Wildlife Corridor identified within the Dundee Local Development Plan 2014 and incorporates Sites of Importance for Nature Conservation.

The Dighty Burn runs to the south of Whitfield and is within 10 minutes walk from the main housing areas. It is accessed via two footpaths off Drumgeith Road. It provides an important natural asset within the area and makes a positive contribution to the wider green network.

The North East Local Community Plan (2012) identifies the need to create safe pedestrian and cycle routes throughout the area, and in particular access to and from the waterway.

An opportunity therefore exists to promote the provision and enhancement of pedestrian and cycle ways throughout the development of Whitfield that will link to the wider path and cycle network and in particular access to the Wildlife Corridor.



## Dighty Wildlife Corridor

 Dighty Wildlife Corridor

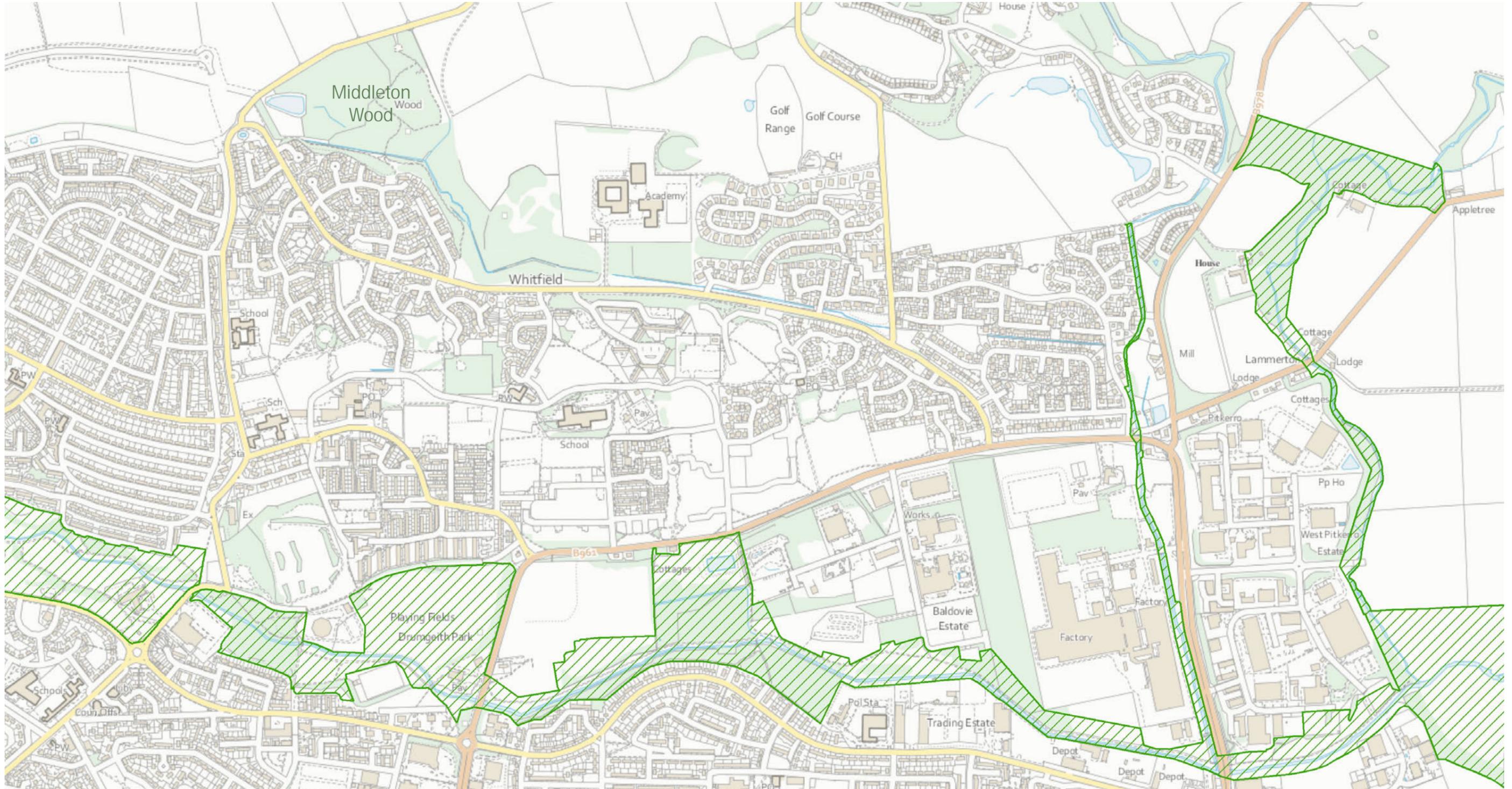


Figure 07: The location of the Dighty Wildlife Corridor in relation to Whitfield.



●●●● Core Path Network      ●●●● Aspirational Core Path      ■■■■ Green Circular

## 2.4.2 The Green Circular

The Green Circular is a 26 mile primarily off-road cycle and walkway circling the city which seeks to encourage sustainable travel. The Dighty Wildlife Corridor to the south of Whitfield forms part of the Green Circular cycle route.

The proximity of the Green Circular to Whitfield provides an opportunity to improve connectivity to this green asset and should be considered in new development through improved path and cycleways, waymarking and signage.



Figure 08: The Green Circular as well as Core Paths and Aspirational Core Paths in relation to Whitfield.



### 2.4.3 Active Travel Routes

Enhancing the green network and providing connections through Whitfield as well as linkages outwith the area provides an opportunity to encourage and enhance active travel within the area. Attractive green routes which are well lit and overlooked by development should be incorporated in to development providing opportunities for walking and cycling within a development and connection to areas of open space with Whitfield and the wider green network.

Through the regeneration and redevelopment there are opportunities to improve active travel within the area:

- Implement a programme for directional signage and mapping,
- Increase provision for cycle parking,
- Ensure adequate and regular maintenance of existing routes,
- Integrate links for walking and cycling with public transport nodes,
- Reduce speed limits for motor vehicles to promote safety and convenience for pedestrians and cyclists.

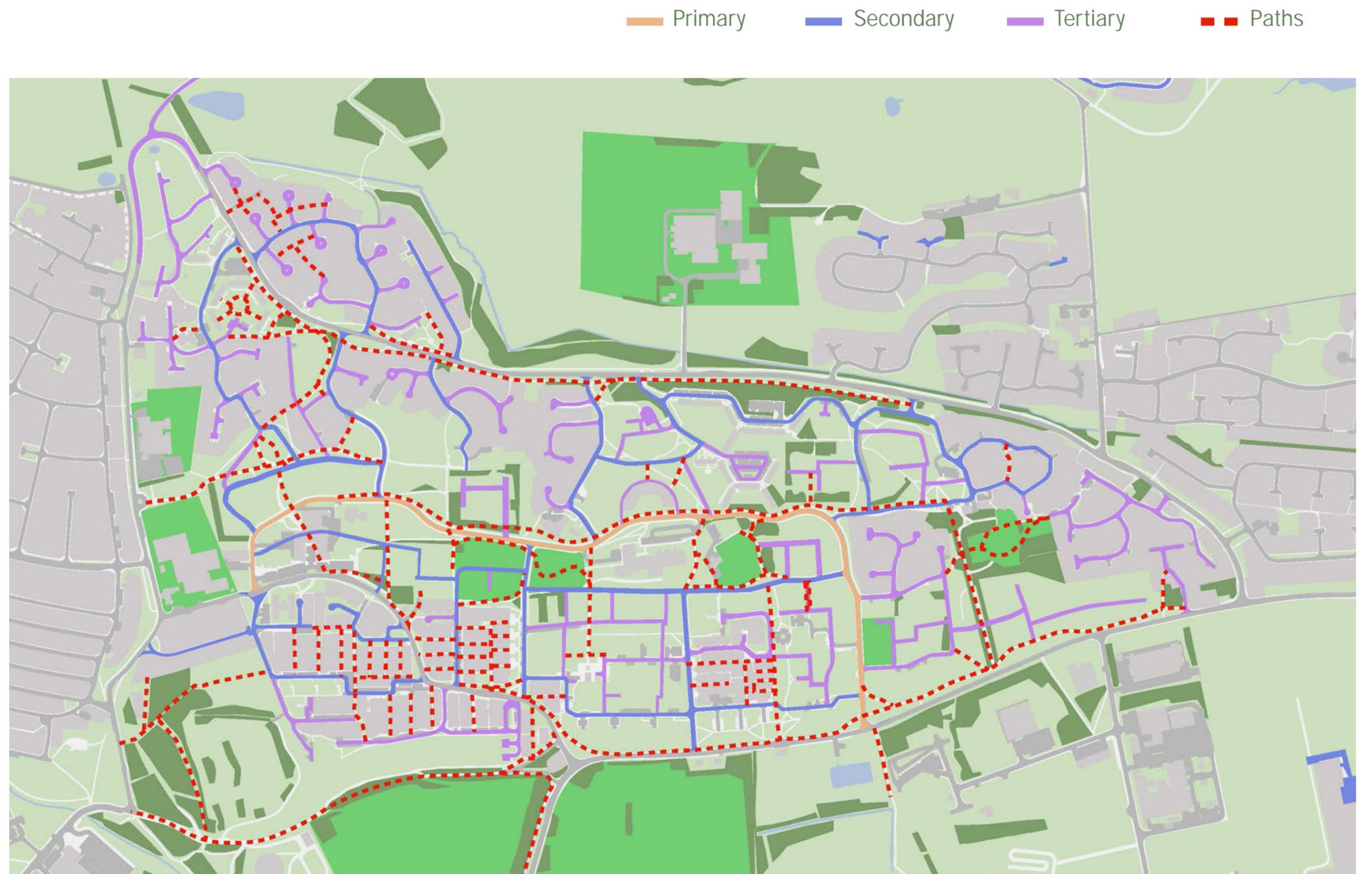


Figure 09: Existing and proposed road network and pedestrian routes around and through Whitfield.

## 2.5 Sustainable Urban Drainage Systems (SUDS)

Sustainable Urban Drainage Systems (SUDS) are a well-recognised method of dealing with surface water which is environmentally-friendly and economical, whilst meeting the legal requirements for treatment of surface water. The implementation of SUDS is an important part of design within the redevelopment and regeneration of sites within Whitfield. The design of SUDS within a site is intrinsic to the street design and built form of a proposal.

SUDS should be fully integrated into the local environmental setting and where possible improve local wildlife habitat. There is an opportunity in the design and layout of development sites to integrate SUDS as an area of green space which contributes to the green network. Where appropriate detention basins should be used to enable the provision of multi-functional green space which also fulfil the drainage requirements.

Developers should refer to the [Whitfield SUDS Guidance \(2016\)](#) which provides more detail and advise on the type, location and use of SUDS within a development.



Figure 10: SUDS pond at Longhagh Road.



# 3 Delivery

## 3.1 Delivery

Green Infrastructure should be considered at the outset of the design process when considering development alongside other important infrastructure such as roads, drainage and power supplies.

Delivery of green infrastructure will take place primarily through the planning process where pre-application discussions will be encouraged early in the design process. Early engagement with Environmental Management Officers and the Forestry Officer will be encouraged.

Detailed design and planting proposals should accompany/form part of a planning application demonstrating consideration for green infrastructure enhancement and provision within a development proposal. Green infrastructure should not be considered as a constraint in development but an opportunity to improve the overall proposal through creating a high quality, well connected and welcoming environment.

## 3.2 Maintenance and Management

Early consideration should be given to how quality and function of green infrastructure will be sustained into the future. Therefore open space should be designed for easy and cost effective maintenance. A maintenance and management plan shall therefore be required to be prepared and provided as part of a planning application. Early discussion will be encouraged with Environmental Management Officers to discuss best practice for the maintenance and management of open space within a development.

Opportunities should be explored to involve the local community in managing and maintaining the green infrastructure, in order to encourage pride and ownership in local green spaces.



## 3.3 Developer Contributions

Developer contributions for green infrastructure will only be sought where it is clearly required to enable development to be acceptable in planning terms and will be proportionate to the scale and nature of development proposed.

Developer contributions will be sought in accordance with the Council's *Developer Contributions Supplementary Guidance* which indicates that developer contributions will be sought for open space improvements and green infrastructure. The Supplementary Guidance indicates that for Whitfield:

“Residential development built for private sector sale shall be required to contribute towards primary education facilities and include **connections to and enhancement of green networks** as specified in Site Planning Briefs”

Developments will be encouraged to not only include appropriate open space and links within site boundaries but to consider how these will interact with the surrounding area. In some instance off-site provision may be necessary to ensure that new development sites connect into existing green network. The Supplementary Guidance indicates that

the developer contributions may be sought for:

- Improvements to core paths serving the development.
- New and/or improved on or off road cycle/walking routes to connect with existing core paths.
- Cycle parking facilities.
- Provision of open space or equivalent contributions to upgrading existing open space such as nearby community woodlands that serve the development area.
- Route or interpretative signage.
- Off-site sustainable urban drainage schemes (all Greenfield sites are expected to include sufficient sustainable drainage facilities within the site, however it is acknowledged that this may not be practical on all brownfield sites).

Developer contributions will be administered through either Section 75 obligations, Section 69 agreements or by planning conditions. The appropriate mechanism will be considered during pre-application discussions. Where financial values and payments are agreed these shall be set at the date from which planning permission is granted.

# 4

## Green Infrastructure Outcomes

The following outcomes have been taken from the Whitfield Planning Framework and highlight those outcomes that are relevant to green infrastructure in Whitfield and the wider green network:

	Green Infrastructure	Permeability & Access
A Successful, Sustainable Place	<ul style="list-style-type: none"> <li>Planting for the creation of mature woodland to promote local pride and identity.</li> <li>Promoting collaboration between the council and developers to manage and maintain the appearance of public space and the public realm.</li> <li>Encouraging developers to include outdoor play areas in their design proposals.</li> <li>Providing the SUDS infrastructure needed to manage the associated effects of climate change in a sustainable manner.</li> </ul>	<ul style="list-style-type: none"> <li>Encouraging walking and cycling activity through the implementation of well-connected and permeable streets.</li> <li>Improving the design and location of street lighting to promote safety and local identity.</li> <li>Building a stronger community by connecting disparate areas through secondary and tertiary streets and footways.</li> <li>Connecting to the wider Green Circular cycle route, providing residents with an active link to the rest of Dundee.</li> </ul>
A Low Carbon Place	<ul style="list-style-type: none"> <li>Implementing a robust SUDS framework that reduces the energy required to treat water before it re-enters the water course.</li> <li>Promoting the planting of trees along roads, cycleways and pathways to offset some of the emissions produced by cars and other vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>Encouraging walking and cycling as an alternative to fossil fuel based transportation.</li> </ul>
A Natural, Resilient Place	<ul style="list-style-type: none"> <li>Implementing a programme of Advanced Structural Planting that serves to establish landscape frameworks for development.</li> <li>Promoting the use of landform features such as swales and basins in place of more engineered SUDS.</li> <li>Reserving areas to be used as allotments, promoting biodiversity and the sustainable growth of local produce – recent consultation in the community showed lack of demand for allotments at present – scope to improve links to the existing allotments at Longhaugh</li> </ul>	<ul style="list-style-type: none"> <li>Improving access to green spaces such as Middleton Wood, Dighty Water and Drumgeith Park through cycleways and footpaths.</li> <li>Increasing access to the surrounding countryside.</li> <li>Investigating the possibility of a heritage trail along the Dighty Water Linear Park.</li> </ul>
A Connected Place	<ul style="list-style-type: none"> <li>Creating connections between elements of green infrastructure such as woodlands; SUDS; and cycle routes to enhance access and attraction.</li> </ul>	<ul style="list-style-type: none"> <li>Creating a new ‘central spine’ connection through Whitfield, improving access to the community hub and new primary school.</li> <li>Building more convenient and accessible cycle routes and footways.</li> </ul>



# Contacts

## Neighbourhood Services

Early engagement with Environmental Management Officers & Forestry Officers will be encouraged and they can be contacted at the following;

Environment Department  
3 City Square  
Dundee  
DD1 3BA

Tel: 01382 433710  
Email: [environment@dundeecity.gov.uk](mailto:environment@dundeecity.gov.uk)

## City Development

Pre-App Planning advice regarding design and incorporation of green infrastructure is encouraged.

Please contact Planning Officers at;

City Development Department  
Floor 6  
Dundee House  
50 North Lindsay Street  
Dundee  
DD1 3LS

Tel: 01382 433105  
email: [development.management@dundeecity.gov.uk](mailto:development.management@dundeecity.gov.uk)