

# Cart to Castlemilk

## Greenspace Feasibility Study

**Quality information**

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**Introduction**

**01**

# Introduction

AECOM have been appointed by Glasgow City Council to undertake a feasibility study to identify options to enhance access, habitats and the landscape in the Cart to Castlemilk area of Glasgow.

## Study Aims

The aim of the study is to produce a 'Cart to Castlemilk Greenspace' concept that will set out:

- An over-arching management strategy for the core sites (namely: Linn Park; Cart and Kittoch SSSI; Castlemilk Park; Pedmyre and Carmunnock; and Cathkin Braes Country Park);
- Accessibility between and through all core sites and the wider network;
- Woodland ecological connectivity enhancement opportunities to improve both connective routes but also the general environmental quality of the area; and
- Any other potential habitat connectivity, including grassland and wetland linkages throughout the study area.

## Site Location

The study area is located to the south of Glasgow City Centre within Glasgow City Council administrative boundaries. It borders South Lanarkshire to the south-east and East Renfrewshire to the west.



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## Core Sites

The study will focus on five 'core sites':

**Linn Park Local Nature Reserve (LNR)** – Glasgow's second largest public park which is home to: woodland and river walks; an 18 hole golf course and playgrounds;

**Cart and Kittoch SSSI** – A historic area of woodland predominantly situated to the northeast of the confluence between the White Cart Water and Kittoch Water. This is the only woodland designated a Site of Special Scientific Interest in Glasgow<sup>1</sup>.

**Pedmyre and Carmunnock** – An area of farmland and grassland west of Carmunnock which provides recreational space for walkers;

**Cathkin Braes Country Park** – A large park situated on raised ground south of Castlemilk which comprises numerous informal paths, ancient woodland, grassland, heath and scrub. The park provides panoramic views over Glasgow and the Clyde Valley. Mountain bike trails within the park were used during the Glasgow 2014 Commonwealth Games and continues to be a major attraction for the area;

<sup>1</sup> Glasgow City Car and Kittoch Valleys SSSI Woodland Management Plan



Google Maps 2018

**Castlemilk Park** – A woodland park situated in the heart of Castlemilk on the grounds of the former Castlemilk Estate. Generally located along the path of Castlemilk Burn the park contains woodland trails, ponds and waterfall. The park benefits from cultural / historical assets associated with the former Castlemilk Estate. Over the past eight years Castlemilk Park has undergone an extensive regeneration programme and this historic designed landscape is now a thriving community space.

**Wider Area** - The study area also covers wider greenspace connections from the core sites northwards into residential areas of Glasgow. This includes targeting key greenspaces, such as, the former Kings Park Golf Course, which will be turned into new wooded parkland during 2017-18, and Kings Park. Blairbeth Urban Park lies just outside of the study area, within South Lanarkshire and is due to be developed from a former golf course into a new park.

This multi-layered study will consider: access arrangements within and between these sites; opportunities for habitat development; landscape enhancement; and general usage and attraction of the area.

## Geographic Context

The study, whilst focused on the five core sites, considers their connectivity with the predominantly residential communities of Castlemilk and Carmunnock. The study area is a diverse environment comprising urban (residential), semi-urban and rural elements and serves a number of roles.

Castlemilk is a mixed density housing area which serves as a dormitory settlement for Glasgow City Centre and East Kilbride. Castlemilk is not solely reliant on external services and employment; it is a relatively self-sustaining community. The area provides local employment, particularly in the retail and small scale engineering sectors. It is home to a number of schools, community centres, sports facilities, health centres and retail services.

Carmunnock is a smaller, lower density residential community, which is generally rural in nature. Like Castlemilk the village is a dormitory settlement for Glasgow and nearby East Kilbride, it is home to a handful of local shops / services.

## Methodology

The study will be undertaken in five stages as follows:

### Stage 1a: Baseline Information / Site Analysis (Desktop)

Relevant local and national policy documents, mapping and other information including core paths and woodland designations were reviewed to help gain an understanding of the local context and to inform the further stages of the report.

**Stage 1b: Site Analysis (On-site Observations)** - The study area was subject to a walkover survey and issues were identified, documented and photographed. Strengths and weaknesses in accessibility, habitat and landscape provision were identified to help inform the Feasibility Masterplan Development.

**Stage 2: Community Engagement** – A focused consultation and engagement exercise was undertaken to seek stakeholder views on the existing Cart to Castlemilk greenspace environment and to discuss opportunities for enhancement.

### Stage 3: Feasibility Masterplan Development –

Following the site analysis and consultation engagement exercise an area wide Masterplan Concept was considered and developed. This is a multi-layered concept which includes accessibility, habitat and landscape enhancements opportunities.

### Stage 4: Feasibility Masterplan Implementation Strategy –

The Masterplan was developed into an implementation strategy / action plan, with consideration given to funding sources, costs and delivery partners.

NTS

# **Baseline Information and Site Analysis**

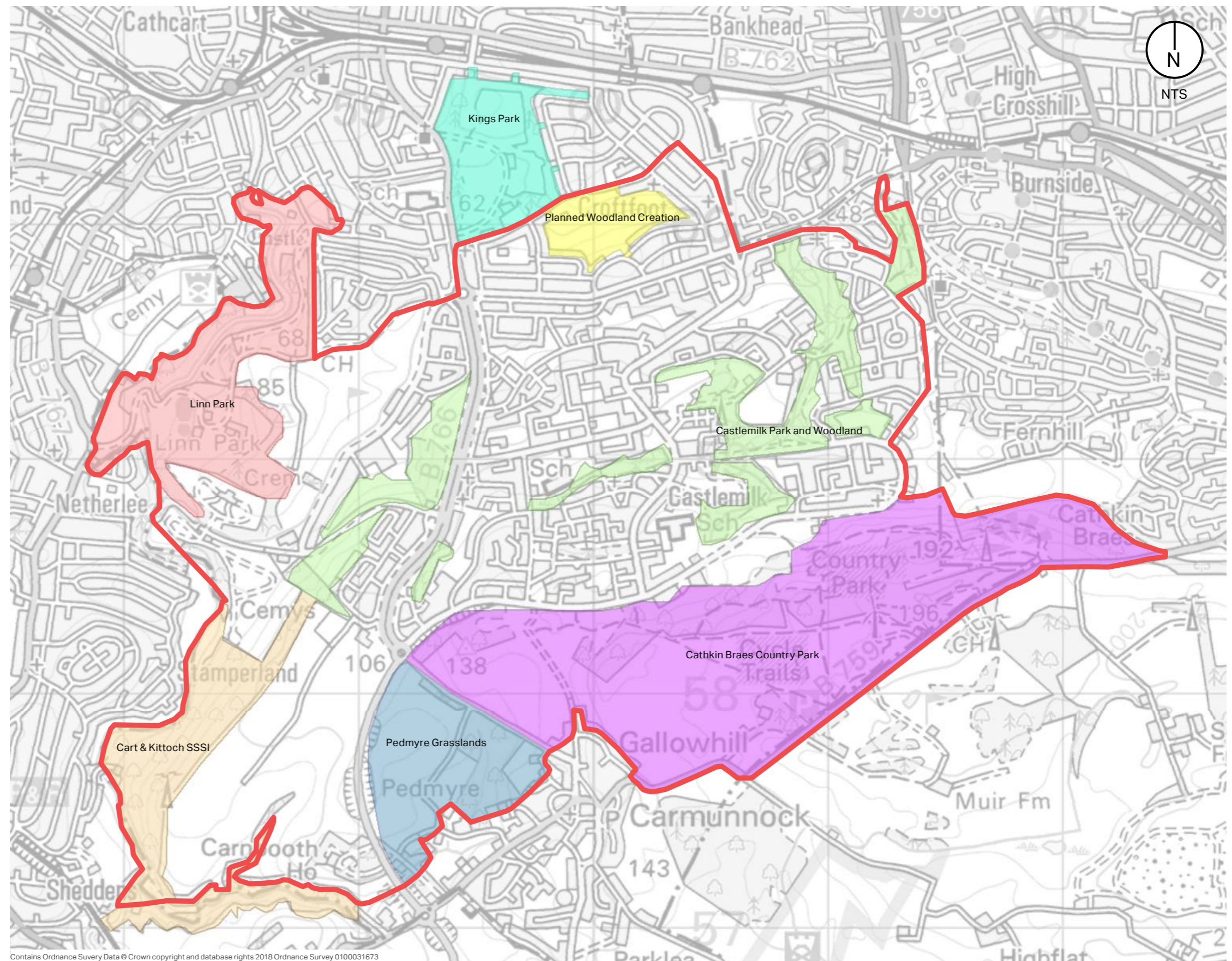
# **02**

# Core Areas Plan and Project Outputs

## Aims for greenspace feasibility

- Connecting Linn Park LNR, Cart & Kittoch SSSI and Castlemilk Woodland
- Linking Cathkin Braes down through Castlemilk Park and Woodlands
- Linking Pedmyre & Carmunnock to Cathkin Braes LNR
- Linking through the SSSI to Pedmyre & Carmunnock
- Linking to the wider network

## Core Areas Plan



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# Planning Policy Background

This page summarises the planning policy background specific to greenspace, access and habitats at a national, regional and local level. The study area is located within Glasgow City Council's administrative boundary.

## National

**Scottish Planning Policy (SPP)** sets out 'how nationally important land use planning matters should be addressed'<sup>1</sup>. The **National Planning Policy Framework 3 (NPF3)** is the Scottish Governments spatial strategy for development for the 20-30 year period.

The Scottish Government published their policy document on **Green Infrastructure Design and Placemaking** in 2011 and **Creating Places** in 2013. Both of these documents are underpinned by the following six qualities of designing successful places: welcoming, distinctive, safe and pleasant, easy to move around, resource efficient, adaptable. The 'easy to move around' principal is of particular relevance to the project and considers that green infrastructure can deliver on this principal through consideration of green networks, connections for people, connections for wildlife.

## Regional

**The Clydeplan Strategic Development Plan, 2017** by Glasgow and the Clyde Valley Strategic Development Planning Authority, is the long-term shared vision and spatial development strategy for the city region and is a partnership of the 8 Local Authorities who make up the region.

Policy 12 'Green Network and Green Infrastructure' is particularly relevant to this project as it supports the delivery of the Glasgow and Clyde Valley Green Network. Local Planning Authorities must also ensure that 'development proposals, including the Community Growth Areas, integrate the Green Network and prioritise green infrastructure from the outset, based upon an analysis of the context within which the development will be located'<sup>2</sup>.

<sup>1</sup>The Scottish Government. 2014. Scottish Planning Policy. [Online]. Available at: <https://beta.gov.scot/publications/scottish-planning-policy/pages/2/>  
<sup>2</sup> Glasgow and the Clyde Valley Strategic Development Planning authority. 2017. The Clydeplan Strategic Development Plan. P.71

## Local

**Glasgow City Development Plan, Glasgow City Council, 2017** sets out the council's land use strategy and planning policy for new development.

The Overarching Policy for the Glasgow City Development Plan is related to placemaking.

CDP1 The Placemaking Principal – "Placemaking is underpinned by a design-led approach to planning... it is a holistic approach that considers the area's context, and balances the range of interests and opportunities to create multiple interconnected benefits through a collaborative process"<sup>3</sup>.

**The Policy and Proposals Plan** shows the spatial realisation of the plan. Within the study area the following policies and proposals are relevant to this project.

CDP 6 Green Belt - A large area (464.67ha) of Green Belt covers the west and south of the study area, including Linn Park, Cart & Kittoch SSSI, Pedmyre Grasslands and Cathkin Braes Country Park.

Housing Land Supply - There are four sites within the Castlemilk area that are selected for potential new housing development. These are typically going to be in the form of new build properties on brownfield land.

CDP 4 Network of Centres - There are two local town centres within the study area including Castlemilk and Croftfoot.

Economic Development Area - Drakemire Drive, located adjacent to Linn Park and Glenwood Business Park in Castlemilk are designated Economic Development Areas. These sites have potential for development for business, general industry and storage/distribution.

<sup>3</sup> Glasgow City Council. 2017. Glasgow City Development Plan, P.28

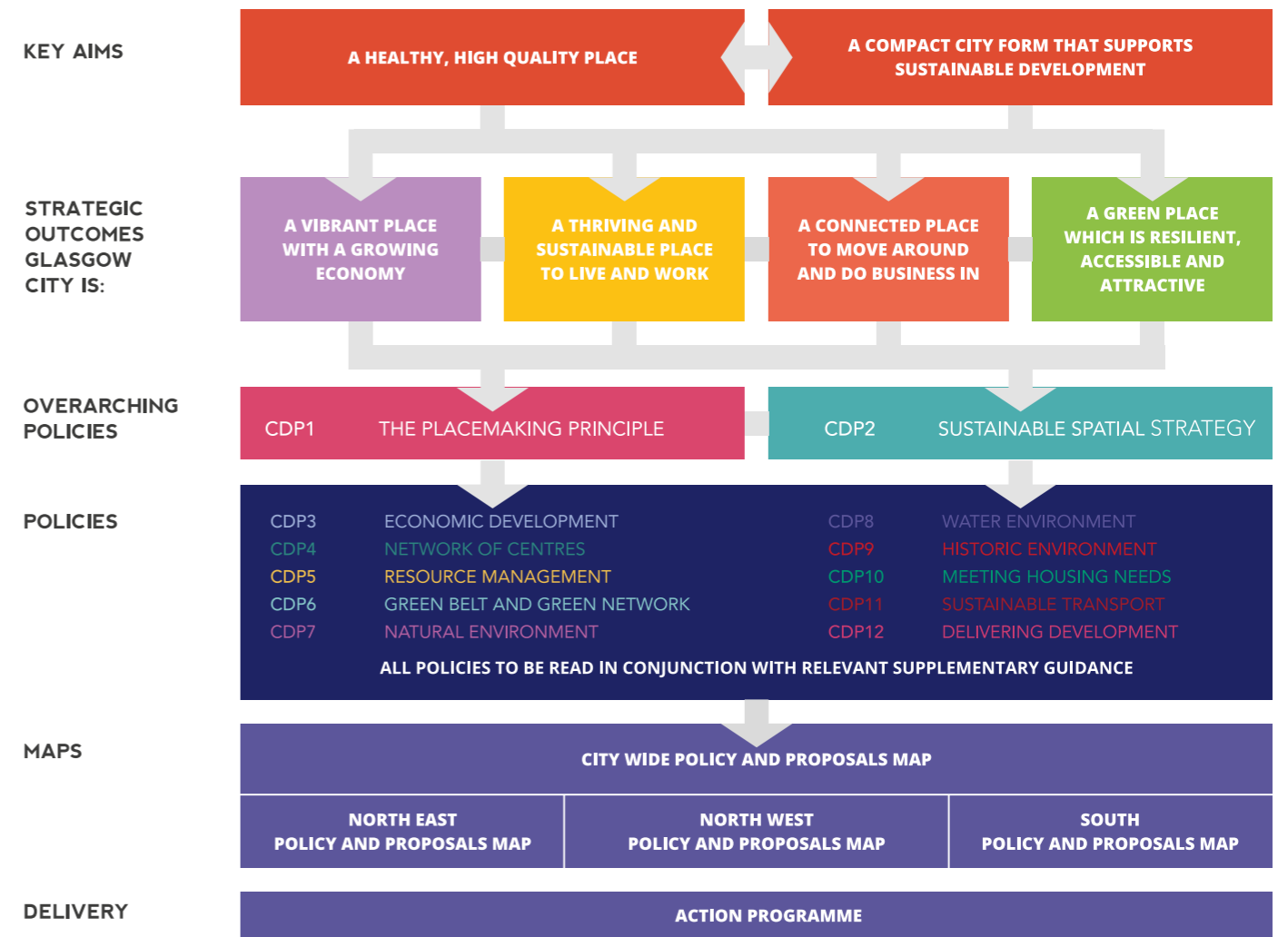


Figure 4: Structure and content of the City Development Plan, Glasgow City Council<sup>1</sup>

<sup>1</sup> Glasgow City Council, 2017, Glasgow City Development Plan, P.9

### Six Qualities of Successful Places<sup>1</sup>

1. Welcoming - open, pleasant and well connected, to help people find their way around
2. Distinctive - special and memorable places are often distinctive and easily recognisable
3. Safe and pleasant - safe off-road routes and pleasant places for fun, play and relaxation
4. Easy to move around - opportunities for walking and cycling, encouraging more people to take part in active travel
5. Resource efficient - reduce the environmental impact and carbon footprint of the development.
6. Adaptable - green infrastructure that can serve a number of different functions and adapt to future uses

<sup>1</sup> The Scottish Government. 2011. Green Infrastructure - Design and Placemaking. P. 10. Crown Copyright: Edinburgh. [Online PDF] Available at <http://www.gov.scot/Resource/Doc/362219/0122541.pdf>



# Existing Networks

To inform the Greenspace Feasibility Study existing larger scale initiatives have been considered to ensure that the study area continues to develop in parallel with the wider green infrastructure network and strategies.

**There are several initiatives/studies that aim to improve habitat and/or connectivity that are relevant to the study area, including the following:**

1. Central Scotland Green Network;
2. Central Scotland Green Network Integrated Habitat Network;
3. National Ecology Network for Scotland;
4. Glasgow City Region Green Network; and
5. Glasgow Open Space Strategy.

## Central Scotland Green Network (CSGN)

The Central Scotland Green Network was set-up in 2008 as a recognised National Development in the NPF2 in 2009. It aims to restore and transform the landscape of an area stretching from Ayrshire and Inverclyde in the west to Fife and the Lothians in the East. This strategic network will include woodland, other habitats, active travel routes, greenspace links, watercourses and waterways.

## CSGN Integrated Habitat Network by Scottish Natural Heritage (SNH)

The Integrated Habitat Network mapping covers the entire CSGN, within in which the study area falls and was produced to increase understanding of existing habitat extent and connectivity.

An integrated habitat network refers to the connectivity of multiple species across identified habitats and the capacity of different habitats for species to disperse over them. Dispersal areas represent species mobility ranges from their habitats. Habitat fragmentation occurs when habitat areas are divided and their dispersal areas do not join with other habitat areas, resulting in a smaller habitat network.

SNH make the following recommendations for using the maps to 'guide the identification of, targeting of and assessment of activities that affect land use change'<sup>1</sup>:

- increase the area of an existing network;
- link together existing networks;
- improve the quality of the habitat within an existing network;
- improve the permeability of the land within existing networks;
- improve the permeability of land around existing networks; and
- create new habitat patches in or around existing networks.

<sup>1</sup> CSGNT. 2013. Integrated Habitat Network – Key Messages. [Online] at: <https://www.nature.scot/sites/default/files/2017-06/C334188.pdf>

## National Ecology Network for Scotland (NEN)

Scottish Wildlife Trust held the first conference on the idea of a Scottish Ecological Network in 2013. It would be known as the National Ecology Network (NEN).

The idea of creating a National Ecology Network was recognised in Policy in 'Scotland's Biodiversity a Route Map to 2020', as part of Big Step 5 – Sustainable management of land and freshwater;

"Develop a national ecological network to enable characterisation of the nature of Scotland, and to help with the identification of priority areas for action on habitat restoration, creation and protection"<sup>2</sup>.

The Idea is based on improving landscape, habitat, ecological and evolutionary connectivity in areas where these have become fragmented by human activity to improve our resilience and preservation of wildlife. This idea is based on the island biogeography theory of the 18th century. The Living Landscapes projects run by Scottish Wildlife Trust are an example of how the NEN can be realised on the ground.

## Glasgow and the Clyde Valley Green Network

The Glasgow and the Clyde Valley Green Network was conceived in 2000 as a strategic green network linking urban and rural areas. The GCV Green Network Partnership was formed in 2007 to deliver and advise on the network, and have since been involved in large green infrastructure projects such as the Seven Lochs Wetland Park. The partnership also provide guidance, analytical tools and greenspace initiatives. The 'Green Network Blueprint' is an emerging masterplan that will show how the network should be developed for off-road movement.

The recognised benefits of the Green network include;

- improvements in physical health and mental well-being;
- climate change adaptation measures;
- improved access to open space; and
- improved habitat connectivity

<sup>2</sup> Scottish Wildlife Trust. ND. National Ecology Network. [Online] Available at: <https://scottishwildlifetrust.org.uk/2016/07/50-for-the-future-create-a-national-ecological-network/>

## Glasgow Open Space Strategy

This document provides a strategy for open space that aims to "ensure Glasgow continues to be a 'dear green place' for both residents and visitors alike by integrating open space into all aspects of the city's activities in ways that promote sustainability, equality and enhance quality of life"<sup>3</sup>.

The document identifies six strategic themes and provides information on how Glasgow City Council can deliver on these.

The themes include;

- Place setting for improved economic and community vitality
- Health benefits and well being
- Creating connections
- Improving ecological quality
- Enhancing natural processes and generating resources; and
- Managing the micro-climate.

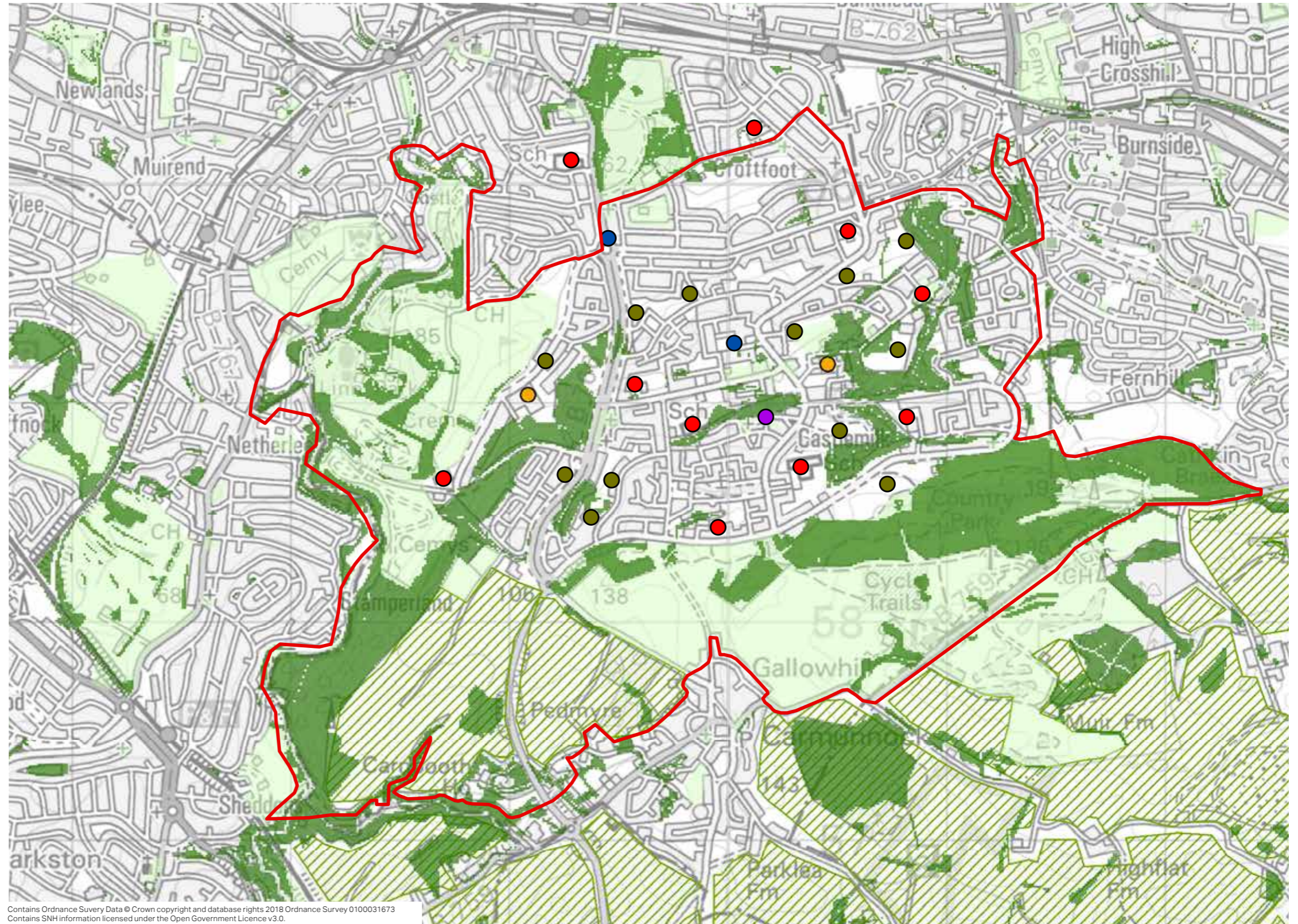
# Land Use

The study area spans across approximately 798ha to the south of Glasgow City Centre and lies on the rural-urban fringe. The area has a high percentage of open space and is strongly influenced by the rural fringe and elevated ridge of Cathkin Braes, in the southern part of the study area. The breakdown is approximately 30% developed land and 70% undeveloped (natural) land.

The developed area includes the residential neighbourhoods of Castlemilk and south Croftfoot. Alongside residential properties there are also schools, leisure facilities, a few small business/ industrial parks (Linn Park Industrial Estate, Glenwood Business Park), and retail areas (The Braes Shopping Centre, Carmunnock Road/Croftfoot Road Roundabout, Tormusk Road).

The undeveloped (natural) area consists of a range of public parks, river corridors of The White Cart Water and Castlemilk Burn, woodland including designated Ancient Woodland, agricultural fields, grasslands, and cemeteries. There are also two Local Nature Reserves; Linn Park and Cathkin Braes.

The Castlemilk area contains a number of vacant and derelict sites and large areas of greenspace. A number of these sites have been allocated by GCC for future housing supply land.



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Key		
<span style="border: 1px solid red; display: inline-block; width: 15px; height: 10px;"></span> Feasibility Study Area	<span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Grassland Agriculture	<span style="color: blue;">●</span> Retail
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<span style="background-color: darkgreen; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Woodland	<span style="color: red;">●</span> Educational	<span style="color: purple;">●</span> Derelict Land

# Existing Connectivity

A site walkover was conducted to develop an understanding of existing levels of accessibility and connectivity within and between the core sites, as well as the study area as a whole.

## Core Sites

### Linn Park Local Nature Reserve

The park is situated between a number of Glasgow and East Renfrewshire residential areas, namely, Castlemilk, Simshill, Stamperland and Netherlee. The park is accessible on foot and cycle from these areas via a number of access points. Visitors travelling by public transport can access the park from bus stops adjacent to the access point on Clarkston Road. Cathcart and Muirend rail stations are both situated approximately 800m from a park entrance.

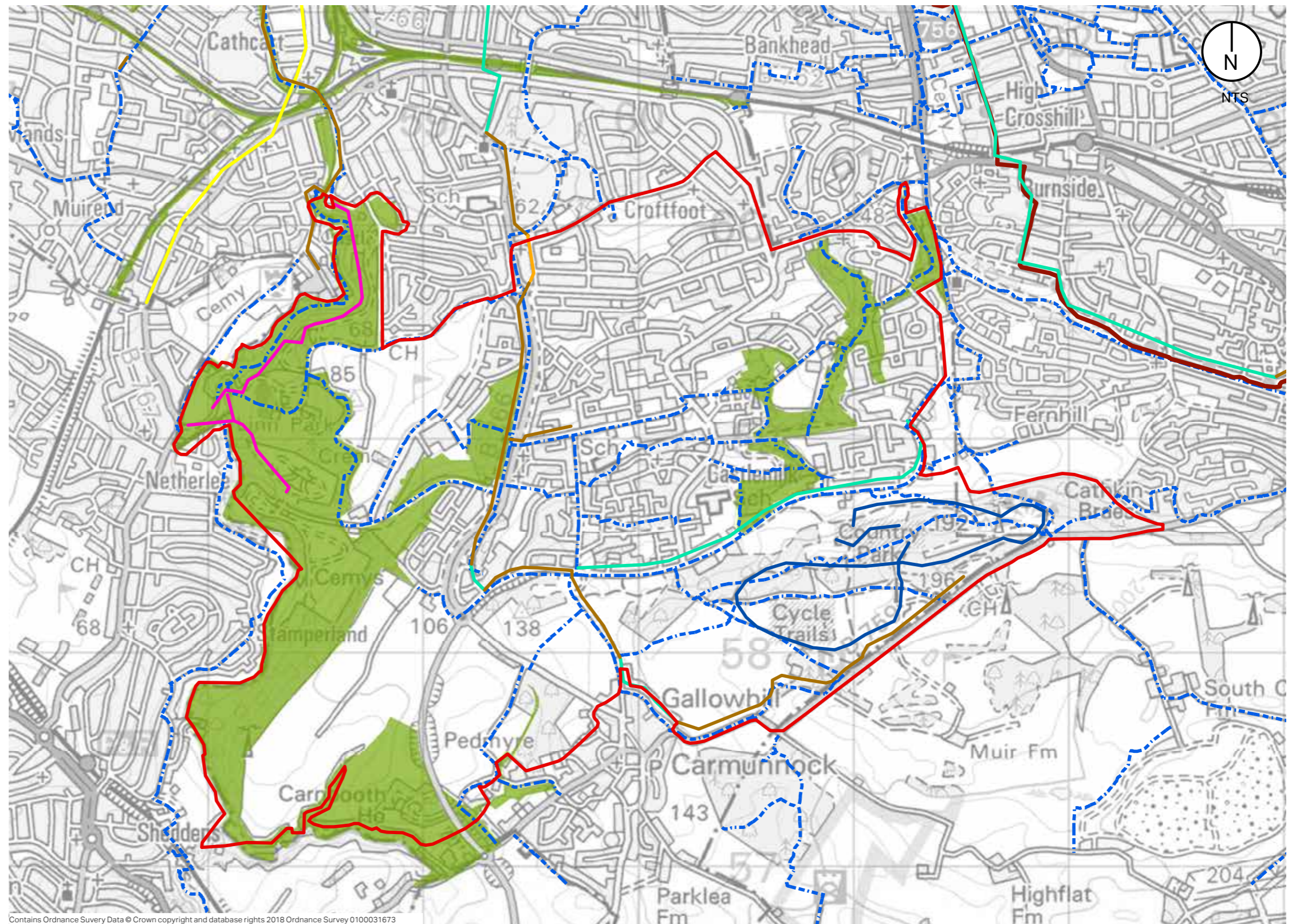
Walking and cycling facilities are appropriate for most user groups. Whilst most paths are step free there are sections where some steps are present, particularly in the north of the park. As a result, the full path network is not completely accessible to all user groups.

Existing paths are surfaced with bound bituminous type material and the vast majority are in a satisfactory condition. In addition to formalised paths, a number of well-trodden informal paths were identified and serve as a pleasant walking environment. A shared vehicular access road is provided from Simshill Road into the park, this is restricted to authorised vehicles only. Traffic calming, by way of speed bumps, is provided to restrict vehicular speed in the park. Wayfinding within the park is well catered for, albeit this is almost entirely focused on internal navigation, there is limited wayfinding for external destinations.

The park is bisected along a north – south axis by White Cart Water, with two bridges linking either side of the park. The White Bridge is situated in the southern area of the park and serves as the primary link between the majority of the park and Clarkston Road. The Snuff Mill Bridge, which is located further north, whilst linking either side of the park, is not actually within its boundary. Both bridges serve as links between the communities either side of the river and offer opportunities for enhanced links.



Figure 5: Bridge over White Cart Water, Linn Park



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- |                                                                                                                                            |                                                                                                                   |                                                                                                           |
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| <b>Key</b>                                                                                                                                 |                                                                                                                   |                                                                                                           |
| <span style="border: 2px solid red; display: inline-block; width: 15px; height: 10px;"></span> Feasibility Study                           | <span style="border-bottom: 2px solid yellow; width: 20px; display: inline-block;"></span> Bus Corridor on road   | <span style="border-bottom: 2px solid brown; width: 20px; display: inline-block;"></span> Shared off road |
| <span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Green Corridor | <span style="border-bottom: 2px solid cyan; width: 20px; display: inline-block;"></span> Calm low traffic on road | <span style="border-bottom: 2px solid orange; width: 20px; display: inline-block;"></span> Signed on road |
| <span style="border-bottom: 2px dashed blue; width: 20px; display: inline-block;"></span> Core Paths                                       | <span style="border-bottom: 2px solid blue; width: 20px; display: inline-block;"></span> Leisure off road         |                                                                                                           |
| <span style="border-bottom: 2px solid red; width: 20px; display: inline-block;"></span> Route 756                                          | <span style="border-bottom: 2px solid magenta; width: 20px; display: inline-block;"></span> Park route off road   |                                                                                                           |

## Cart and Kittoch SSSI

Cart and Kittoch SSSI by the nature of the environment and topography of the land has limited accessibility. The area is penetrated by a small number of semi-formal and informal paths. Access to the area is via Castlemilk Woodlands or Linn Cemetery, or a farm / utility access road.

Within the area, access is limited to a few informal paths, which are not surfaced. The paths, which meander through the woodland, vary in width and gradient, and require stepping over trees, muddy soil and other obstructions. Local volunteers have laid logs and constructed steps to improve access, avoid drainage issues and minimise damage caused by walkers. Increased access could exacerbate damage caused by walkers and therefore this should be considered at design.

The area has steep gradients which may be difficult for users with mobility impairments. Due to the general nature of the area it is unlikely that would be possible to completely avoid such gradients. This is exacerbated by the SSSI designation which would likely restrict potential enhancement options.

## Pedmyre and Carmunnock Coppice

This area is bounded by Carmunnock Bypass, Carmunnock Road and Carmunnock Village. Core paths, which follow the alignments of former roads / paths, provide strong access routes into this area. The area has several gated and open access points on all sides, particularly from the village. Generally speaking the routes in the area are unbound and are little more than well-trodden paths. Notwithstanding this, the historic routes have established treelines and hedgerows which visually designate routes.

## Cathkin Braes Country Park

Access to Cathkin Braes is benefited by good walking, cycling and public transport links. Walkers are provided a number of direct access points at its Castlemilk (northern) boundary and indirect access to Carmunnock along its western edge. Access routes into neighbouring South Lanarkshire communities to the east are less prevalent.

As well as on-road cycling, cyclists are provided an off-carriageway approach which utilises shared use footways alongside B766 Carmunnock / Aikenhead Road and Arden Craig Road. A shared footpath is also provided along the western / southwestern edge of the park which provides cyclists access to the top of the park, where the mountain bike trail start. The accesses along the northern edge of the park facilitate access between service buses, which stop along Arden Craig Road, and the park.

Within the park, there is an abundance of unbound / informal walking and cycling routes, many of which are designated as mountain bike trails.

As previously mentioned, access from the east is limited. A number of informal paths do provide access, most passing through the land of the former Blairbeth Golf Course. However, these involve climbing steep gradients along loose / rocky paths. These routes do provide access to excellent viewpoints over the Glasgow and Clyde Valley. Formalising these would provide an excellent attraction within the park. Whilst gradients are currently challenging, it is envisaged that an appropriately

graded path could be established which would allow users of varying levels of mobility to both access the viewpoint and path.

## Castlemilk Park

Given its central location, Castlemilk Park is accessible from numerous locations on-foot and by on-road cycling. The paths in the park are surfaced with bound material. Access roads, which contain street lighting associated with the Castlemilk Estate, penetrate the park. A bridge over the Castlemilk Burn remains and provides access to Castlemilk Stables. Gradients within the park are steep in places, albeit with the exception of one route all access routes are step free.

The internal path network is suitable for walking, although those with mobility difficulties may find some sections challenging. Due to the general nature of the area it is unlikely that all paths would be viable for shared use cycling, particularly along the western side of the park where the path is narrow and the topography is likely to prevent appropriate widening.

A number of external paths / routes converge on the park and given its central location the park provides opportunity to form through routes. Castlemilk Park is likely to be central to the establishment of an active travel network in Castlemilk. The park is positioned between Croftfoot Rail Station and Cathkin Braes and could form part of link between the two.



Figure 6: Castlemilk Park



Figure 7: Pedmyre Grasslands

## Other Locations

In addition to the core sites, walking and cycling in other locations are likely to influence the establishment of enhanced accessibility within the study area. These other locations are considered below.

### Castlemilk

Castlemilk is a fairly typical Glasgow residential urban environment; most roads have footways provided on both sides. The area is interconnected by footpath links and throughways. Castlemilk is located on sloping land has resulted in different parts of the areas being at different elevations. The constraints on access has somewhat been alleviated by the road / footway network and a number of staircases.

Cycling is predominantly an on-carriageway activity, although sections of footway are designated shared use, particularly alongside Arden Craig Road. Access to public transport links vary. Bus stops are provided throughout the area and as such within easy walk or cycle from most residences. Access to railway stations is reasonable but could be enhanced, particularly for cyclists whom have limited off-carriageway links to the railway network.

Most destinations within Castlemilk are within a relatively short walk or cycle from one another, therefore there is an opportunity to increase walking and cycling for everyday journeys. Enhanced walking and cycling links would not only encourage modal shift, but positively contribute to local accessibility, social inclusion and the environment.

### Carmunnock

Carmunnock is a fairly typical rural village and whilst footways are provided they are narrow, often on a single side of the road and not continuous. Bus services provide public transport links with most bus stops being accessible on-foot off-carriageway. There is almost no cycling infrastructure within the village, other than that associated with Cathkin Braes.

External connectivity is fairly limited; to the north the area is linked to Castlemilk and its associated facilities by a narrow shared footpath along the western edge of Cathkin Braes; and to the west a footway is also provided along Carmunnock Road. However, this is narrow and leads to the Arden Craig Road / Carmunnock Bypass corridor where crossing provision is limited and creates severance. Access to the southwest, south and east is minimal.

There is a significant opportunity to enhance connectivity between Carmunnock and nearby communities and services, including rail services to Glasgow.

### Other

The study area borders Rutherglen (South Lanarkshire) and Clarkston (East Renfrewshire). There is no discernible border between the urban areas Castlemilk and Rutherglen, and they blend into one another. As such, footway connectivity between the two areas is good; however, cycling links are predominantly on-road.

Clarkston and East Renfrewshire are severed from the study area by White Cart Water and Kittoch Water. Two footbridges are provided at Linn Park with a vehicular bridge provided

further north. To the south along the B759 there is a bridge over Kittoch Water providing narrow footway access to Busby, south of Clarkston. There is a 2.5mile gap between the Linn Park and B759 bridges, creating significant severance.

It is noted that a bridge 1.5mile south of Linn Park is provided across White Cart Water. This is owned and maintained by Scottish Gas Networks and access across the bridge is prevented by a locked gate. Whilst this could be utilised to enhance links between Clarkston, Castlemilk and Carmunnock, the bridge is within the Cart and Kittoch SSSI and as discussed previously the establishment of a compliant path(s) would be challenging and potentially prohibitive.

An 11 mile walking route has been developed which interconnects seven greenspaces in and around Castlemilk. It links Linn Park, Kings Park, Castlemilk Parks and Cathkin Braes Country Park. The route broadly speaking passes around the perimeter of the study area. The route is currently given as a guided walk; however, route infrastructure such as wayfinding has not been established. The route, if formalised, provides opportunity to connect communities and encourage social inclusion. In addition, the route could dovetail with general community links to enhance connectivity to services and transport halts.

## Summary

Existing connectivity and accessibility to and within the core sites vary; Linn Park, western Cathkin Braes and Castlemilk Park are all very accessible from the surrounding communities, whereas the Cart and Kittoch SSSI and the eastern Cathkin Braes have limited levels of accessibility. Linn Park offers opportunities to enhance links between Castlemilk and neighbouring Clarkston (East Renfrewshire).

Cathkin Braes and Cart and Kittoch SSSI are more destinations than through routes. Improved access to and within Cathkin Braes could be achieved reasonably comfortably. However, for Cart and Kittoch, it is envisaged that the SSSI designation and topography will reduce the viability of significant improvements, particularly for those with mobility issues.

Within Castlemilk, access is generally appropriate, albeit cycling access could be enhanced with greater off-carriageway facilities, particularly in relation to links to neighbouring communities, railway stations and Castlemilk centre. Castlemilk Park, whilst not severing routes currently, could be enhanced to better connect the community and provide a link between Croftfoot rail station and Cathkin Braes.

Carmunnock has substandard linkages for walkers and cyclists. There is an opportunity to enhance links alongside Cathkin Braes and Carmunnock Road to provide better access and encourage sustainable travel.

# Trip Attractors

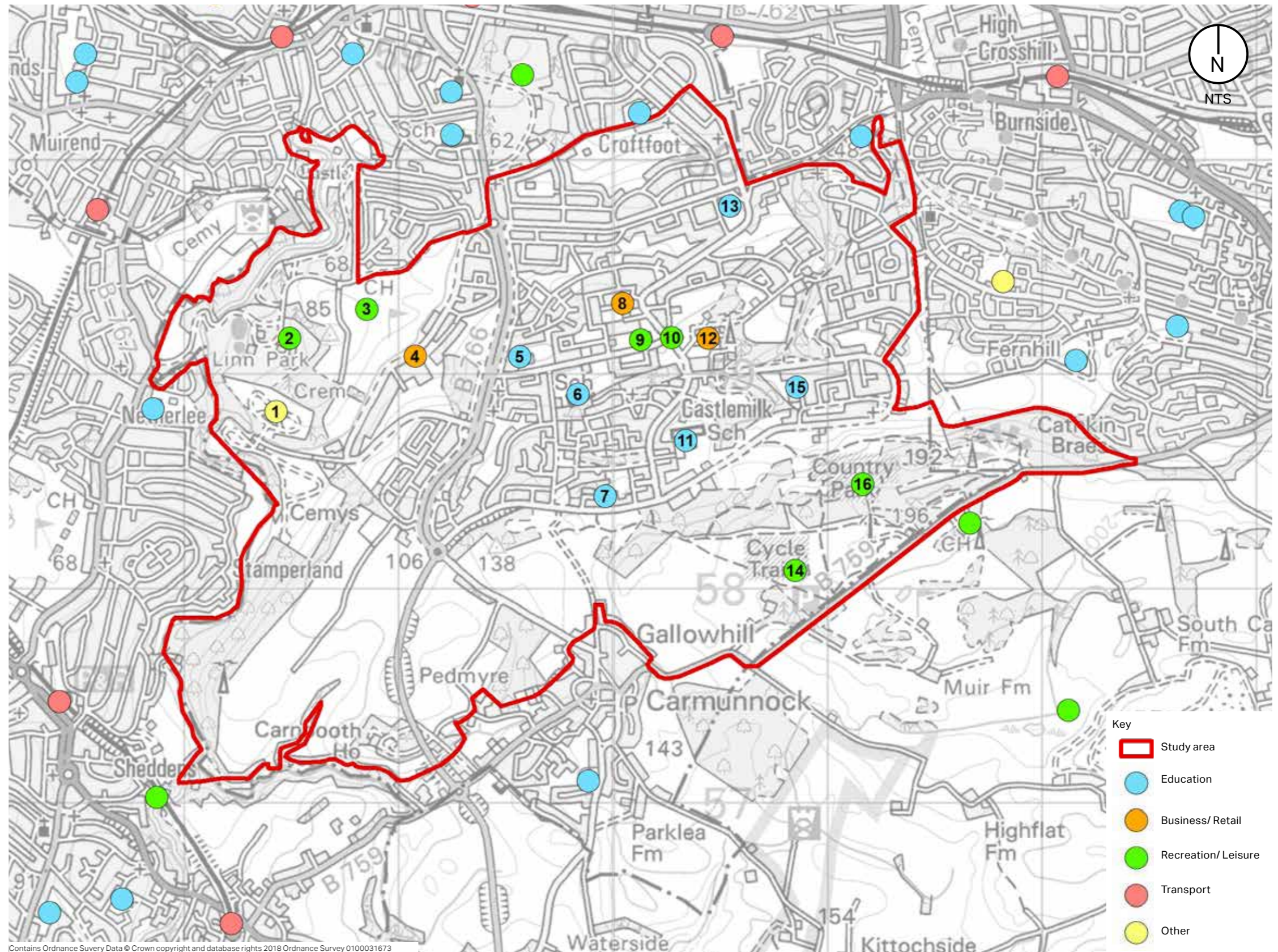
As stated previously, Castlemilk, which occupies the majority of the study area, is predominantly a dormitory settlement for Glasgow City Centre and East Kilbride. However, it is a relatively vibrant and self-sustaining community which comprises a number of local services and attractions. The centrally located Braes Shopping Centre is home to a number of food, electronic and houseware retail stores, and provides employment and recreation for the area.

Employment in Castlemilk is benefited by a number of small industrial / engineering units located at Glenwood Business Park. A number of social, administrative and educational facilities are also located in the area, including: care homes; secondary and primary schools; community centres; nurseries; health centres; and family centres.

The study area is also home to a number of sports and recreational facilities which service both local residents and visitors. Castlemilk Sports Centre, Castlemilk Pool, Barlie Football Centre, Linn Park Golf Course and the Cathkin Braes all provide publicly accessible recreational health and fitness facilities.

Carmunnock has a handful of localised services, such as a café, restaurant, coffee shop and vehicle service centre. There is an opportunity to enhance links between Carmunnock and larger nearby communities with a wider range of services.

A number of railway stations are positioned to the north and west of the study area and provide quick access to Glasgow, the regional economic centre. Glasgow provides a large range of retail, employment, leisure, educational, administrative and health services which will attract trips from the study area



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### Trip Attractors within study area

- 1. Linn Crematorium
- 2. Linn Park
- 3. Linn Park Golf Course
- 4. Industrial Park

- 5. Castleton Primary School
- 6. St. Margaret Mary's Secondary School
- 7. St. John Paul II RC Primary School
- 8. The Braes Shopping Centre
- 9. Castlemilk Gym
- 10. Castlemilk Pool

- 11. Castlemilk High School
- 12. Glenwood Business Park
- 13. St. Bartholemew's RC Primary School
- 14. Cathkin Braes Mountain Bike Trails
- 15. Miller Primary School
- 16. Cathkin Braes Country Park



Figure 8: The Braes Shopping Centre, retail attractor

# Ecological Designations

The peri-urban study area contains several statutory and non-statutory ecological designations. These include:

## Cart and Kittoch Valleys Site of Special Scientific Interest (SSSI)

SSSI is a statutory national designation implying national ecological importance. This SSSI is located to the west of the study area and comprises the wooded river corridor of the White Cart Water and its confluence with the Kittoch Water. It was designated in 1973 and is classified in broad terms as Upland Mixed Ash Woodland. It is non-acidic with a mixed broadleaved canopy including oak, birch, ash, sycamore and beech. The site is split between administrative boundaries with 37.25 ha falling within GCC ownership. The SSSI is currently considered to be in unfavourable condition, in particular because of the high proportion of non-native sycamore and the adverse impact of deer on native tree regeneration, but a management plan has been drawn up to alleviate these and other issues.

## Cathkin Braes and Linn Park Local Nature Reserves (LNR)

LNR is a statutory designation assigned by the local authority for ecological or geological value and for public educational and well-being benefits. Cathkin Braes LNR covers a large zone in the south of study area, including woodland (much of it Ancient – see below), open grassland (partly managed to promote species-richness), hedgerows, scrub and smaller areas of wetland and heath. Cathkin Braes is extensively used for recreation and leisure, and contains the highest point in Glasgow.

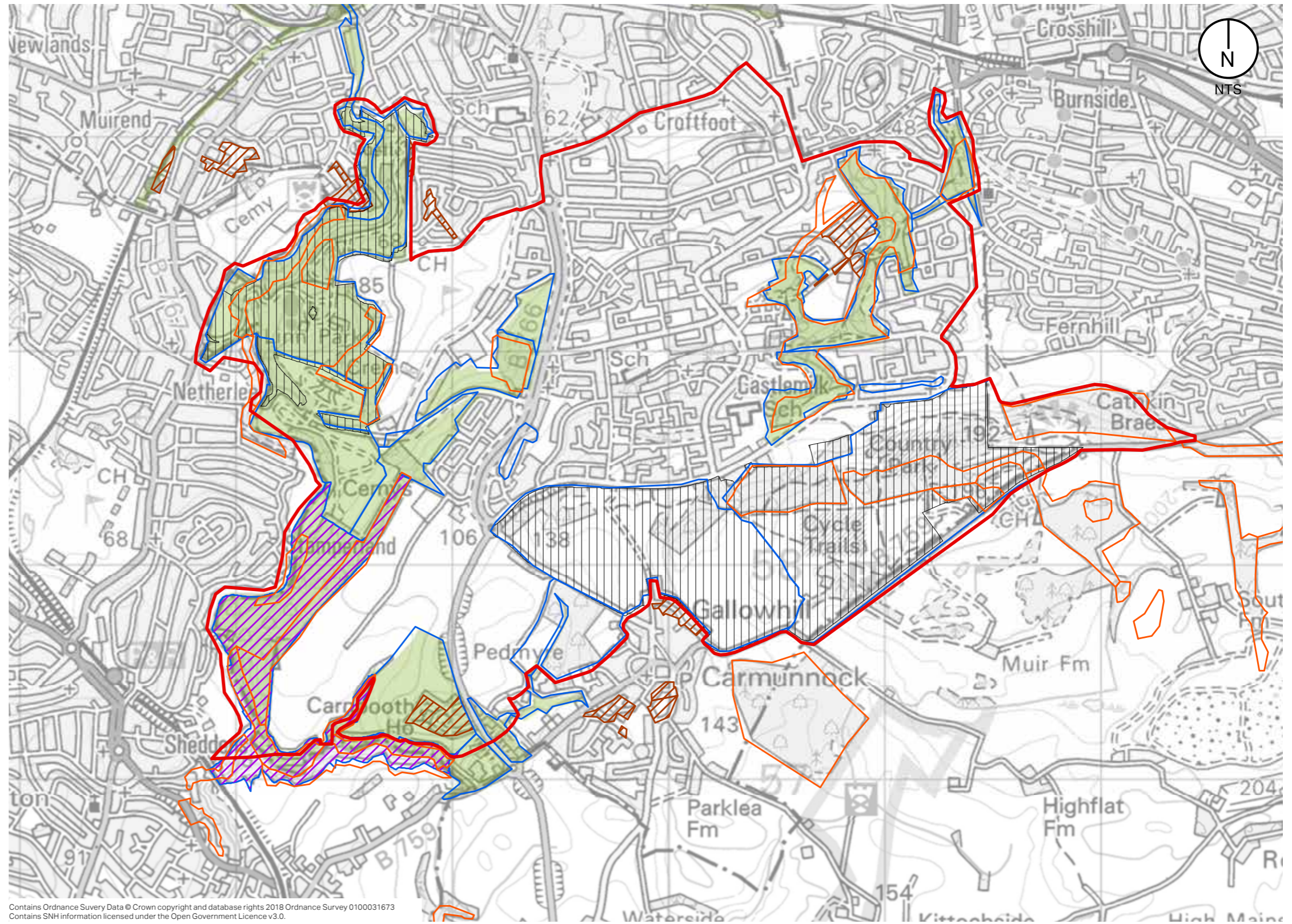
Linn Park LNR lies in the north-west part of the study area. It includes further riparian woodland along the White Cart corridor downstream of Cart and Kittoch Valleys SSSI, with Linn Cemetery lying between these sites. It also contains blocks and strips of mixed woodland plantation, scrub, open grassland (part amenity and part managed as species-rich meadow) and parkland trees, and has significant cultural heritage through its historic estate background.

## Sites of Importance for Nature Conservation (SINC)

SINC is a non-statutory local authority designation indicating some form of nature conservation interest. All the above statutory designations are also SINC, and additionally there are several other SINC in the study area including Linn Cemetery and adjacent riparian corridor, areas of woodland and grassland at Pedmyre and Carbooth, and several patches of non-acidic woodland with strong semi-natural elements constituting Castlemilk Woodlands.

## Ancient Woodland

Significant parts of the woodland are indicated as ancient woodland in the Ancient Woodland Inventory. Ancient woodland, in particular semi-natural ancient woodland, has significant ecological value because of the greater known continuity of woodland cover, which results in a higher diversity of native woodland species than occurs in other woodlands, and often includes native trees of significant age.



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### Key

- Feasibility Study Area
- Tree Preservation Orders
- Sites of Special Scientific Interest
- Green Corridor
- Sites of Importance for Nature Conservation
- Local Nature Reserve
- Ancient Woodland Inventory

# Integrated Habitat Network

The Integrated Habitat Network (IHN) dataset covers all of the Central Scotland Green Network (CSGN), which includes the study area. It was commissioned by Central Scotland Green Network Trust (CSGNT) and produced by Forest Research, on behalf of SNH, Forestry Commission Scotland and the CSGN Partnership Board. It was derived through detailed analysis accounting for existing broad habitats and the ability of various focal species to disperse across different habitats.

Habitat network data can be used to identify and prioritise areas for action, where the network could be managed better or connectivity increased. Habitat connectivity enables species to move between existing suitable habitats or to new habitats, and provides greater resilience to change. Separate habitat patches may be functionally connected, depending on separation distance and intervening habitat. Networks of connected habitats provide more benefits for people and nature than areas of fragmented and disconnected habitats.

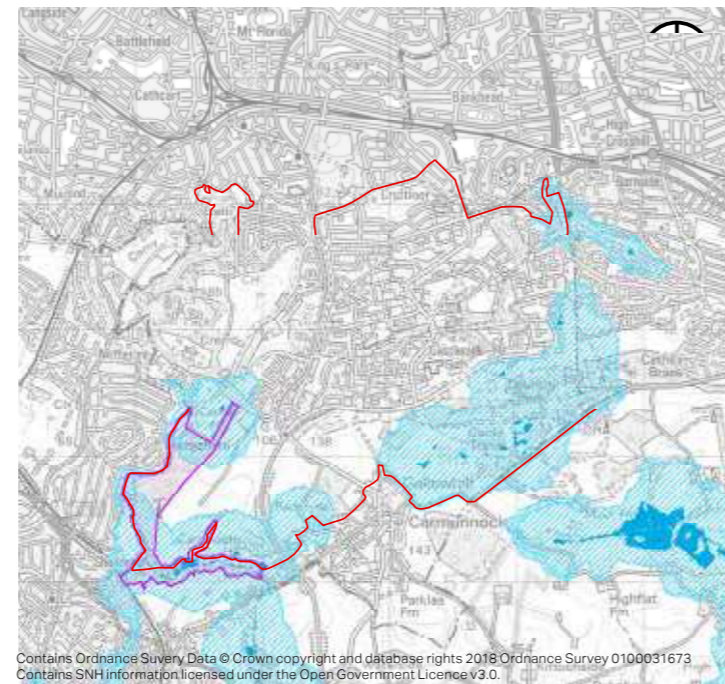
SNH make the following recommendations for using the IHN mapping to 'guide the identification, targeting of and assessment of activities that affect land use change'<sup>1</sup>:

- Increase the area of an existing network;
- Link together existing networks;
- Improve the quality of the habitat within an existing network;
- Improve the permeability of the land within existing networks;
- Improve the permeability of land around existing networks; and
- Create new habitat patches in or around existing networks.

The IHN dataset was produced several years ago, and cannot account for habitat changes since its production. Additionally, the dataset should not be used as the sole source of habitat information since it analysed habitats on a broad scale and was dependent on available data. Information from site visits should always be used to confirm suitability of land for any habitat improvement or creation measures suggested by IHN data.

The IHN dataset includes woodland, wetland, neutral grassland, acid grassland and heath. However, site visits demonstrate that the IHN data overestimates acid grassland in this area (largely in Cathkin Braes LNR), and dry heath is found only very locally on steep slopes in the east part of Cathkin Braes LNR. The maps to the right show wetland, neutral grassland and woodland IHN data in the study area. They show habitats and 'high dispersal networks', which are the larger distances over which the IHN analysis concluded some species could disperse.

## Wetland Habitat

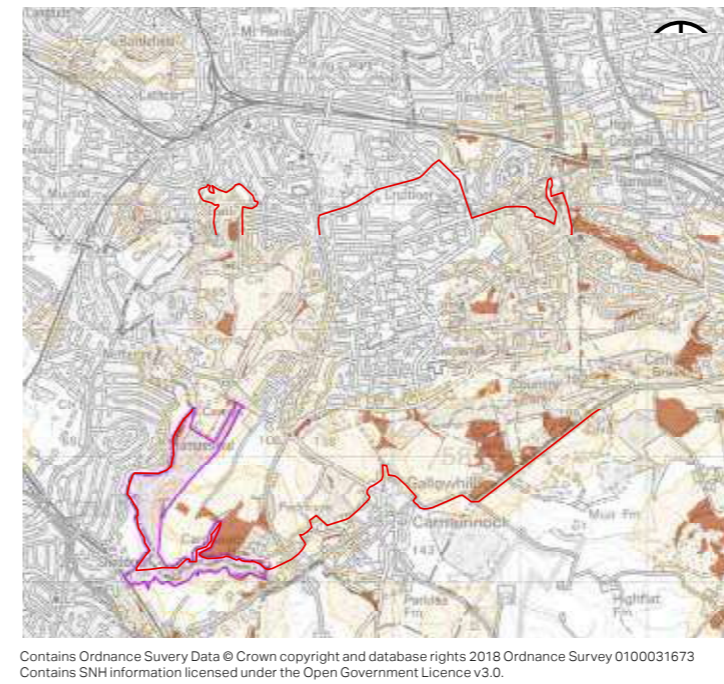


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- Key
- ▭ Feasibility Study Area
  - ▨ Sites of Special Scientific Interest
  - ▭ Wetland Habitat
  - ▨ Wetland High Dispersal Network

Site visits indicate that the IHN wetland data is largely correct, although it underestimates the size of the existing wetland feature in the western part of Cathkin Braes LNR. It can be seen that there are obvious gaps in the wetland network: in particular, there is a noticeable gap to the north of Carmunnock which could be bridged by intervening wetland creation (coincidentally at the location of two patches of scarce wetland sedges, as discussed on page 28 - 30).

## Neutral Grassland Habitat

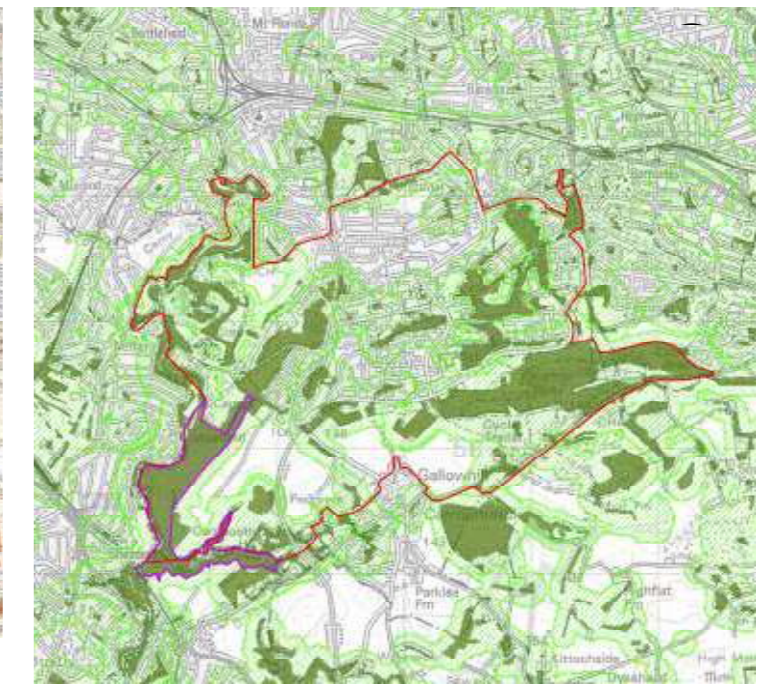


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- Key
- ▭ Feasibility Study Area
  - ▨ Sites of Special Scientific Interest
  - ▭ Neutral Grassland Habitat
  - ▨ Neutral Grassland High Dispersal Network

The neutral grassland IHN habitats in this map are broadly correct, although there is now much more neutral grassland in the Cathkin Braes LNR area than this map indicates, parts of which are actively managed to promote species-rich meadows. The patch of neutral grassland in Linn Park near the golf course corresponds to another area actively managed for species-rich meadow. The dispersal network is fairly good but gaps in the Pedmyre area could be alleviated by improving the species-richness of existing grasslands in this area (as discussed on page 28 - 30).

## Woodland Habitat



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- Key
- ▭ Feasibility Study Area
  - ▨ Sites of Special Scientific Interest
  - ▭ Woodland Habitat
  - ▨ Woodland High Dispersal Network

There is much existing woodland in the study area, and this is clearly shown in the IHN data. Such is the frequency of existing woodland patches that there is already a good dispersal network. There is a little overestimation of woodland in Cathkin Braes LNR, some of the indicated woodland being other habitats such as dense bracken (which however replicates woodland conditions under its canopy and thereby can support woodland species such as bluebell). Additionally, the area of managed willow coppice north-west of Carmunnock is not accounted for. The network extent suggests that the emphasis should be on improvement of existing woodland condition (as discussed on pages 28 - 30).

<sup>1</sup> CSGNT, 2013. Integrated Habitat Network – Key Messages. [Online] at: <https://www.nature.scot/sites/default/files/2017-06/C334188.pdf>

# Cultural and Landscape Designation

## Summary

The study area is characterised by a ribbon of green and open space that warps around the west and south of the study area along the White Cart Water and Kittoch Water Valleys and through to Cathkin Braes Country Park. These ribbons bound the Castlemilk residential area, with further residential areas include Croftfoot and Cathcart to the north. The area rises steeply to Cathkin Braes in the south, where there are panoramic views back across Glasgow City and then drains towards the River Clyde further north.

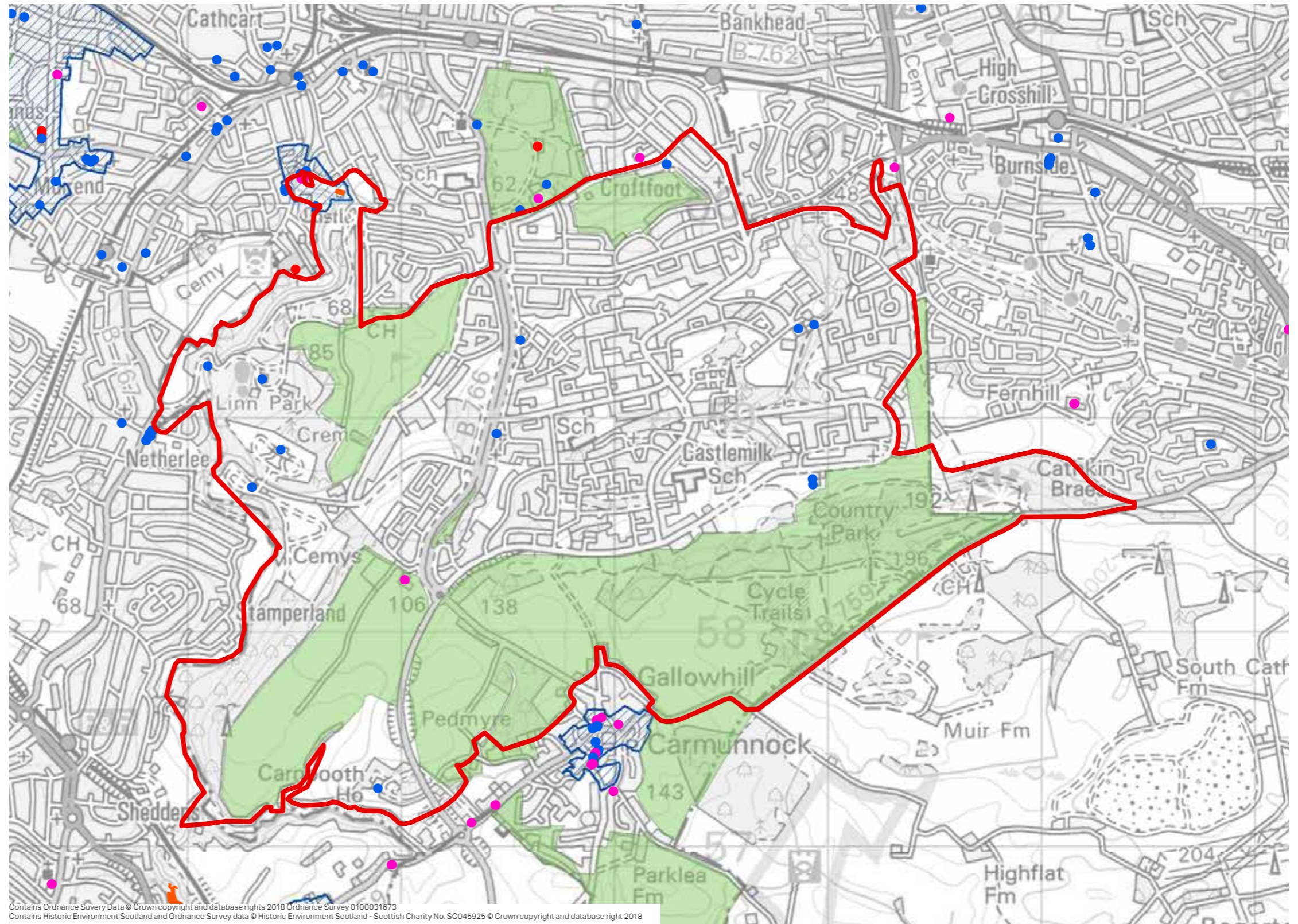
## Sites of Special Landscape Importance

There are a number of Sites of Special Landscape Importance located within the study area. These sites were identified in 1999 by Glasgow City Council and have been designated to safeguard and enhance the character and quality of these landscapes. Policies CDP6 Green Belt and Green Network and CDP7 Natural Environment, of Glasgow City Development Plan, 2017, are relevant to these designations. Sites of Landscape Importance within the study area include:

- Cathkin Braes Country Park;
- Netherton Braes;
- Linn Park Golf Course;
- Carmunnock Road; and
- Kings Park Golf Course (Former Golf Course).

## Heritage/Conservation Areas

There are a small number of Grade B and C listed buildings throughout the study area. Snuff Mill Conservation Area is also located partially within the boundary of the study area.



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### Key

- Feasibility Study Area
- Scheduled Monument
- Conservation Area
- Site of Special Landscape Importance

### Listed Building by Category

- A
- B
- C



# Community Engagement

03

# Consultation Summary

Community engagement was a key part of the project development. As part of the brief AECOM was asked to:

“Undertake initial series of consultations to establish community and ecological desire and/or need for access and habitat linkages that can give priority setting; inclusion of community empowerment act outcomes to help achieve concept of supported community management in the future. This should aim to identify how local communities can help define and deliver physical changes to the greenspaces within the study area.”

We undertook an initial series of consultations which are expanded on within this report. This Feasibility Study represents the initial project stage and the findings reflect the high-level strategic approach.

## Consultation Aims

- To inform the workshop attendees of the Feasibility Study baseline research findings and the emerging Cart to Castlemilk Greenspace Feasibility Masterplan Development.
- To discuss the Feasibility Study and obtain key stakeholder inputs into the report development.
- To allow stakeholders to consider and identify potential high level route/connectivity/accessibility options for the development of green networks in the Cart to Castlemilk study area which can be taken forward for more detailed assessment in a subsequent study stage to this Feasibility Study.
- To inform the conclusions and recommendations of this Feasibility Study Report.



Figure 9: Consultation set-up at Castlemilk Sports Centre

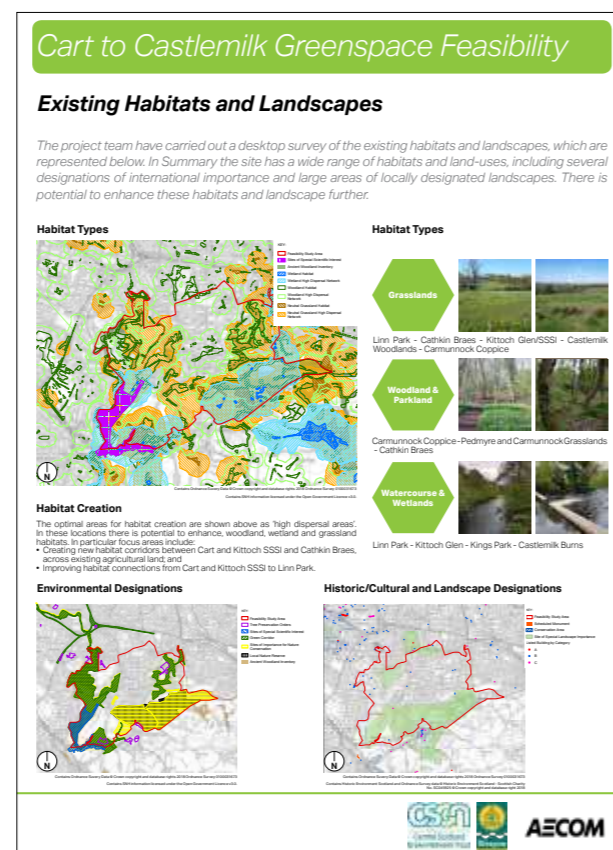


Figure 11: Example of consultation board

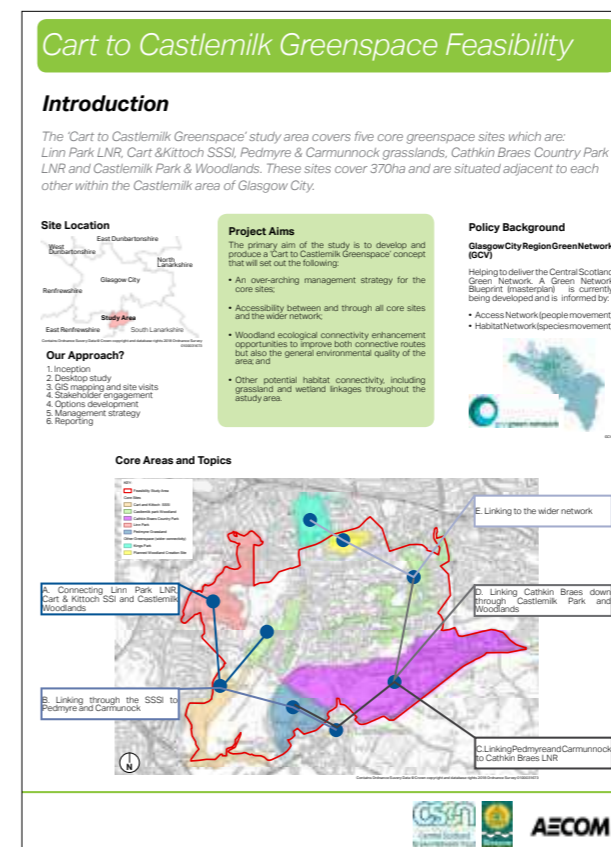


Figure 10: Example of consultation board

## Consultation Event

Invites were sent to agency representatives and community representatives to inform them about the project and the consultation event. The event was held on the 13th of June 2018 at Castlemilk Sports Centre. There were five drop-in sessions starting on the hour between 1pm and 5pm (inclusive). Each session included a 15 minute presentation to introduce the study and the aims of the consultation event, followed by 45 minutes for questions and discussion, including open options development discussion informed by the desktop review and site visits.

The event had been attended by many of the invitees, which included the following agencies and community groups.

## Invited Agency Stakeholders

- East Renfrewshire Council;
- South Lanarkshire Council;
- Sustrans;
- Paths for All;
- Central Scotland Green Network Trust;
- Forestry Commission Scotland;
- Scottish Natural Heritage;
- SEPA;
- Scottish Ramblers;
- Glasgow Life: Good Move;
- Free Wheel North; and
- Glasgow Ramblers.

## Invited Community Representatives

- Friends of Kings Park
- Castlemilk Gardening Club
- Friends of Linn Park
- Friends of Cathkin Braes Country Park
- Carmunnock Heritage Society
- Ardenglen Housing Association
- Cassiltoun Housing Association
- Craigdale Housing Association
- North View Housing Association
- Carmunnock Community Council
- Castlemilk Community Council
- Fernhill Community Centre; and
- Linn Ward Councillors.

# Summary of main points

**'Friends of...' groups are active in the local area and have good levels of participation, although there is a lack of coordination between these groups. Several groups have secured funding for small projects.**

**Castlemilk is at the centre of the study area and most people would see it as a positive move for it to become the hub of the greenspace strategy.**

**Some of the attendees were aware of the Magnificent Eleven guided walks route and all were positive about the future promotion and upgrading of this circular route.**

**An accessibility strategy will be important to ensure that there are accessible alternative routes when it is not possible for paths in a certain area to meet accessibility standards. One approach would be to grade paths in terms of difficulty, with clear signage and maps.**

**The most appropriate funding strategy will be to break the area down into a range of individual projects that follow the wider strategy, funded by separate grants. It was felt that the project is not large enough to trigger a 'one pot' funding approach.**

**There is a desire for a route linking Castlemilk and Carmunnock with East Renfrewshire, through Linn Park and Cart to Kittoch SSSI.**

**More thought required on how the project could connect with the existing wider network of routes in Glasgow, such as the Clyde Walkway.**

**Most agreed that a pedestrian crossing over the Carmunnock Bypass would be positive.**

## What happened next

Following the consultation event and a review of the outcomes there was a clear direction for the project going forwards. The general consensus were enthusiastic about the Magnificent Eleven route, community links and habitat enhancement opportunities.

A meeting was held with GCC to confirm the next stages of the project which included the development of a study area masterplan which incorporated specific sites and opportunities to make the proposed routes more accessible and user friendly but also provide new ecological habitats and connections.

During the meeting it was confirmed that the future projects should be practical and cost effective and engage with all of the existing housing, social, school and volunteer partnerships within the study area.

To provide a clear and concise set of project outcomes for the masterplan a site visit was carried out on the 5th of July 2018 by two Landscape Architects and an Active Travel Engineer. The outcome of the site visit was to identify new access links, habitat links, landscape connectivity, challenges and opportunities.

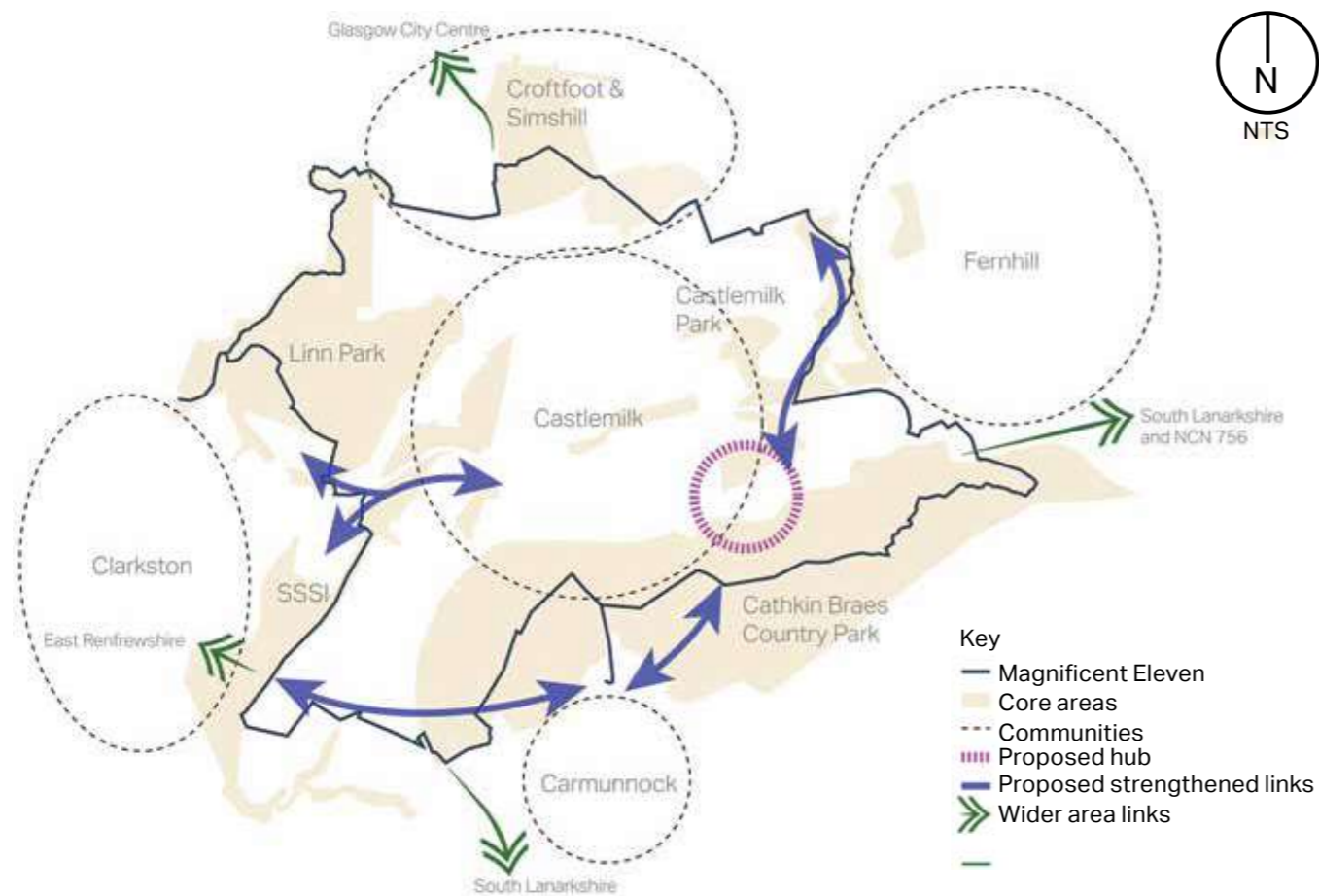
AECOM subsequently divided the study area and existing routes into smaller more localised sections which allowed the site visit information to form smaller scale independent projects that could be developed, funded and managed independently. Collectively, these would combine to provide a large scale improvement to access and habitats across the study area.

# Masterplan Development

04

# Overall Feasibility Concept

## Concept



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### Project Aims

- Connecting Linn Park LNR, Cart & Kittoch SSSI and Castlemilk Park
- Linking Cathkin Braes down through Castlemilk Park
- Linking Pedmyre & Carmunnock to Cathkin Braes LNR
- Linking through the SSSI to Pedmyre & Carmunnock

## Objectives



Figure 12: Streetscape along Croftfoot Road

### Improving the streetscape

The existing network of wide streets lack visual interest and variety. These wide corridors offer the potential for the inclusion of a stronger green infrastructure framework and could also accommodate active travel routes.



Figure 13: Desire lines across Cathkin Braes

### Providing access to rural areas

There are a lack of clearly defined routes within the Cathkin Braes, Carmunnock and Pedmyre areas. Where tracks do exist many are overgrown and not signposted. This restricts access to rural areas such as Pedmyre and reduces connectivity between the core areas.



Figure 14: Access to Castlemilk Park

### Revealing gateways to greenspace

Entrances make the first impression and therefore must feel safe and welcoming to encourage usage of the greenspace. Currently too many of the entrances are overgrown and lack clear signage.



Figure 15: Derelict site at Blairbeth Urban Park

### Activating derelict sites

Derelict and vacant sites, particularly within Castlemilk, create large areas of dead spaces that degrade the quality of the surroundings. Finding temporary uses for these sites would help to activate them and has potential to improve access and habitat provision.

# Wider Network Links

## National Cycle Network and Long Distance Routes

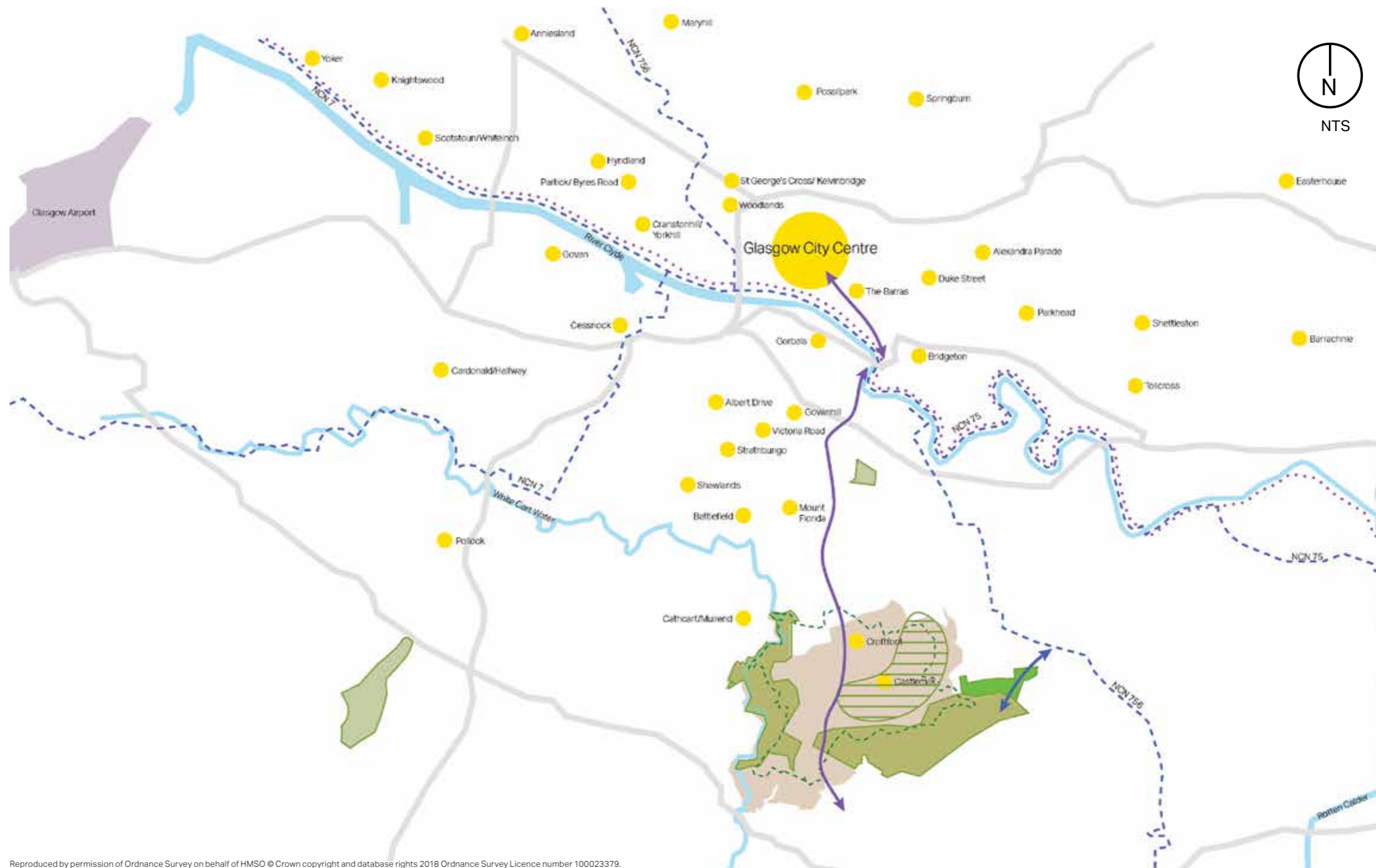
Several Long Distance Routes and National Cycle Network Routes are located in Glasgow and tend to focus on the River Clyde corridor. NCN 756 runs closest to the study area and there is potential for a connection with this route from the southeast corner of the study area through into South Lanarkshire via Blairbeth Urban Park. This would then link the study area routes with the wider network of movement routes within Glasgow.

## Network of centres and connection to city centre

Glasgow city centre is approximately 5 miles from Castlemilk, which would take approximately 25 minutes to cycle. There is an existing link from the area along Carmunnock Road that is mostly off-road along a shared use path, with the path meeting the city centre via Glasgow Green. There is potential to further enhance this existing link along Carmunnock Road and also ensure that there are adequate links from Castlemilk joining this major route to strengthen its potential as a commuter link.

## Blairbeth Urban Park

The Blairbeth former golf course is being developed by South Lanarkshire Council as a new urban park. The park development will provide a new resource for people in neighbouring Castlemilk and Fernhill, as well as linking these two communities and provides links from both areas up to Cathkin Braes. More accessible routes up to Cathkin Braes may be available via Blairbeth Urban Park than the steeper options within the study area.



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### Key

- Study Area
- Glasgow Airport
- Town Centres
- Rivers
- Major roads
- National Cycle Network
- Long Distance Route
- Off-road cycle link to city centre
- Magnificent Eleven
- Existing Local Nature Reserve
- Proposed Local Nature Reserve
- Blairbeth Urban Park
- Link to National Cycle Network

# People Connectivity

Whilst this study focuses on the environmental assets of the study area, interconnectivity between the various greenspaces and community links in general rely on significant roadside paths and footways. This section summarises the recommended solutions aimed at improving and enhancing connectivity within the study area.

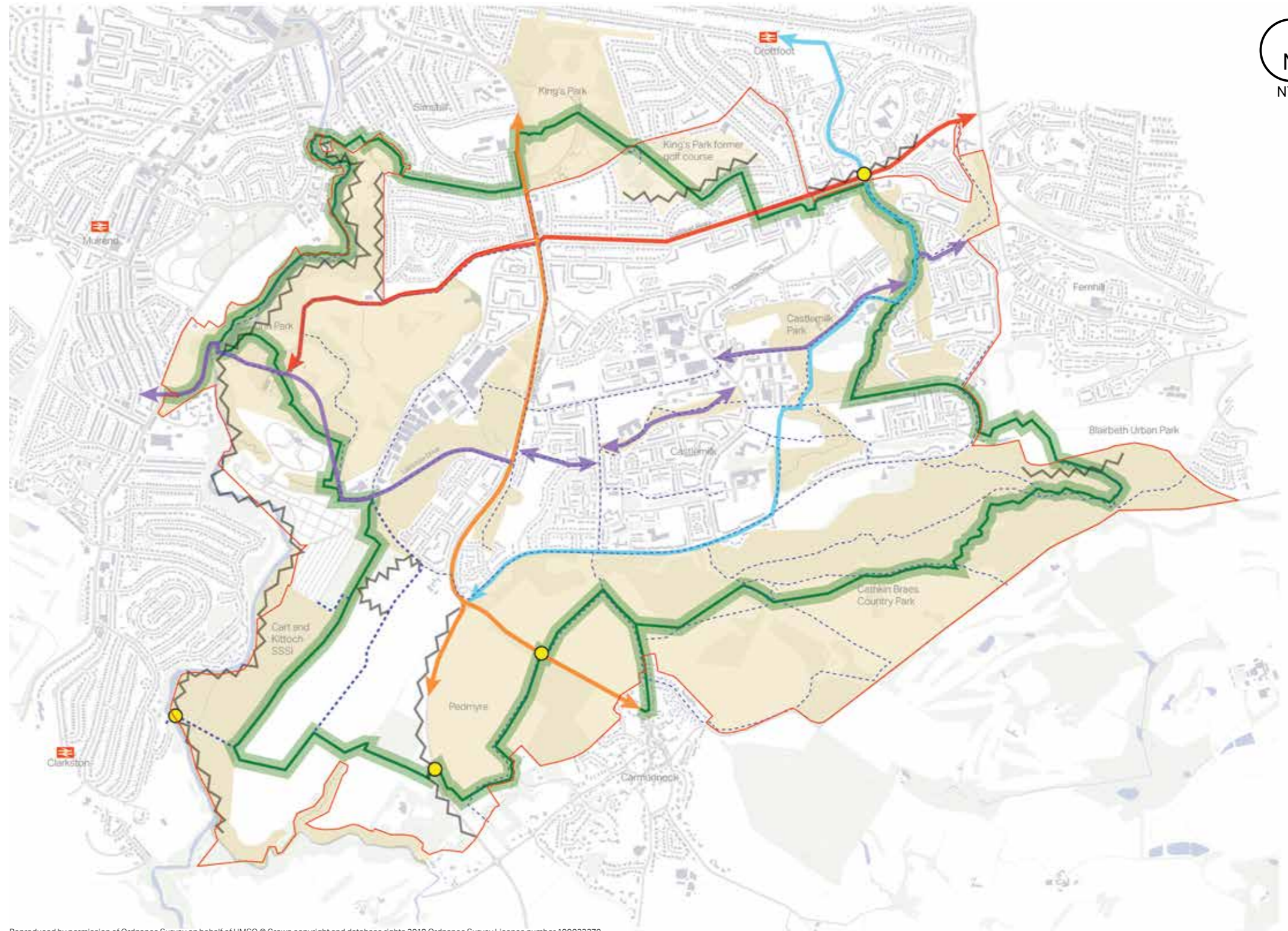
The range of routes described below would enhance connectivity between the core sites and the wider community. These solutions will service two main trip purposes: utility and leisure journeys.

Utility type journeys represent the everyday trips people make to reach employment, education or services. It also includes journeys to visit friends and relatives.

Leisure type journeys comprise of journeys made for pleasure, either by residents or visitors, particularly at weekends and evenings.

Proposed new connections include the following:

- Route A: Muirend/Netherlee - Simshill-Rutherglen
- Route B: Muirend/Nerherlee-Castlemilk-Rutherglen
- Route C: Cathkin Braes/Carmunnock - Castlemilk (East)-Croftfoot Rail Station
- Route D: Carmunnock/Pedmyre - Glasgow Cycle Corridor
- Developing the Magnificent Eleven Route



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**Key**

- |                    |                               |                                |
|--------------------|-------------------------------|--------------------------------|
| Study area         | Route C                       | Proposed road crossings/bridge |
| Magnificent Eleven | Route D                       | Existing train stations        |
| Core areas         | Existing barriers to movement |                                |
| Route A            | Existing Core Paths           |                                |
| Route B            | Proposed Core Paths           |                                |

# New Routes

## Route A: Muirend / Netherlee - Simshill – Rutherglen

This route alignment would include a mix of on-road cycling and a shared use cycling and walking path linking Muirend through Linn Park towards Simshill and through Castlemilk, along Croftfoot Road towards Rutherglen. This will contribute to creating a cycling and walking link in the heart of northern Castlemilk which connects significant amount of residences with Linn Park. Route A would connect directly with Route B and C, forming a network which links Linn Park with Castlemilk Woods, Cathkin Braes and Pedmyre and Carmunnock Coppice. This route would also connect with local shops and the primary school, providing a general benefit to local connectivity.

The route alignment potentially could accommodate either shared or segregated walking and cycling for the majority of its length, although, some short lengths of on-carriageway cycling may be required. Through Linn Park the route would utilise existing paths and the vehicular access to the park towards Simshill Road. Beyond Linn Park, appropriate facilities for walking and cycling appear to be achievable without impacting the existing road network capacity and parking. It is envisaged that outside of Linn Park establishment of this route would require significant lengths of new path construction.

## Route B: Muirend / Netherlee - Castlemilk - Rutherglen

This route alignment would comprise a shared walking and cycling link which utilises existing paths and throughways to achieve a coherent link across the study area. This route links Muirend / Netherlee through Linn Park towards central Castlemilk, through Castlemilk Park towards Rutherglen. This would create strong links between Linn Park and Castlemilk Park through the heart of Castlemilk. This route would provide a strong community link, connecting with The Braes Shopping Centre, Castlemilk Sports Centre and Swimming Pool, Glenwood Business Park, Stables, Barlia Football Centre and a secondary school.

Route B would connect directly with Route A and C as well as a number of existing core paths, forming a network which links Linn Park with Castlemilk Woods, Cathkin Braes and Pedmyre and Carmunnock Coppice.

Whilst sections of the route could be segregated, the majority would be on shared use paths, although short sections of on-carriageway cycling may be required. A significant proportion of this route utilises existing paths which would only require relatively minor improvements, for example resurfacing, localised widening, and signage to establish a coherent route.

New path construction would be required along Lainshaw Drive to provide an appropriately wide shared use footway. The width and nature of the road could accommodate a high quality shared use path to be established. A link would also need to be constructed from Lainshaw Drive in Linn Park to connect with the internal path network within the park.

It should be noted that a branch route south from Lainshaw Drive could connect into the Cart and Kittoch SSSI area. This route would need entirely new construction to establish a user friendly route. At this stage it is unclear whether this could be made cycle friendly or would simply exist as a walking route. It is also unclear which alignment and level of intervention would be permissible given the areas SSSI designation.

## Route C: Cathkin Braes / Carmunnock – Castlemilk (East) – Croftfoot Rail Station

This route alignment would offer a step-change in accessibility to Cathkin Braes and Carmunnock from the rail network. This north – south route links these areas, through Castlemilk and Castlemilk Park providing a shared use link. Route C would also link with Route A and B to provide a holistic walking and cycling network in Castlemilk, linking the area with local services and recreational facilities.

This route would require significant lengths of new path construction, including;

- Between Croftfoot Railway Station and Castlemilk Park, alongside the alignment of an existing burn between Alloway Drive and Dunure Drive.
- Around the perimeter of a new housing development by Dawn Homes Limited, named Croftfoot Park, adjacent to Croftfoot Rail Station.
- Through Castlemilk Woodlands which is bordered to the north and south by Arden Craig Road.
- Isolated sections alongside Arden Craig Road between Castlemilk Woodlands and Cathkin Braes which would need upgraded / provided for a continuous shared link to be established.

In addition, it is recommended that the path link between Arden Craig Road and Windlaw Road, Carmunnock, is widened to a minimum of 3m. Whilst the current path is of reasonable standard, it is narrow with vegetation reducing forward visibility.

## Route D: Carmunnock / Pedmyre – Glasgow Cycle Corridor

A pre-existing cycle route, signed initially alongside the B766 corridor, exists between Glasgow and Castlemilk. This north – south route features a mixture of on-carriageway and off-carriageway cycling. The route appears to terminate at Arden Craig Road, meaning a gap exists between the route and Carmunnock.

It is recommended that a shared use path is established alongside Carmunnock Road between the village and Arden Craig Road. Whilst there is currently a footway along one side of the route, it is would not meet minimum footway width requirements, let alone shared use path requirements. Land adjacent to the road and existing footway is understood to be owned by Glasgow City Council, as such, there is an opportunity to utilise land to widen the footway or realign it. Establishment of a footway would offer significant accessibility improvements to Carmunnock and facilitate direct access to Pedmyre and Carmunnock Coppice.

In addition, there is potential for a route to be established southwards along the Carmunnock Bypass, which has a large verge to accommodate an off-carriageway route. This would provide a link from Castlemilk onto the Magnificent Eleven, Carnbooth House and to southern Carmunnock. There is an aspiration to connect this route to form part of an off-road connection to East Kilbride and Busby.



Figure 16: Wayfinding at Linn Park



Figure 17: Entrance to Castlemilk Park and Woodlands



Figure 18: Shared path through Cathkin Braes

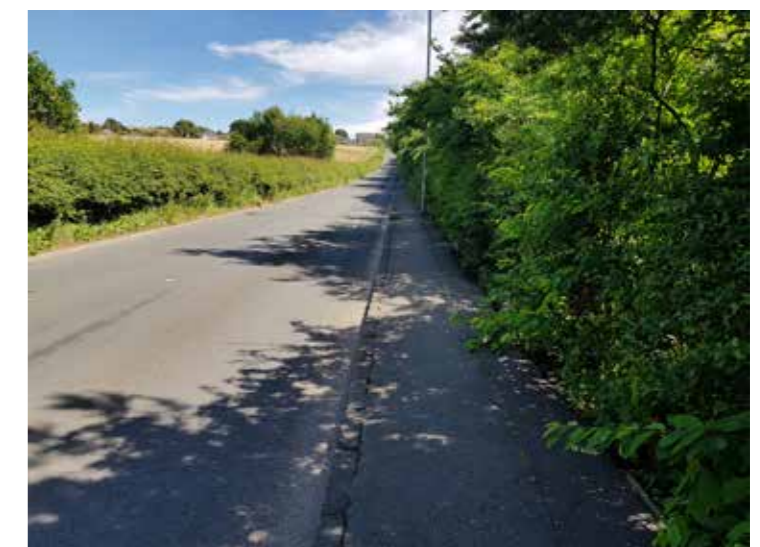


Figure 19: Public access along Carmunnock Road



## Magnificent Eleven

The routes previously discussed are designed to provide for utility journeys as well as leisure journeys and would form a network of strong community links. The Magnificent Eleven is primarily a leisure route, following an indirect path between greenspaces to maximise access and appreciation of the natural and cultural assets of the community.

The route currently utilises a mixture of existing paths, footways and tracks, a large percentage of which are appropriate for their use. There are sections of the route which feature;

- Stepped access;
- Steep gradient climbs; and
- Uneven and loose path surfaces.

Through careful design these issues could be alleviated, resulting in the path becoming more accessible. It is noted some interventions may be considerable, with particular note given to providing an appropriately graded path from Arden Craig Road to Catkin Braes (East), which has an approximate elevation difference of 70m

Perhaps the most challenging section of the route is through Cart and Kittoch SSSI. Currently the route utilises a very uneven path, which has drainage and gradient issues, and is unlikely to be accessible to pedestrians with mobility issues. As discussed for Route B, it is unclear whether a full compliant route would be permissible in this area due to the SSSI designation.

## Other Paths / Internal Park Paths

Generally speaking the core sites are well served by their network of internal paths. As such, it is considered that beyond those routes discussed above there is little need for new path alignments within Linn Park, Castlemilk Park and Pedmyre and Carmunnock Coppice. Access within Catkin Braes and Cart and Kittoch SSSI could and should be enhanced. However, this should be proportionate and at this stage a formalised Magnificent Eleven route should be sufficient to improve access through these areas.

Linn Park and Castlemilk Park are well served by bound paths which, subject to moderate enhancement, should be sufficient for satisfactory walking and cycling access. However, within and approaching Catkin Braes, Pedmyre and Carmunnock Coppice, and Cart to Kittoch SSSI there is a mix of formalised paved links and unbound natural paths. Improved accessibility would be achieved by surfacing existing tracks within these areas.

Notwithstanding the above, a careful balance should be struck between providing bound access paths to enable convenient walking and cycle within the core sites without losing its natural environment and its purpose as a park or woodland. It is recommended that a comprehensive audit is undertaken of the existing path network to determine which should be formalised and which should be retained as natural tracks.



Figure 20: Various photos from along the Magnificent Eleven Route

## Wayfinding

Signing will be an integral part of providing a coherent network of routes for all user groups. A range of existing signage is already in place, which is beneficial to users and provides appropriate information at some locations in a variety of styles. Signs are generally easy to understand, and while the range of sign styles may cause some confusion this is not considered a major issue. Introduction of new routes, in particular the Magnificent Eleven, will require additional signing scheme, although this does not necessarily require existing signage to be removed or replaced.

Should the findings of this study be taken forward, it is recommended that a signing strategy is developed. The strategy should consider the signing requirements of the new routes and how these could dovetail and integrate into existing signing systems. It is envisaged that the routes would require;

- Destination Signage – Information to enable wayfinding to a destination, typically key local destinations and welfare facilities such as shops, toilets and cafes.
- Route Confirmatory Signage – Regular signage to enable wayfinding along a route.
- Regulatory Signage – Information as to the designation and operation of the path network, such as, shared use signage.

Notwithstanding the above, while a comprehensive provision of signs will be required, a balanced approach should be employed to minimise sign clutter which would detract from the setting of the area. Furthermore, use of alternative materials which integrate and complement the surrounding environment, particularly in the woodlands, should be considered.



Figure 21: Fingerpost, Bristol

## Road Crossings

Within the study area, like most residential urban areas, the abundance of roads restrict convenient movement for active travel users, increase delay and generally reduce the permeability and attractiveness of an area for walking and cycling. Whilst this not a problem within the core sites, the comprehensive road network will impact accessibility between the parks. It is acknowledged that wholesale changes to the road environment are unlikely. However, the implementation of regular, appropriate and user friendly road crossing facilities could enhance accessibility for non-motorist users.

There a number of different crossing types, which could be considered:

**Uncontrolled Crossings** – This is the simplest type of pedestrian crossing which typically included flush dropped kerbs and tactile paving. Pedestrians must wait at the kerb until there is an acceptable gap in traffic to enable them to cross. Drivers are not required to stop at an uncontrolled crossing point.

These facilities are useful in environments where traffic levels are low and acceptable gaps in traffic are readily available. In addition, they are a relatively cost effective method to improve accessibility and movement across a road. They are not suitable at busy roads, or roads requiring significant time to cross. In addition, these facilities may not be fully inclusive. An 'acceptable' gap varies by individual, i.e. pedestrians requiring more time to cross will require a large gap. In busy environments these individuals may suffer greater delay and severance compared to other walkers.

**Pedestrian Refuge Crossings** – These crossings are similar to standard uncontrolled junctions and operate in the same manner. However, provision of a refuge island in the road separates the crossing movements. Therefore each stage of crossing is treated as an individual crossing; waiting pedestrians require only identifying an acceptable gap in one stream of traffic, rather than two.

Subject to road speed, both uncontrolled and pedestrian refuge crossing facilities can be enhanced with a raised table, whereby the level of the carriageway is raised to the level of the footway. This provides a more visual indication of pedestrian prominence and has the effect of slowing traffic.

**Zebra Crossings** – Zebra crossings are relatively low cost facilities. They are controlled crossings where pedestrians have a legal priority over vehicles. The benefit of these facilities is that they offer immediate response to pedestrian demand and provide priority to the pedestrian across the whole crossing. Although, care must be taken and in reality waiting pedestrians must ensure approaching vehicles have seen them and stopped before crossing the road.

Views on the use of Zebra crossings vary across authorities in Scotland, and in recent years there has been a steady decline in their use due to safety concerns. 'Roads for All' produced by Transport Scotland states they are "unsuitable for visually impaired pedestrians". Whilst the jurisdiction of this document is on Scotland's trunk road network, it is recommended to all

Scottish local road authorities. However, AECOM are aware through recent design and research studies that a number of local authorities, including Glasgow City Council and City of Edinburgh Council still implement Zebra crossings.

**Tiger Crossings** - A "Tiger Crossing" combines a pedestrian Zebra with a crossing for people on bikes. They are called "Tiger" because early versions had yellow stripes on black tarmac. These facilities segregate cyclists and pedestrians into two parallel streams for crossing the road. This is with the purpose of removing potential conflict between pedestrians and cyclists riding across the road. Whilst cycling across a Zebra is not strictly prohibited it is in contravention of the Highway Code, Tiger Crossings remove this as an issue.

**Signalised Crossings**<sup>1</sup> – Crossing facilities whereby both traffic and crossing movements are controlled by traffic signals. There is a range of controlled crossing facilities, these are;

**Pelican** - The pedestrian, after pushing a button, is signalled when to cross by a red or green symbol from an aspect on the opposite side of the road. These systems are not 'intelligent', i.e. the system is unable to cancel the pedestrian demand if a pedestrian crosses whilst a red pedestrian aspect is showing and there is nobody waiting to cross. They will continue on their predetermined plan, leading to a green pedestrian aspect appearing and traffic being stopped.

**Puffin** - Puffin crossings differ from Pelican crossings as the red and green signal are located just above the push button on the same side as the pedestrian. This encourages pedestrians to face the oncoming traffic while waiting for the green signal to show. Puffin crossings also have on crossing detectors to extend the time traffic is stopped to allow all pedestrians to cross.

**Toucan** - The Toucan crossing is a shared signal controlled crossing designed for use by pedestrians and cyclists. Toucan crossings are very similar to Puffin crossings, but they are wider and have an additional red and green cycle. Unlike Pelican and Puffin crossings, cyclists can legally cycle across the road.

**Pegasus** - The Pegasus crossing is based on the Puffin crossing with separate push buttons and enclosures for horses with riders. The pedestrian area is the same as with a Puffin crossing with a kerb side button and signals. The Pegasus crossing has an additional traffic signal pole and enclosed area, separate from the pedestrian crossing area, with a red and green horse signal. The push button is located 2m from the ground to allow a rider to call the traffic to a halt without dismounting.

Although, the establishment of the routes discussed previous have yet to be subjected to a preliminary and detailed design exercise, it is envisaged that a combination of the crossing measures listed will be required to provide an appropriate, coherent and buildable range of solutions.

It should be noted that on higher speed roads (35mph +), such as, Carmunnock Road and Carmunnock Bypass the use of Zebra / Tiger crossings are not permitted. It is recommended that the preferred option at these locations should be signalised crossings. Due to the speed however, vehicle actuation and speed discrimination loops should be used, these control green times using real-time traffic flow and speed data. These systems ensure that a red traffic signal is not given if an approaching vehicle is travelling too fast to stop safely.

<sup>1</sup> Clackmannanshire Council, N.D. Pedestrian Crossings. [Online]. Available at: <<https://www.clacks.gov.uk/transport/pecrossings/>>

## Inclusive Mobility

This study is about providing and promoting access between various greenspaces within the Cart to Castlemilk area. Inclusive Mobility is a guidance document published by the Department for Transport, providing details of provision to ensure accessibility for disabled users of transport infrastructure, which includes access to the countryside.

It is essential that implemented options borne from this study are designed with the needs of disabled users in mind to ensure all users are able to reap the benefits of improved access to the areas greenspace. This has an important role in a positively impacting on social inclusion, personal wellbeing and supporting healthier lifestyles, as well as on accessibility.

With Inclusive Mobility it is recommended that the follow principles are considered during any design exercise;

- All accessible path surfaces should be compact, firm, stable, non-slip and obstacle free. Suitable materials include concrete, bitumen macadam, stone, timber, brick/paving and grass. Sand, loose gravel, woodchips and cobbles should not be used;
- Step-free access should be provided where at all possible, and where steps existing they should preferably be replaced by a ramp. If this is not practical, an alternative ramped route should be provided;
- Where field boundaries require crossing appropriately sized gates or stiles, which do not need climbed, should be provided;
- Where viewing points are provided, wherever possible these should be accessible to everyone including wheelchair users;
- Steps and ramps should be appropriately sized and graded, as to meet the requirements of Inclusive Mobility;
- Seats and benches should be provided at regular intervals, with a maximum gap of 100 metres being suggested in Inclusive Mobility; and
- Signage and interpretation boards should be legible to users with mobility issues and to those sat in a wheelchair.

It is acknowledged that providing fully inclusive facilities in certain areas, particularly Cart and Kittoch SSSI, may be challenging / not possible. If this is the case it is recommended that disability groups are consulted to explore opportunities to maximise accessibility where possible.

# Specification

As far as is practicable, a desirable minimum path width of 3 metres should be used, with an absolute minimum width of 2 metres as specified in 'Cycling by Design'. Where it is impractical to meet these widths due to physical constraints, these can be reduced locally by a maximum of 0.5 metres. Sustrans Scotland, the main funders of cycling projects in Scotland, often require shared walking and cycling paths, supported by their Community Links Funding programme, to have a minimum width of 3metres.

## Gradients

As referenced in 'Inclusive Mobility', 'A Good Practice Guide to Countryside Access for Disabled People'<sup>1</sup> developed by the Fieldfare Trust provides guidance on suitable path / ramp gradients. The good practice guide has been developed to enable disabled people easier access to the countryside. A general footway / path gradient should be no steeper than 1 in 20 (5%). Where this is exceeded, the gradient is considered a ramp, which introduces a range of different parameters for consideration, such as ramp length, size of ramp and distance between landings.

All ramps should have a non-slip surface and abrupt changes of gradient should be avoided, with smooth gradual changes preferred and the maximum cross slope of any path should be no steeper than 2 per cent. Cross slopes in excess of this, especially when combined with linear path slope, can present difficulties of balance for wheelchair users and some ambulant disabled people.

## Path Construction

The study area encompasses a range of environments in which paths may be established. These include roadside footways, woodland and open parkland. As such, construction methods are required to be both sympathetic to the environment whilst meeting user requirements.

For all off-carriageway sections of the route, a flexible surface will be specified to provide a smooth and comfortable ride for all user groups and to minimise future maintenance. For the purposes of this study, the following specification will be adopted for the entire route as given in 'Table 10.1: Typical construction – urban location' of 'Cycling by Design':

- Surface Course: 30mm Hot Rolled Asphalt (CI 910).
- Binder: 50mm Dense Asphalt Concrete (CL906).
- Sub-base: 150mm Type 1 granular material (CI 803).

Given the diverse nature of the terrain a number of construction methods may be required to provide a route. For example, in woodland areas a 'no dig' construction method may be required due to tree roots. A series of typical cross-sections are shown opposite, which provide solutions to most anticipated situations in the study area. It is appreciated that providing a bound surface path may not be sympathetic to the local environmental setting. A range of colours are available to soften the visual

impact. However, where a bound surface is not permissible or practical, for example within the SSSI area, options should be explored to provide the most appropriate surfacing solutions which does not disenfranchise certain user groups.

It should be noted that where a route is to accommodate equestrians, care should be taken to make it non-slip for horses: "Bound rubber-crumb-aggregate mixes have been found to be appropriate for all users and very acceptable for horses on multi-user paths. Although the initial cost may be higher than for tarmac, it has many advantages in construction, particularly on sites with limited access, and in not requiring edging (unlike tarmac) as well as providing a more beneficial surface for pedestrian and equestrian users without detriment to vehicles. Its porosity means it is safer for all users in icy conditions, there will no puddles and dung will quickly wash through."<sup>2</sup>

## Illumination

Due to the diversity of the area the illumination requirements are likely to vary. Many of the routes will utilise existing urban environments and will already be illuminated by systems of street lighting. However, through the parks and woodlands the existing routes are almost entirely unlit.

For routes promoted for around-the-clock / community link journeys it may be considered beneficial for full illumination by lighting columns to be provided, including through parks and woodlands. Whilst it is acknowledged that this perhaps presents maintenance, vandalism and light pollution issues. The absence of light is likely to discourage regular cycling and pedestrian journeys, particularly during the winter months.

Notwithstanding the above, routes both within and outside the parks and woodlands, which are not serving as a community link, are unlikely to justify street lighting. Illumination would reduce the visual and environmental amenity and potentially have a detrimental impact on local habitats. However, it may be considered prudent to provide markers to guide paths users during the hours of darkness. A range of solutions are available to achieve this, such as, solar lit studs, reflective studs, low level lighting / bollards and reflective surfacing / aggregate. The performance of solar lit study and reflective surfacing / aggregate may vary between open areas of land and those covers by tree canopies.

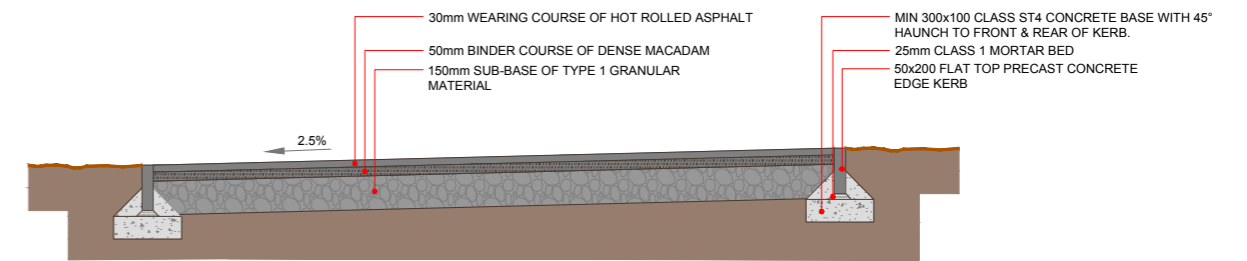
As solutions are brought forward it is recommended that a lighting assessment, where appropriate, is undertaken. This should take cognisance of anticipated user type, hours of operation, environment, local habitats and maintenance requirements.



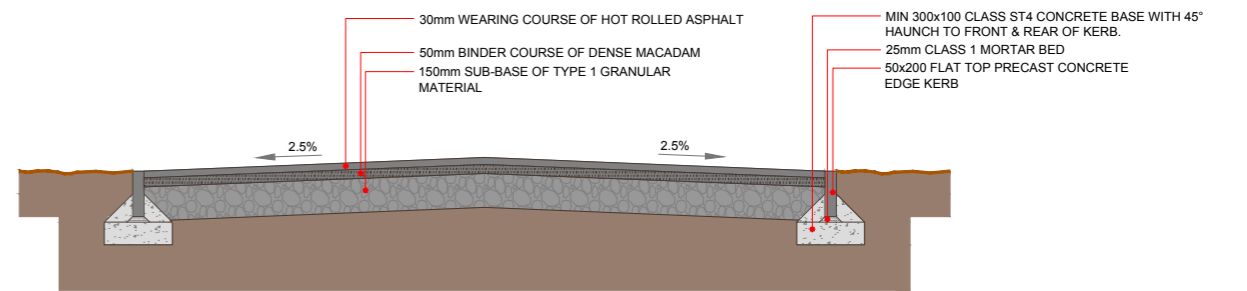
Figure 22: Reflective Surfacing The Van Gogh Starry Night Cycle Path <sup>1</sup>

<sup>1</sup> VOLT. 2014. Van Gogh Starry Night Cycle Path. [Image] Available at: <https://voltbikes.co.uk/blog/cycling-news/how-cycle-paths-should-be-made/>

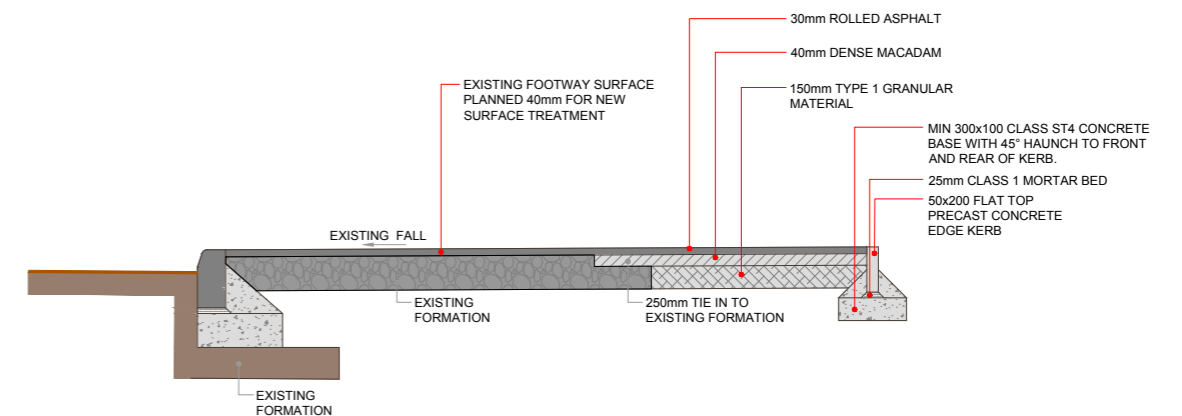
# Standard Path Details



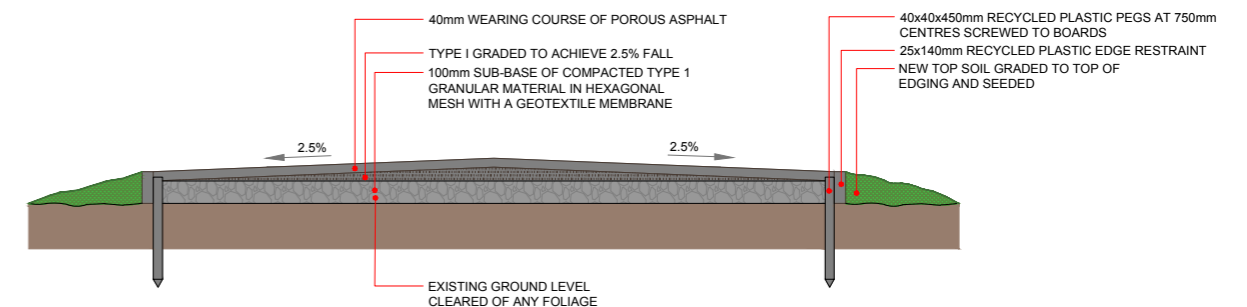
SHARED USE FOOTWAY/PATH - CROSSFALL



SHARED USE FOOTWAY/PATH - CAMBERED



EXTENSION TO EXISTING FOOTWAY

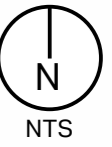
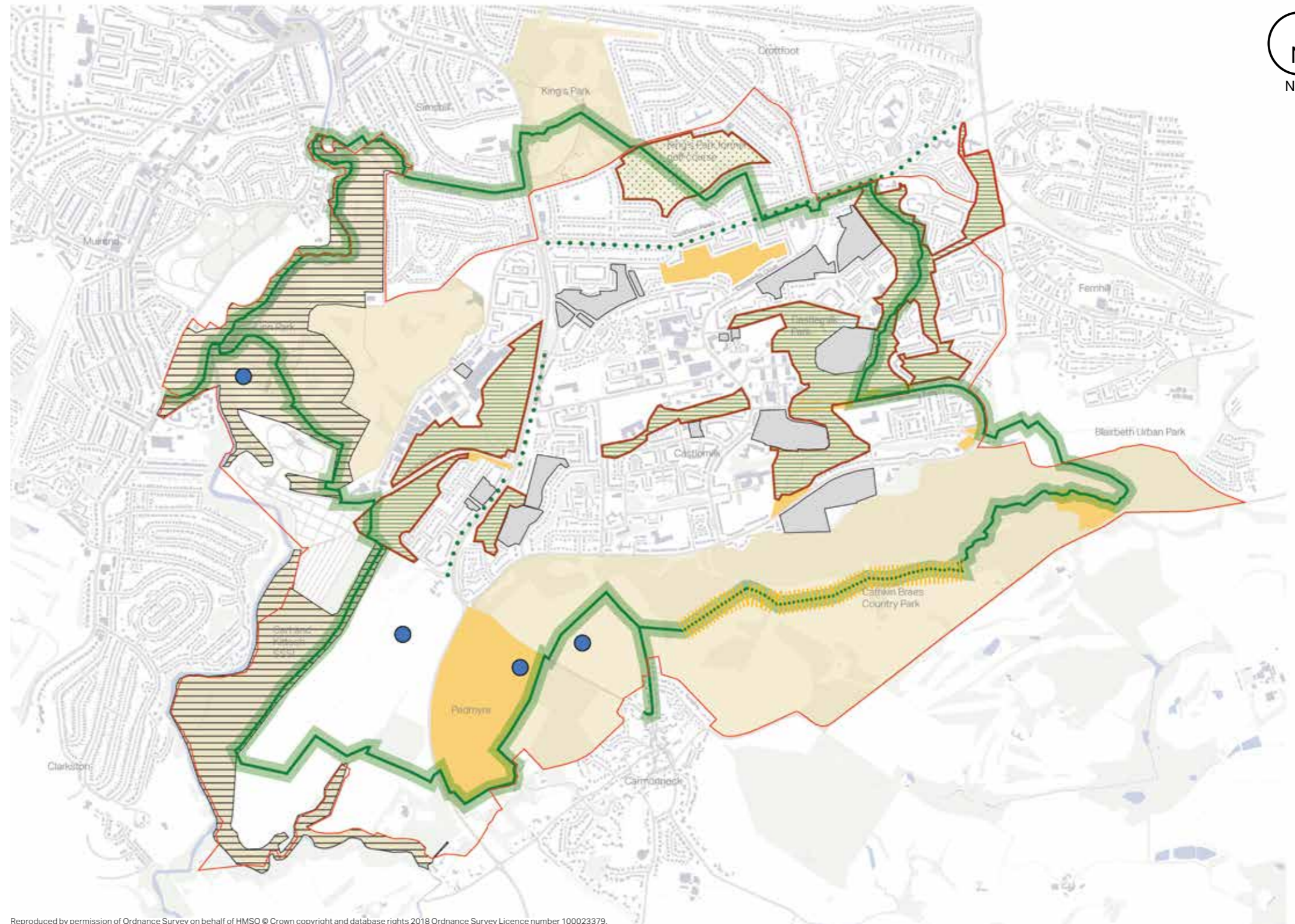


SHARED USE FOOTPATH - NO DIG CONSTRUCTION

<sup>1</sup> Fieldfare Trust. Promoting Countryside Access for Disabled People. [Online]. Available at: <http://www.fieldfare.org.uk/countryside-for-all/countryside-for-all-good-practice-guide/>

# Habitat Connectivity

Ecological measures implemented for this project should be harmonious with existing habitats and their management. The proposed Magnificent Eleven route passes through and connects several existing sites of significant ecological interest, namely Cathkin Braes LNR, Linn Park LNR, Cart & Killoch SSSI and the Castlemilk Woodlands. These are subject to varying amounts of existing management, for which reason reference has been made to the Cathkin Braes Country Park Management Plan 2013-2018 (Glasgow City Council, 2013), the Cart & Killoch Valleys SSSI Woodland Management Plan 2017-2022 (Mark Hamilton Landscape Services, 2017), the Linn Park & Local Nature Reserve Management Plan 2013-2018, and on-line information from the Central Scotland Green Network (CSGN). The scale of the below recommendations is variable, and achievability will in part depend on the degree of funding.



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**Key**

Study area	Proposed MG5 Meadow cutting and management	Existing management plan area (Linn Park and SSSI)
Magnificent Eleven Route with habitat buffer	Proposed grassland/meadow habitat diversification	Proposed woodland management (selective thinning where required)
Core areas	Proposed extension to LNR network	
Proposed habitat enhancement of derelict/vacant land	Proposed urban habitat corridors	
Proposed woodland creation areas	Proposed wetland creation zone	

## Linking Pedmyre and Carmunock to Cathkin Braes

### Management Recommendations for Cathkin Braes to Pedmyre Grasslands

**MG5 grassland management** - Management of adjacent tall species-poor grassland (including areas of rosebay willowherb) to produce more species-rich MG5-type grassland. This would be relatively straightforward, since the mechanism is already in place in the form of the existing management regime for species-rich grassland at Cathkin Braes, which could be extended. The management primarily involves a suitable yearly cutting regime (currently in September), which reduces dominance of coarse grasses and thus benefits herbs. In order to more drastically reduce coarse grass dominance in new management areas along the route, it may be advisable to also take a cut in early spring. Cut grass must be removed in all cases. Note that although rosebay willowherb is non-native, it is now an accepted common component of the UK flora that would be difficult to eradicate and is not without some value (e.g. as one of the foodplants of the elephant hawkmoth *Deilephila elpenor*); given its extent at Cathkin Braes, it would be beneficial overall if some such areas were converted to more species-rich MG5-type grassland. Conversion of species-poor swards to more species-rich swards can be accelerated by supplementary methods such as plug-planting, or (if preceded by chain harrowing or scarifying to expose some earth in the grass thatch) temporary laying of green hay with ripe seeds cut from species-rich parts of Cathkin Braes. The green hay method is best carried out in July / August and may also benefit from rolling to help bed wildflower seeds. Plug-planted plants or sources of green hay should include yellow rattle since this parasitizes grasses thus reducing their dominance to the benefit of herbs. Although the IHN underestimates the amount of neutral grassland within Cathkin Braes LNR, development of greater extents of species-rich neutral grassland in this area would either be within the indicated IHN dispersal network or help expand it.

The grass fields in the Pedmyre area adjacent to the managed coppice appear to be managed (in 2018) for hay / silage. Currently herb diversity is often lower than in the core Cathkin Braes LNR area, and there is often much rye grass *Lolium perenne* (characteristic of agriculturally-improved grassland), although there are better patches with e.g. yellow rattle. Encouragement of more diverse MG5-type meadows in these fields could be achieved by continued cutting and removal of arisings, combined with supplementary management such as laying of green hay in July / August following chain harrowing / scarifying. Such measures will only work properly if there is also no use of fertiliser and no high-intensity grazing.

**Dog-litter bins** - Dog-litter bins should be provided along the proposed route through this section, where not already present. It was noted that although dog-litter bins are present at the Cathkin Braes car park, there are none along the woodland-grassland interface where there is an existing well-used footpath. Dog-fouling has the potential to cause eutrophication of grassland with consequent encouragement of undesired weed species and reduction in natural meadow herbs. Note that it has been found elsewhere that dogs generally defecate within about 400 m of the starting point of a walk, and siting of dog-litter bins should take this into account.

**Wetland habitat enhancement** - The patches of lesser pond sedge and water sedge near Carmunock Road towards the western edge of Cathkin Braes LNR are near the proposed Magnificent Eleven route. Their presence indicates that the water table is close to the surface in this depression, and together with the sedges themselves this presents an obvious opportunity to create a new wetland feature. Moreover, this location is in an area outside the IHN wetland dispersal network but coincidentally almost equidistant between two components of it, thus a new wetland in this location would effectively bridge the gap in the wetland network. It is suggested that a wetland similar to the existing wetland feature to the east be created, using similar management techniques. This would entail some shallow excavation to expose the water table and produce pools of water, and to allow development of surrounding marsh. In order to protect the existing two patches of scarce sedges, it is recommended that excavations should be very shallow in close proximity to them, but that the wetland feature be created in the lower ground between the two patches. In order to maximise appeal to breeding and wintering birds, areas of standing water should be as permanent as possible. The larger the feature, the greater the likely ecological benefits; however, the maximum size of a created wetland in this area will be in large part dictated by the natural topography. If this field is periodically cropped for hay or silage, then creation of this wetland feature would entail some loss of crop. Funding for this measure may be obtainable through the Scottish Rural Development Programme (SRDP).

At Pedmyre directly west of the above lesser pond sedge and water sedge, on the south side of Carmunock Road, there is another small depression in the grass field. This also supports a small amount of water sedge as well as rushes and other plants indicative of a high water table, representing another opportunity for small wetland creation. Again, this would require shallow excavation to increase marsh vegetation and possible pool creation, whilst leaving the water sedge intact. It would best be undertaken by those familiar with management of the wetland in Cathkin Braes LNR, and again may be funded through the SRDP.

**Willow coppice management** - There is an existing managed willow coppice adjacent to the proposed Magnificent Eleven route in the Pedmyre area, with an interpretation board. Aside from improvement of the existing track for access purposes, no further measures are suggested for the coppice, which is already under appropriate management for nature conservation and cultural interest.



Figure 23: Potential for hedgerow improvement along old farm tracks



Figure 24: Proposed grassland diversification through MG5 management regime



Figure 25: Boggy areas could be developed into wetland habitat areas to improve drainage along proposed paths

## Connecting Linn Park LNR, Cart and Kittoch SSSI and Castlemilk Woodlands/Linking through the SSSI to Pedmyre and Carmunock

### Management Recommendations for Linn Park and Cart and Kittoch SSSI

Both Cart & Kittoch SSSI and Linn Park LNR are substantial and contain mature woodland (for the most part broadleaved) with semi-natural ground flora elements. In both cases, the woodland is non-acidic, with key ground flora species (not all dominant) including bluebell *Hyacinthoides non-scripta*, large *Dryopteris* spp. ferns and lady-fern *Athyrium filix-foemina*, sanicle *Sanicula europaea*, enchanter's nightshade *Circaea* sp., and occasionally ramsons *Allium ursinum*. Linn Cemetery stands between the SSSI and LNR, but an almost continuous woodland habitat network exists via the northern spur of the SSSI.

The Cart & Kittoch Valleys SSSI Woodland Management Plan already sets out a detailed work plan and programme. Close liaison with SNH should be a priority in order to coordinate or supplement nature conservation management activities in the SSSI. This is also a legal requirement since any measures undertaken within a SSSI are likely to constitute Operations Requiring Consent, which must not be undertaken without prior authorisation from SNH.

**Public access routes** - Currently-restricted public access to these woodlands is considered to be increasing risk of antisocial activities, such as fly-tipping and unauthorised mountain-bike track construction (the latter including apparent use of an excavator), which adversely affect the natural flora as well as aesthetic appeal of the site, and is also thought to potentially increase the adverse tree-browsing effects of deer which would currently be seldom displaced by people in the SSSI. Increased and improved access (along suitable path routes, minimising harm to ground flora) and improving the profile of these woodlands is thought likely to alleviate these issues to some extent. Desired access improvements in the SSSI Woodland Management Plan include: surfacing of the existing principle path running south through the SSSI (also desired for the Castlemilk Woodlands in general, where not already present) to provide all-weather access routes, supply / improvement of signage, way-marking and improvement of drainage crossings to allow access to all user groups.

The SSSI Woodland Management Plan also indicates (on Map 7 and Map 8 of that document) that clearance of paths is intended in several places including along both edges of the northern spur of the SSSI, along the east edge of the SSSI and within the middle of the SSSI. Path surfacing is also proposed for the path along the west edge of the northern SSSI spur, and it is acknowledged that there has been an aspiration for some time to install part of a long-distance path outside the east edge of the SSSI. Precise placement of the Magnificent Eleven route in this area should follow any of these already-proposed routes, in liaison with SNH.

Local installation of tall fencing and appropriately-designed entrances could alleviate the fly-tipping issue by making it more difficult to carry large objects into the woodlands. Such fencing should not be overly visually intrusive, for example tall wooden palisade fencing would be superior to the industrial appearance of metal fencing.

**Management plan species control-** The creation of improved or new access routes through the SSSI is also a clear opportunity to commence or supplement other desired SSSI management measures, which include: reduction of bracken and Himalayan balsam, maintenance of open grassland glades (in specific areas – not involving creation of new glades by excessive tree felling), localised selective thinning of trees (of species and in locations dictated by SNH – see further detail below), and provision of dog-litter bins. Some of these measures (such as reduction of Himalayan balsam and provision of dog-litter bins) would also be appropriate within Linn Park LNR.

An known issue in the SSSI is an unfavourable proportion of sycamore *Acer pseudoplatanus* and beech *Fagus sylvatica* in the canopy, both of which reduce the ground flora and development of native tree canopy through heavy shade and persistent leaf litter. However, as noted in the SSSI management plan, it is not feasible or desirable to remove mature sycamore and beech in bulk, especially given the possible loss of ash trees through the spread of ash die-back disease. However, localised selective thinning for footpath upgrade would likely have a net beneficial effect in otherwise semi-natural broadleaved woodland if small amounts of sycamore, beech or other non-native trees (such as spruce *Picea* sp.) were removed.

For the desired reduction in Himalayan balsam, community involvement would be appropriate, since the plant is safe to handle and easy to pull up. Pulling of Himalayan balsam should take place before the plants are in flower but are tall enough to easily see (if pulled when seed pods are present, then seed is liable to be spread, and if pulled when in flower and left in situ then plants may re-root and still set seed). If pulled before flowering, pulled plants can be left in dry places to rot, but if removing from site then correct protocol for transfer and disposal of controlled waste to licensed landfill must be followed to avoid contravention of legislation. Pulling of Himalayan balsam would need to be repeated for several years to destroy the seedbank. Community involvement with reduction of rhododendron and bracken is also possible and has been implemented elsewhere, but requires equipment / machinery.

Within semi-natural woodland at Linn Park (excluding any woodland which is part of the historic estate landscape with purposefully planted non-native trees), it may be appropriate to carry out localised selective removal of sycamore and beech trees along or adjacent to the Magnificent Eleven route. Other measures proposed by SNH for Cart & Kittoch Valleys SSSI may also be applicable to woodland at Linn Park LNR, including pulling of Himalayan balsam and removal of rhododendron (if not part of the historic estate landscape).

**Wetland habitat creation** - It is stated in the Linn Park LNR Management Plan that there is no wetland habitat in the area, and that public opinion favours creation of wetland. The IHN dataset corroborates the lack of wetland habitat network components in the Linn area. Consequently, where the Magnificent Eleven route passes through open areas of grassland at Linn Park (ideally not already managed as species-

rich meadow, unless some loss of this habitat is deemed acceptable), it would be highly appropriate to create an adjacent wetland feature. It is suggested that this include a pond of permanent open water surrounded by an area of swamp and / or marsh. The size of the feature would depend on available funding and aspirations, and since this is in a public park location it would need to include appropriate public safety measures.

**Funding options** - Funding for access improvements to the SSSI, Linn Park LNR and Castlemilk Woods (such as clearing of fly-tipping, path upgrades, improved path entrances / signage, fencing upgrade / removal, invasive species treatment, etc.) should be obtainable via forestry grant support for Woodlands In and Around Towns (WIAT) - eligible woodlands, which all these woodlands constitute.



Figure 26: Boggy areas could be developed into wetland habitat areas to improve drainage along proposed paths



Figure 27: Existing management of grassland within Linn Park is good.

## Linking Cathkin Braes down through Castlemilk Park and Woodlands

### Extending Local Nature Reserve Status to Castlemilk Park and Woodlands

Castlemilk Woodland is not currently within an LNR, and there are other related woodland patches extending westwards towards Linn Park LNR. These are currently Sites of Importance for Nature Conservation (SINCs) and allied to the woodlands at Cart & Kittoch Valley SSSI and Linn Park LNR. This non-acidic woodland, in particular along the watercourses, is mature, largely broadleaved and was noted to include good neutral ground flora species such as bluebell, dog's mercury *Mercurialis perennis*, large ferns, ramsons, opposite-leaved golden-saxifrage (in wet areas) and, notably, wood speedwell *Veronica sylvatica*.

There is already well-maintained access through parts of these woods, and also apparent herbicide treatment of Japanese knotweed *Fallopia japonica*, which occurs in a few places along the watercourses. There is opportunity for this project to further contribute to invasive non-native plant species control through pulling of Himalayan balsam, which is locally abundant, and potentially also removal of rhododendron. It may also be practical to remove smaller non-native conifers (such as spruce), which occur at low density and development of which should be avoided.

These Castlemilk Woodlands include amongst the canopy species some large mature oak trees of perhaps up to 200 years age, in addition to the natural ground flora (at least in places) outlined above. From a nature conservation perspective, this would justify designation as an LNR. Designation as an LNR would further raise the profile of these woodlands and likely provide a greater degree of protection and potentially greater likelihood of receiving funding for improvement and educational measures. LNR is a statutory designation (unlike classification as SINC) declared under the National Parks & Access to the Countryside Act 1949. There are many LNRs in England but rather few in Scotland. It is a requirement of LNR designation that the land management (not necessarily the ownership) be in the control of the local authority (although they may pass management to other organisations) and ideally public access should be afforded to at least part of the site. Given that there is already public access to much of this woodland, there appears to be no reason why the Castlemilk Woodlands could not be designated as an LNR, consolidating its existing SINC status and the improvement and educational works which have already been undertaken with CSGN funding, and which have reportedly given significant benefits to the local area.

## Magnificent Eleven Habitat Buffer

As well as enhancing people connectivity The Magnificent Eleven also has potential to improve habitat connectivity, as a dual focus of the project. For any works or projects along that are taken forward to implement the route, it is recommended that ecological improvements be considered within a habitat buffer zone of 25m either side of the route, or further afield where there is clear potential for ecological benefit within the study area .

A habitat buffer zone will help create a connected corridor that improves linkages between habitats and upgrades existing habitat provision. The focus may be on habitat creation where there is a habitat shortage or a clear gap in the habitat network and there is capacity for this to be undertaken, for example through tree planting or installation of wetland features. In areas where a given habitat network is well-developed the emphasis can be on strengthening existing habitat.

It is recognised that each section of the route has its own complexities and therefore specific strategies should be developed for the habitat buffer along each section. This should be informed, unless sufficient information is present in the existing management plans of the nature conservation sites, through ecological surveys undertaken by an Ecologist and Landscape Architect. These strategies should consider the existing habitat networks and the varying urban and rural surroundings.

Individual projects should be assessed and designed in detail, tying back into the wider strategy.

Some of the key deliverables for the buffer zone would include:

- planting of locally-native species of trees and shrubs, ideally also of local provenance, particularly where beneficial to the woodland habitat network, and outside of areas of known importance for meadow and wetland habitats;
- removal of any invasive non-native species of conservation concern (including species such as Japanese knotweed, Himalayan balsam and rhododendron, but excluding, in general, established mature trees such as beech and sycamore), by supplementing existing treatments or establishing new;
- management of existing vegetation, as appropriate, to improve floristic or structural diversity (and thereby also diversify other groups such as invertebrates and birds), where such diversity is lacking;
- the creation, in localised suitable areas, of wetland features;
- installation of wildlife features such as bird/bat boxes and habitat piles; and
- placement of interpretation panels about the ecology enhancement works.

# Landscape Connectivity

The following recommendations aim to improve the quality and connectivity of the existing public open space network.

## Connecting Linn Park LNR, Cart and Kittoch SSSI and Castlemilk Woodlands

Linn Park and Cart and Kittoch SSSI have the continuity of the White Cart Water; however, this steep sided river gorge restricts movement to the east. Open spaces are more fragmented further east through Linn Crematorium and the SSSI, although levels are more accessible. There is potential to strengthen the connection across the crematorium and along Lainshaw Drive, with enhancement of the entrance to the SSSI.

There are further links to Castlemilk Park via Lainshaw Road and across Carmunnock Road, which tie-in with a new central route through Castlemilk (Route B). Streetscape improvement along Lainshaw Road may help to strengthen the connection. The central section of Castlemilk Woodlands requires upgrading as it passes through derelict sites and some existing overgrown areas of woodland. New entrances and woodland clearance/management along the route are recommended and temporary landscapes creation within the derelict/vacant sites.

## Linking through the SSSI to Pedmyre and Carmunnock

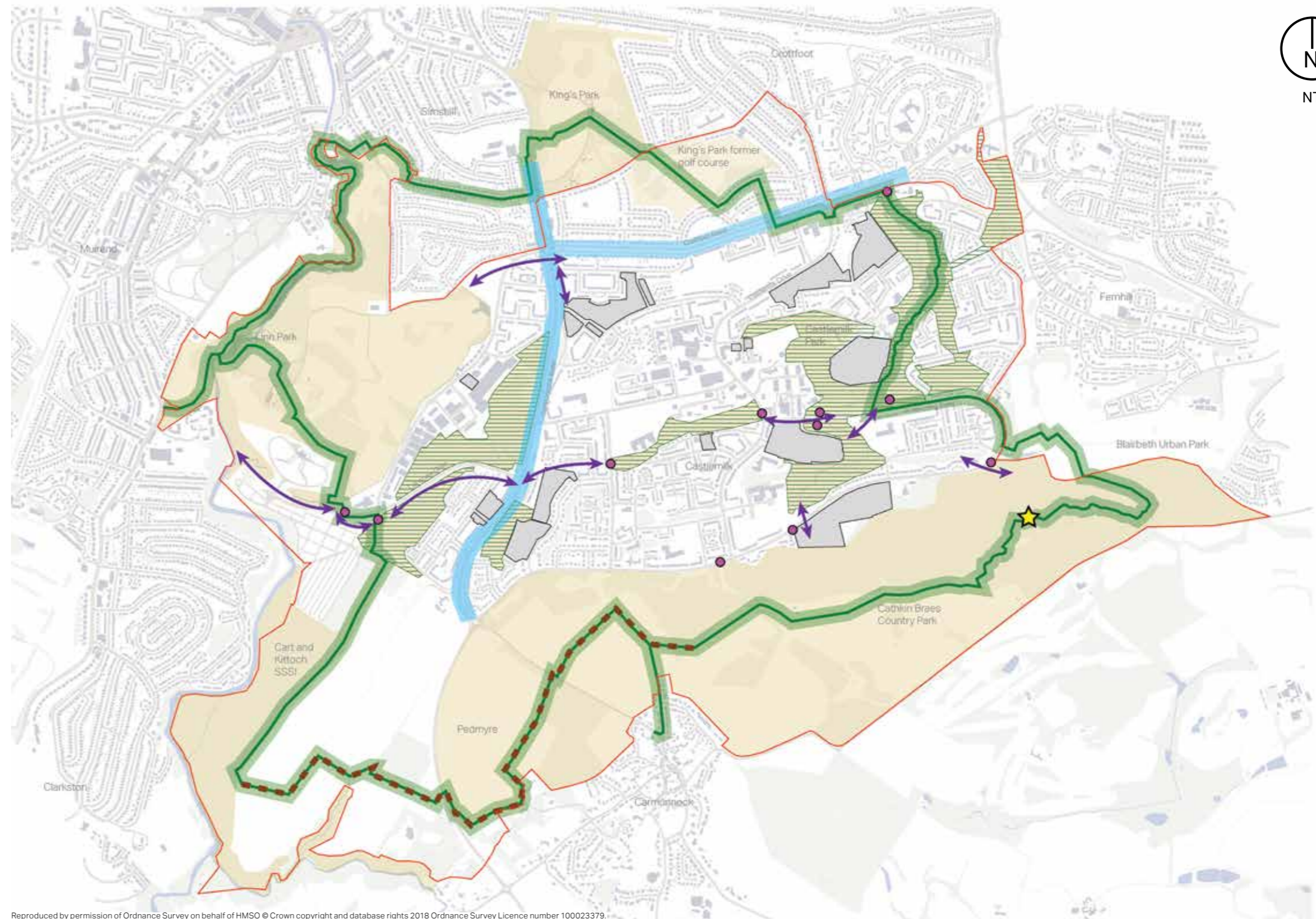
The creation of a rural route through the Carmunnock and Pedmyre grasslands should be low impact and in keeping with the surrounding landscape. The inclusion of new paths should be informed by the footprint of former farm tracks and the landscape framework surrounding them. It may be appropriate to plant new trees and hedgerows across sections of the new route, to integrate the footpath within the existing landscape. In more open areas where there are no former tracks the creation of new links could include mown tracks and in time more established formal paths.

## Linking Pedmyre and Carmunnock to Cathkin Braes

There is a current lack of any marked route through this section although desire lines can be seen. As this section is open in character and there are no former farm tracks to follow, the creation of new links could begin with mown tracks and in time more established formal paths. Access from Carmunnock will be along the shared use path which is in good condition.

## Linking Cathkin Braes down through Castlemilk Park and Woodlands

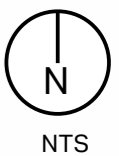
There is potential to improve the links between Castlemilk Park and Cathkin Braes. The entrance points along Arden Craig Road could be upgraded and signage improved. Within Castlemilk Park there are areas where woodland thinning and management is advised to prevent vegetation encroaching on paths and entrances.



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Key

- Study area
- Magnificent Eleven and habitat buffer
- Core areas
- Proposed streetscape improvements
- Vacant or derelict sites
- Proposed strengthened links between greenspace
- Proposed entrances to be enhanced
- Proposed viewing platform
- Proposed woodland creation
- Proposed woodland management and thinning
- Proposed rural route



# Precedents



## Gateways to greenspace

There is potential to enhance the existing entrances, which in some case are overgrown and lack presence/visibility within the streetscape.

Existing maintenance should be reviewed to ensure it is sufficient to keep entrances clear of overgrown vegetation.

Other interventions such as; new signage, wayfinding, gates (where required), seating and planting, could help to make these gateways more welcoming. It is recommend that the entrances are categorised into a hierarchy that informs the level of the enhancement works.

## Temporary Landscapes

Temporary landscapes can provide a solution to activating derelict and vacant sites. These landscapes can take many forms including; growing spaces, events spaces, informal public open space and meadows, but this should ultimately be driven by the needs of the local communities.

Often temporary landscape are constructed of low cost materials and designed so that they can be easily removed for future development of the site.

These types of projects could also have be potential for community involvement and could provide social activities, training and education for local people.

## Streetscape

The wide streets within the study offer the potential for multi-functional linear greenspaces that could provide more efficient use of available land and separation between the road and adjacent residential areas.

Interventions may include tree planting, meadows, play spaces and seating. There is also potential for the inclusion of planted swales alongside the carriageway to collect surface water; improving sustainability and resilience of the urban area. This would also tie-in with plans for the development of surface water drainage swales in the wider Croftfoot area.

These linear greenspaces may also provide space to accommodate shared use paths that could form part of the proposed community links network.

## Rural Areas

Proposals to create a new access link across the rural Pedmyre/ Carmunnock area should be in keeping with character of the surrounding landscape. As part of these proposals there may be opportunity to strengthen and add to existing landscape features, with new hedgerow and tree planting.

A potential viewpoint at Cathkin Braes Country Park would need to be carefully sited within the park. It should be located at an accessible location that does not detract from the character of the Local Nature Reserve and also optimises the views that can be seen across Glasgow.



# Feasibility Masterplan and Projects

**05**

# Feasibility Masterplan

The research, findings and conclusions of the preceding chapters have led to the development of the Feasibility Masterplan for the Cart to Castlemilk study area, which;

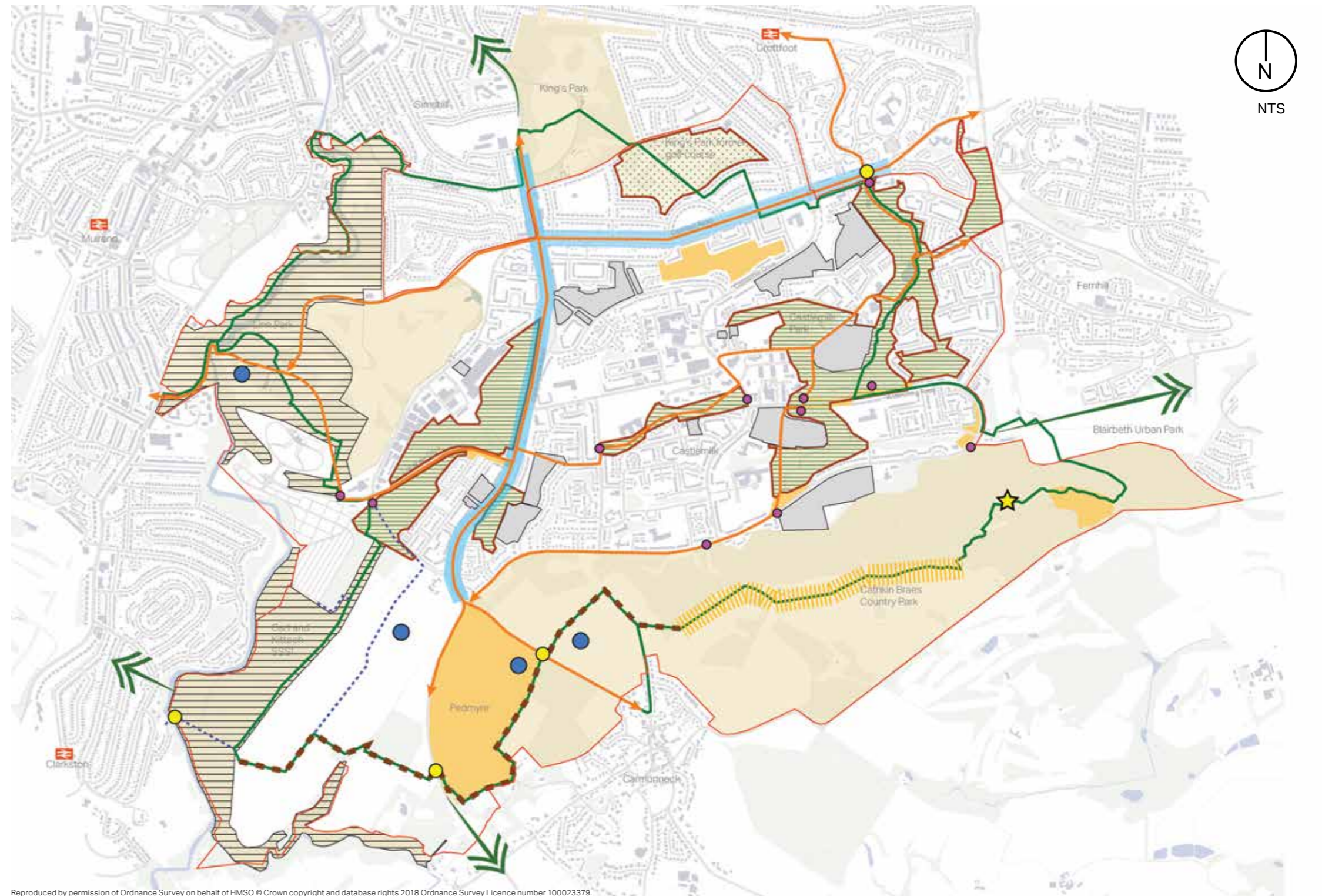
- Provides an overall strategy for the development of the core sites, discussed further below;
- Enhances accessibility through all the core sites and wider network;
- Enhances the connectivity and quality of public spaces which will improve the overall environmental quality of the area;
- Provides for improved habitat connectivity and linkages throughout the study area.

This masterplan leverages and builds upon the established Magnificent Eleven walking route to enhance connectivity between the various greenspaces. The Magnificent Eleven, if developed, fully connects the core sites defined. However, it is acknowledged that, whilst this route provides some community links it is more of a leisure route. Therefore, four additional routes (Routes A - D) have been developed to provide a network of accessible routes which interconnect the communities within the study areas.

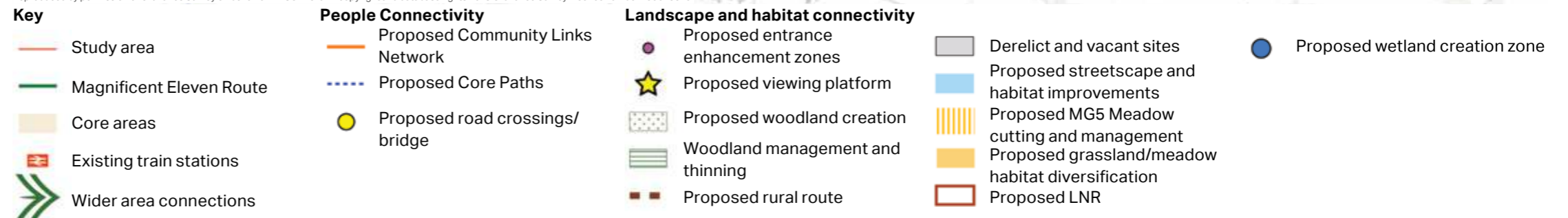
All of these routes also provide wider connectivity to communities in South Lanarkshire, East Renfrewshire and other communities in south Glasgow.

Sites identified for landscape and habitat enhancements have been included within the masterplan which;

- Strengthens habitat networks, particularly through the grassland / farmland spaces between the SSSI, through Pedmyre and into Cathkin Braes;
- Provides potential for habitat creation, in particular, grassland habitat improvements and establishment of wetland habitat zones. A series of interventions have been identified between Linn Park and Cathkin Braes habitats.
- Provides opportunities for woodland creation, management and enhancement; and
- Provides improved access for people to experience local greenspaces, thus enhancing potential for social inclusion, personal health and well-being.



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# People Connectivity Projects

## Short Term 0-2 years

### Wayfinding Strategy

A comprehensive audit of existing walking, cycling and parkland signage should be undertaken. Following this, a wayfinding strategy should be developed which integrates with existing signage to ensure that a consistent and coherent system of signage can be implemented as the route network develops. The strategy should consider; typeface, aesthetics, legibility, hierarchy of destinations, regulatory requirements and opportunities to minimise clutter.

### Concept and Developed Design

An initial design exercise should be undertaken to determine the route alignments, construction details and materials for Routes A and C. In addition, it is recommended that a design for Carmunnock Road (Route D) should also be developed. These routes may be worth prioritising as they close gaps in network connectivity. It is also recommended that the data gathering exercise is undertaken at the earliest opportunity to inform the subsequent detailed design.

### Route Audit and Remedial Action

A large proportion of the routes utilise existing footways and paths. It is therefore recommended that a comprehensive audit is undertaken to identify defects which would require mitigation before a compliant route could be established. Following this exercise, subject to available funding, it is recommended these defects are corrected. This may include; localised path widening, resurfacing, trimming / pruning vegetation and replacing damaged street furniture.

## Mid Term 2-5 years

### Detailed Design and Construction

Following the Concept / Developed Design being completed it is recommended, subject to finance and public acceptability, that Routes A and C, and Carmunnock Road (Route D) are taken forward to detailed design and, if successful, constructed.

### Concept and Developed Design

The initial design exercise should be undertaken to determine the route alignments, construction details and materials for Route B and Carmunnock Bypass (Route D) should also be developed.

### Cathkin Braes Viewpoint (Design of Access Arrangements)

Prior to the viewpoint installation, as discussed in 'Landscape Connectivity Projects' (pg. 36), it is recommended that improved access facilities are designed to link Ardencraig Road and the viewpoint location. This is likely to be complex and involve the construction of a long graded path through an abandoned golf course and woodland situated on the hillside. The woodland is dense and provision of a path may potentially result in the loss of some trees. Ground investigation, environmental surveys and topographical surveys are likely to be required.

### Discussions with Scottish Natural Heritage (SNH)

Access to and through Cart and Kittoch SSSI will, as discussed, be challenging, therefore it is recommended that early discussions are undertaken with SNH to discuss options, prior to any design exercise. This will limit the risk of abortive design work being undertaken.

## Long Term 5+ years

### Cathkin Braes Viewpoint (Construction)

Assuming a suitable design can be identified it is recommended that the access to the viewpoint is constructed in advance of/ in parallel with the viewpoint development.

### Detailed Design and Construction

Following the Concept / Developed Design being completed it is recommended, subject to finance and public acceptability, that Route B and Carmunnock Bypass (Route D) are taken forward to detailed design and if successful constructed.

### Magnificent Eleven Leisure Route

As described on pages 38 - 39

# Landscape and Habitat Connectivity Projects

## Short Term 0-2 years

### Revealing Gateways to Greenspace

The existing gateways to greenspaces should be developed to enhance the streetscape and give people confidence to enter the existing greenspaces. Entrances could be enhanced with clear signage, seating and vegetation clearance.

### Woodland Management Plan (Castlemilk Park)

A management plan for Castlemilk Park would help to support this community asset continue to develop. Management should be lead and implemented by GCC and should also aim to involve the Friends of Castlemilk Park where possible. Cassiltoun Housing Association should be consulted from the outset and involved as a key partner in the funding and delivery of any management plan for Castlemilk Park.

### Assessment of existing amenity space and play provision

A survey of the existing play provision and amenity space is recommended. This may trigger projects to upgrade existing areas and for the creation of new play areas. Other amenity uses may include growing spaces (allotments), orchards and outdoor gyms.

## Mid Term 2-5 years

### Woodland Creation (Kings Park)

GCC have already allocated this site for woodland creation as an extension to the adjacent Kings Park. The development of this woodland should include a fully accessible pedestrian through route to Croftfoot Avenue, as well as new seating and interpretation to encourage use of this space. This space could provide educational facilities and there should be ongoing links with the nearby Schools.

### Streetscape Improvements Croftfoot Avenue

There is potential for streetscape improvement to be delivered in conjunction with the proposed active travel/community link routes (Routes A and D). Improvements may include street tree planting, seating, amenity planting/meadows and play interventions. There is also potential for the inclusion of planted SUDS alongside the road corridor, similar to those planned in the wider area along Aikenhead Road.

### Rural Route through Pedmyre

Old farm tracks should be rediscovered to provide a new public link connecting Cathkin Braes via Carmunnock and Pedmyre with Cart and Kittoch SSSI. This new rural route should include habitat/landscape enhancement, including hedgerows and tree planting, fencing and species rich grassland, as appropriate to the surrounding landscape.

## Long Term 5+ years

### Activation of Derelict Sites

The activation of derelict and vacant spaces is a longer term aspiration, however this is likely to require an initial short term input. For example activation may be achieved through temporary uses of these sites within the first five years and then development of permanent uses that may include housing and new public parks in the longer term.

### Viewpoint at Cathkin Braes

The development of a formal viewing platform at Cathkin Braes has the potential to draw more people into the surrounding area and become a tourist attraction. The viewing platform could be developed as a bespoke, architectural/sculptural structure with the unique selling point of being Glasgow's highest point. There is potential to involve local artists and sculptor's in the design process.

### Strengthened landscape and habitat network

Over time the development of a stronger green infrastructure network with well connected landscapes and habitats will help to support the wider development of the area.

# Project Example - Magnificent Eleven

## Background

This circular walk has been developed over the past ten years by Gary Linstead, Countryside Ranger for South East Glasgow(GCC). The route takes in a range of the city's greenspace on the southern urban-rural fringe, covering approximately 11 miles. Highlights include Linn Park, Kings Park, Castlemilk Park and Cathkin Braes Country Park. These areas also contain rich habitats including river valleys, parkland, hills and grasslands.

## Potential

To continue developing the route several areas of path upgrading are required to make the route more accessible and safer. Wayfinding would also be an essential step as the route is currently difficult to navigate in areas where there is currently no formal path. Following these improvements, the route could be advertised and linked into wider walking networks within Glasgow.

There is also potential to use the Magnificent Eleven as a brand for the entire area to draw people in to the other assets within the study area, such as Castlemilk Park, and development of the spokes from within Castlemilk could also have multiple uses including linking into wider transport networks.

There is potential to capitalise on the Cathkin Braes Viewpoint, as Glasgow's highest point this could be a great selling point for the walk. The creation of a formalised viewing platform would increase the presence of this asset and could become an attraction itself.

## Consultation

A meeting was held with Gary Linstead to discuss the Magnificent Eleven route and its potential for the future. Currently the route is used for guided walks run by the GCC Countryside Rangers and information about it is also available online at:

<http://www.ramblers.org.uk/go-walking/find-a-walk-or-route.aspx?layer=routes,walks&placename=Glasgow>

The wider stakeholder event confirmed that the route was well known amongst stakeholders, who support the further promotion and development of the route. However there were concerns that the circular walk excludes the Castlemilk area at the centre. The Magnificent Eleven was originally conceived as a wheel with Castlemilk as its hub and spokes branching out and linking to the Magnificent Eleven.



Figure 28: Existing viewpoint at Cathkin Braes Country Park

## Route Sections

The route connects with public transport at four points and can therefore be walked as one large loop or broken down into individual shorter sections that take between 1 - 2 hours each.



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**1. Linn Park to Kings Park** (2 miles, leisurely level)

Wooded gorge leading to a historic area surrounding Snuff Mill Bridge.

**2. Kings Park to Arden Craig Road** (2.1 miles, leisurely level)

Formal parkland through Kings Park and along the wooded river corridor of Castlemilk Burn.

**3. Arden Craig Road to Carmunnock** (2.3 miles, leisurely level)

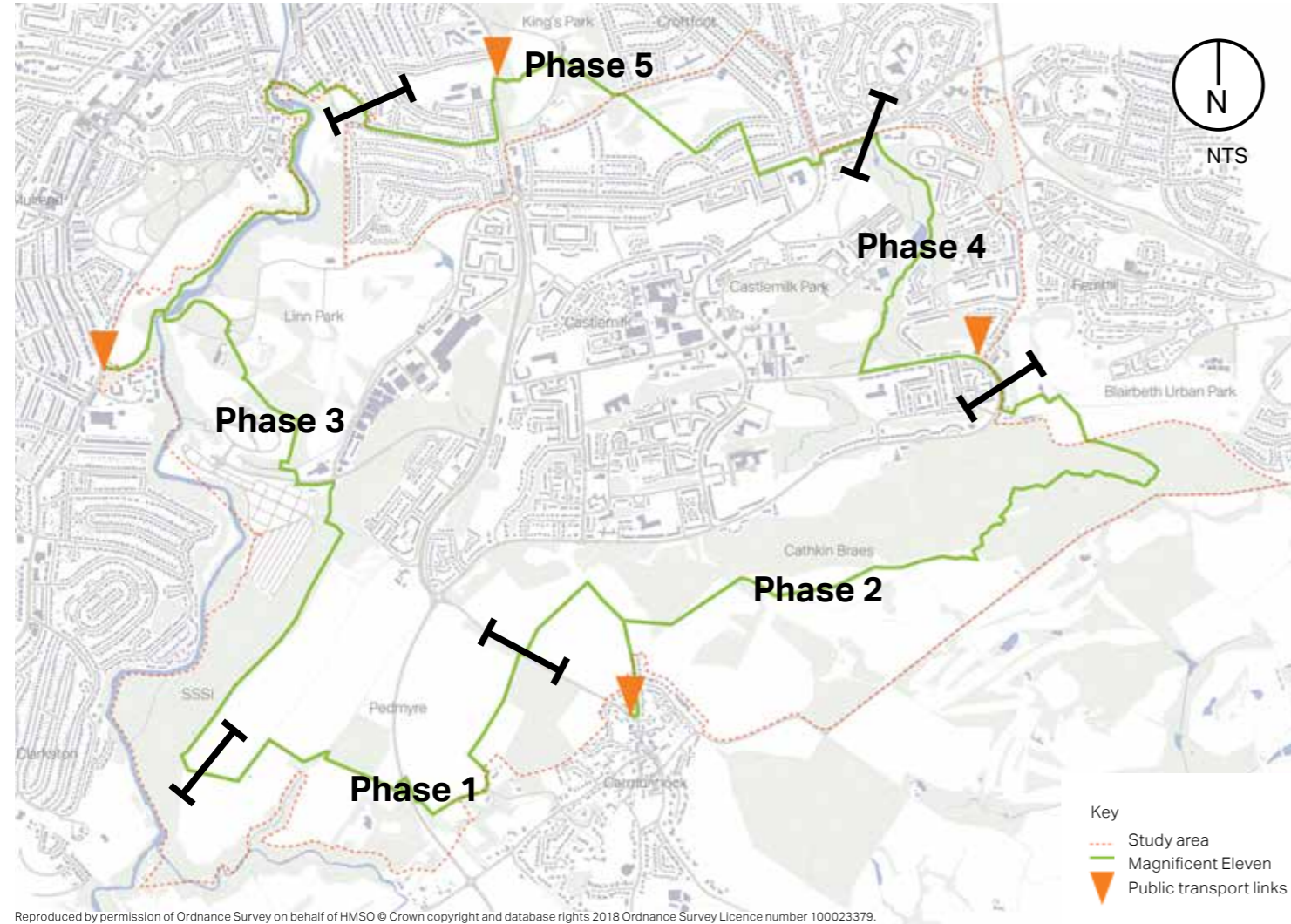
A steep walk up to Cathkin Braes and then a long linear section across the braes taking-in the elevated views over Glasgow.

**4. Carmunnock to Linn Park** (2 miles, leisurely level)

Rural section through Carmunnock village and across fields to Cart and Kittoch SSSI. A wooded section leads to Linn Park.

# Magnificent Eleven Delivery and Phasing

It may not be possible to deliver the route as one big project and therefore it may be necessary to develop it in a phased approach. The Magnificent Eleven has naturally distinguishable areas with individual characteristics and requirements for route development. These sections could be developed as individual phases of the overall route over a number of years. These can be broadly split into the following sections, which we have ranked in a suggested order of priority:



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Priority actions

Longer term visions

**1. Pedmyre** - This is the weak link, with no existing formal paths and should therefore be the priority section. This section should include a new access link through the Pedmyre Grassland, linking Carmunnock with the SSSI and potentially with Clarkston via a bridge over White Cart Water.

**2. Cathkin Braes** - Cathkin Braes Country Park has multiple attractions including the BMX tracks, woodlands and views over Glasgow. Enhanced access points up to the Braes should be the focus of development, as the Country Park is lacking welcoming and clearly signposted entrances. The development of a formal viewing platform is another potential project that would help to promote the route and the area.

**3. White Cart Water** - Development must be sensitive to the SSSI designation and could include a low impact path along the more accessible east/south side of the river.

**4. Castlemilk Woodlands** - There are already good paths in this area and the route would benefit from improvements to the entrances and wayfinding.

**5. Croftfoot** - The development of the former golf course into woodland should include the Magnificent Eleven route and a smooth transition from Kings Park. Links into Castlemilk Park across the busy Croftfoot Avenue will be important.

# Phasing and Funding Strategy

06

# Project Management and Funding

## Phasing

This chapter outlines the interventions that are suggested to facilitate the creation of network of walking and cycling routes which connect a number of high quality environments which support habitats and their growth. This action plan has been developed in order to provide details of how the Council and its stakeholders may take forward the implementation of the recommendations of this study.

The various projects listed in the Masterplan have been categorised into short, medium and long term interventions.

Due to a manner of reasons, such as costs, complexity, utilities, local objections and funding delays, the scheme may be subject to phased implementation. During the concept design a phased implementation exercise should be considered where necessary.

In addition, where opportunities beyond the remit of this study have been considered / identified, such as a cycle link from Carmunnock Bypass towards East Kilbride and Busby, have been considered aspirational.

**Short Term (0-2 years)**

Measures requiring minimal public consultation, relatively low capital / revenue investment and are wholly within the Local Authority's control.

**Medium Term (2-5 years)**

Measures requiring detailed design, public consultation and capital investment / external funding.

**Long Term (5+ years)**

Long-term recommendations requiring significant stakeholder, public consultation and engagement opportunities. These options require more involved detailed design and investment. Interventions reliant on the delivery of other projects are also considered long term.

## Project Management

All of the above projects will require specialist input from the Council, consultants, advisors and the local community. It is proposed that GCC are the lead body for each of the projects but utilising the collective partnerships where feasible for delivery and for ongoing management. At this stage the projects are at feasibility level and will require significant development prior to delivery on the ground. We would anticipate that the Council or partnerships commission a specialist Engineering and Environmental consultant or group of consultants to develop the projects through the project work stages. RIBA Plan of Work 2013 should be utilised as it would provide a clear and consistent approach to the projects. The project work stages would be:

- Strategic Definition;
- Preparation and Brief;
- Concept Design;
- Developed Design;
- Technical Design;
- Construction;
- Handover and Close out; and
- In Use.

Due to the nature of the projects it is anticipated that the consultants required to develop and deliver the works would include: Landscape Architects, Active Travel/Civil Engineers, Ecologists, Community Engagement consultants, Tourism consultants, Hydrologist/Geotechnical Engineers, Quantity Surveyors and Principal Designers. However, each project should be considered individually by GCC and where feasible existing consultancy frameworks or internal services should be utilised.

During the initial stages of a project, and dependant on the nature of the works, a number of surveys may be required. These may include: Topographical Survey, Utilities/Services Survey, Preliminary Ecological Assessments, Tree Surveys and Geotechnical Surveys. The appointed consultants would be able to advise on the necessary surveys required and whether they are determined by the seasons e.g. Ecological Surveys.

With the importance of cost savings it is recommended that individual projects are grouped together and delivered under one contract where feasible. This would reduce the procurement processes but also provide consistency in the project delivery, which would be vital to building one common theme for the Cart to Castlemilk Projects.

## Project Lifecycle

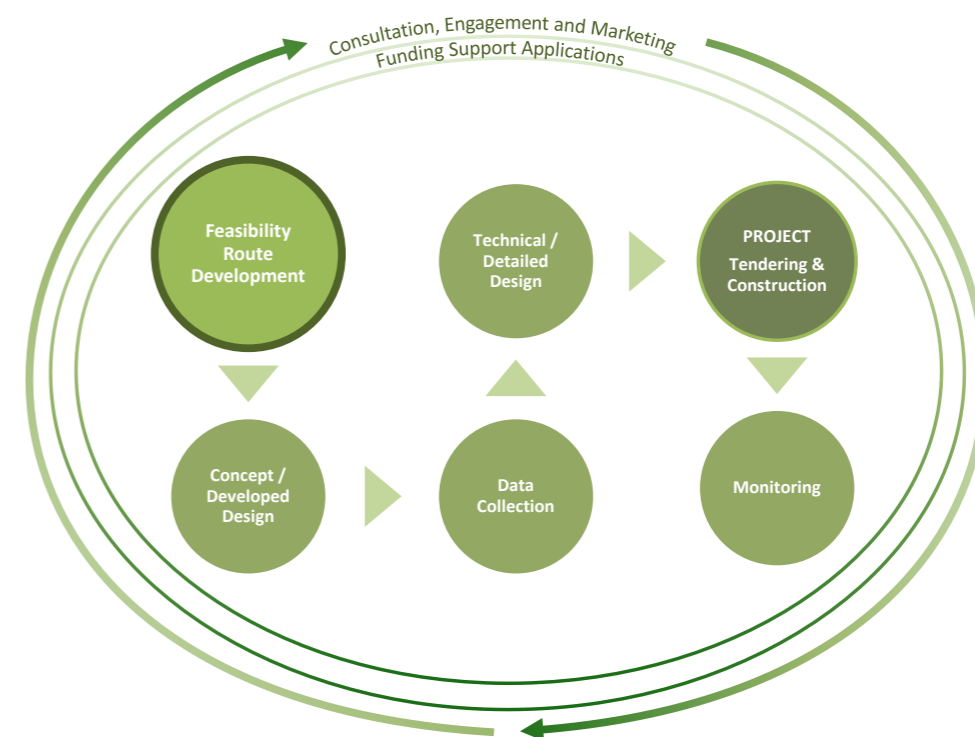
The infographic below provides a high level overview of the implementation process for each route. As alluded to above, each route should be developed and designed through a systematic process which includes comprehensive consultation and engagement exercises. Consultation and securing project funding will like be a constant exercise throughout the lifecycle of the project.

Between the concept / developed design and technical / detailed design stages is a data collection phase. This exercise should be undertaken after a robust scheme has been agreed to ensure all opportunities, risks and constraints have been identified and all necessary data, as listed below;

- All necessary environmental studies;
- Topographical surveys;
- Public utility checks;
- Ground Investigations; and
- Land ownership checks.

Proactive and positive data collection should help ensure an efficient delivery of the detailed design exercise and minimise abortive work. The above data list may not be exhaustive; the data required for the detailed design should be identified at the concept stage.

A monitoring stage should be considered before and after scheme implementation. The purpose of this is to assess the scheme's impact through the information available before and after scheme implementation. A number of existing, periodical and new sources of data, as well as commissioned bespoke data sources, can be utilised to evaluate and monitor the project's impact.





## Larger Project Funding



## Smaller Project Funding

The following represent a wide range of potential funding options which support greenspace and active travel projects.

### Climate Challenge Fund

The Climate Challenge Fund is run by 'Keep Scotland Beautiful' and was launched in 2008. To date the Climate Challenge Fund has supported over 1000 community projects that have helped to reduce carbon emissions across Scotland. The fund supports projects that can demonstrate that they are community led, reduce carbon emissions, improve community understanding of climate change and have a sustainable legacy.

**Climate Challenge Fund Grants up to £150,000**

### Sustrans Scotland Community Links

Community Links is a grant, provided by Sustrans Scotland, that provides funding for the creation of infrastructure that enables more people to cycle and walk for everyday journeys. Community links funding can be phased over successive years for longer term projects. Match funding is only required for construction of projects, not design.

**The fund can provide between £1,000 and £2,000,000 for a single project.**

### Heritage Lottery Fund

The Heritage Lottery Fund (HLF) from the National Lottery, aims to 'make a lasting difference for heritage, people and communities' through the projects they support. There are a wide range of grants available for different types of heritage project types that broadly including the following areas; buildings and monuments, community heritage, cultures and memories, industrial, maritime and transport, landscapes, parks and nature and museums libraries and archives.

**HLF grants from £3,000 to £5,000,000.**

### Green Infrastructure Fund

The Green Infrastructure Fund, managed by SNH included an initial round of funding in 2016 totalling £15million for urban green infrastructure projects in Scotland. The funding included over £7million from the European Development Fund that has been matched funded by the Scottish Government. It is anticipated will be open for application from late summer 2018.

**Blairbeth Urban Park** is one of the 15 project that was awarded funding. This new park which lies adjacent to the study area, is being developed as a 'catalyst and centre piece for a master planning exercise to regenerate the immediate area'.

### Woods In and Around Towns, Forestry Commission

This programme has grants available for the management of existing urban woodlands in Scotland (woodlands within 1km of a settlement with a population of more than 2000 people). The funding is for maintenance items including drainage, woodland thinning, paths, gates and vegetation clearance, seating and interpretation.

### Scottish Landfill Communities Fund

This funding is linked to the Scottish Landfill Tax and uses the funds from landfill site operators to support a range of community and environmental projects. A list of approved bodies have been appointed to manage and approve funding.

### Communities Place Making Grant, Strathclyde Partnership for Transport (SPT)

This grant has been created to support place making projects with an element of cycling improvement. The grant has been designed to support the Government's vision for 10% of everyday journeys to be made by bike by 2020.

**Grants can be requested up to £7,500 and do not require being match funded.**

### Outdoor Learning in Nature, SNH

Focuses on outdoor learning projects for young people 3-26 years from deprived backgrounds. This includes using local parks/greenspace for outdoor learning spaces for schools and other groups.

### Community Paths Grant, Paths for All

Funding is available for community groups who want to create, improve, maintain and promote community use paths that encourage people to be more active.

### Stalled Spaces, GCC

Glasgow City Council in partnership with Glasgow Housing Association set-up the Stalled Spaces programme in 2010 to support community led city-wide projects for temporary uses within stalled spaces such as derelict, vacant or underutilised open spaces. Since then the programme has funded over 100 projects.

Within the study area there have already been a number of Stalled Spaces project delivered.

### Culture and Business Fund Scotland (Arts&Business Scotland)

Arts and heritage organisations can apply for match funding from the Culture and Business Fund when they are successful at gaining sponsorship from a business for a part of their work.

**Match funding £1,000 - £40,000.**

### Sustrans Scotland Community Links PLUS

Community Links PLUS is a collaborative design competition, providing multi-funding from Sustrans Scotland, supported by the Scottish Government, for local authorities and other statutory bodies to conceptualise, design and deliver an exemplar, high profile and inspirational active travel project within their areas. The projects generally will exceed the value of funding available from the standard Community Links fund.

### CSGNT Development Fund

Projects are awarded annually and must be located within the CSGN area. Projects should fulfil one or more of the priorities within the following broad areas.

- Woodland
- Community Growing
- Strategic Routes
- Active Travel
- Feasibility and project research

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**07**

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