Middlesbrough Green and Blue Infrastructure Strategy 2021-2037

Part Two: Action Plan

Document control

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Project
Middlesbrough GBI Strategy

Client
Middlesbrough Council

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Project Team
The Green and Blue Infrastructure strategy has been prepared by a team at LUC.
All comments and contributions to the development of the study are gratefully acknowledged.

LUC project team
Mark Cooke
Lucy Wallwork
Sofie Swindlehurst
Emily Beedham

Date
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Introduction to Part 2

Chapter 1
Introduction to Part 2

Part 2 of the Strategy provides an Action Plan that responds to the priorities for Middlesbrough's GBI network identified through Part 1 of the Strategy. This takes the form of a series of Priority Opportunities for the network, along with suggestions for potential delivery mechanisms to make them a reality.

The 'spine' of this Strategy, as outlined in Part One, are the following GBI Themes identified for Middlesbrough, which are:

- Regeneration, heritage and 'sense of place'
- Biodiversity and geodiversity
- Reconnecting communities with nature
- A resilient landscape
- The blue network and waterfronts
- Walking and cycling

These 6 themes also provide the basis for the identification of Priority Opportunities for the network, as set out in this Action Plan.

This Part Two (Action Plan) consists of the following sections:

- The Vision for Middlesbrough's GBI network from 2020-2037, as tested through consultation with stakeholders.
- An overview of the Priority Opportunities mapped against the identified Objectives for each of the 6 GBI themes used in the Strategy.
- A Profile of each of the 12 Priority Opportunities, including suggested delivery partners and mechanisms.
- An overview of the two 'catalysts for action' to provide the focus for the delivery of the network.
- A chapter providing further guidance on how to 'embed' GBI into Middlesbrough's emerging Local Plan.
- Further guidance on the various delivery mechanisms available to explore for the delivery of GBI enhancements.
- A simple GBI 'checklist' for developers and planners, framed as a set of questions to be asked of each new development in the Borough.

Task 1 Development of Vision, 'tested' through stakeholder consultation.

Task 2 Development of series of Objectives for each theme, to guide opportunities.

Task 3 Revisiting of Emerging Opportunities from Strategy Part 1 along with stakeholder consultation responses.

Task 4 Identification and discussion of 'long list' of Priority Opportunities, mapped against each theme.

Task 5 Distilling of 'long list' to short list of 12 Priority Opportunities, and creation of dedicated profile for each.

Task 6 Exploration of potential delivery mechanisms and recommendations for 'embedding' the Strategy in Middlesbrough's Local Plan.

Figure 1.1 Key tasks undertaken for Part 2 of the GBI Strategy

Chapter Two
The Vision for Middlesbrough's Green and Blue Infrastructure Network

Chapter 2
The Vision for Middlesbrough's Green and Blue Infrastructure Network

All Priority Opportunities presented in Part 2 of the Strategy flow from an over-arching vision for the network in 2037. This common Vision will draw on local aspirations to help to direct actions across the Borough toward a shared goal.

The Vision presented in this Chapter draws on the baseline analysis and policy review from Part 1 of the Strategy, and was tested and amended through the online consultation process with selected local stakeholders.

The Vision is accompanied by a series of 15 Objectives also presented in this Chapter, which are sub-divided by theme and used to inform the Priority Opportunities details in the remainder of **Part 2**. The Objectives were identified based on the aspirations set out in the policy review and baseline analysis (set out in **Part 1**), as well as the outputs of the stakeholder consultation process. They 'nest' under the over-arching Vision for the network, providing more detail on ambitions up until 2037.

To illustrate how each Priority Opportunities presented here responds to these objectives, **Chapter 3** also provides a table mapping each of the Priority Opportunities to the various Objectives which it fulfils.

Vision

Objectives

Priority Opportunities

Delivery

Figure 2.1: Process for identifying Priority Opportunities and delivering projects.

"By 2037 Middlesbrough will be the greenest town in Tees Valley, and one where regeneration is firmly led by the 'green and blue' rather than the 'grey'. The green and blue infrastructure network will be anchored by the town's rich industrial and pre-industrial heritage assets, linked together by a mosaic of green spaces at all scales, that helps people reconnect with the natural environment on their doorstep and which tackles the root of health inequalities.

Green routes will make walking and cycling the natural way to travel around the town, and will help to reclaim and green the town's streets as a public space for gathering with neighbours, and for children to play and travel to school safely.

Middlesbrough will also lead the way regionally as a resilient urban landscape with significantly boosted tree cover, and which is reshaped to make a meaningful contribution to tackling climate change and biodiversity challenges. It will be a town where urban wildlife can thrive by creating bigger, better and more joined up habitats.

Finally, local communities and their efforts will sit at the heart of efforts to shape the network, from school children to volunteer groups and local businesses. By joining up these efforts, change will go beyond isolated projects to create an integrated, landscape-scale regeneration of Middlesbrough's natural environment."

Housing set against Middlehaven Urban Park.

View down the Ormesby Beck green corridor.

Landscape within the Borough's swathe of southern farmland.

Figure 2.3: Objectives identified for the GBI Strategy, which 'nest' under the Vision

Theme 1: Regeneration, heritage and 'sense of place'

Objective 1.1: To enable the GBI network to underpin Middlesbrough's ambitious regeneration schemes, 'urban living' agenda and the revival of the Borough's high streets and local centres.

Objective 1.2: To ensure that an enhanced GBI network both 'frames' and connects Middlesbrough's historic environment, and helps to boost the local visitor economy.

Theme 2: Biodiversity and geodiversity

Objective 2.1: To provide a diverse, expansive and well-connected ecological network as a foundation for the Borough's Nature Recovery Network and to enable greater resilience to the effects of, climate change.

Objective 2.2: To provide clear context for the delivery of locally-appropriate Biodiversity Net Gain (BNG) in new development.

Theme 3: Reconnecting communities with nature

Objective 3.1: To help narrow the gap between the health and wellbeing of Middlesbrough residents and the rest of the UK through the provision and maintenance of a strong, connected and truly accessible green and open space network.

Objective 3.2: To support and enhance the efforts of numerous local community groups working on GBI initiatives.

Objective 3.3: To unlock land for community scale food growing initiatives, in order to support community cohesion, tackle physical and mental health challenges and to nurture 'locally grown' approaches to food provision.

Theme 4: A resilient landscsape

Objective 4.1: To boost the resilience of Middlesbrough's landscape to the impacts of climate change, including flood risk and increasing temperatures.

Objective 4.2: To enable Middlesbrough's landscape to play a key part in mitigating against the effects of climate change by expanding the Borough's 'carbon sink'.

Objective 4.3: To increase tree canopy cover across the Borough in line with national targets.

Theme 5: The blue network and waterfronts

Objective 5.1: To improve the relationship between the town and the River Tees by mending links between urban areas waterfronts, while respecting the integrity of sensitive habitats.

Objective 5.2: To maximise the potential of Middlesbrough's Beck Valleys as green corridors and high quality multifunctional GBI assets.

Objective 5.3: To shift perceptions of the role that sitting water can play in Middlesbrough's landscape when pursuing nature-based and SuDS solutions to long-term flood risk management across a variety of green and blue spaces.

Theme 6: Walking and cycling

Objective 6.1: To support the Borough's 'modal shift' ambitions toward active travel by creating attractive walking and cycling routes, and better connecting the town's network of greenways.

Objective 6.2: To integrate 'urban greening' features fully into active travel infrastructure schemes and the design of future streets.

Chapter Three
Priority Opportunity Profiles

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Priority Opportunity Profiles

Each profile in this Chapter explores the priorities identified under each GBI theme from Part One - along with feedback from local stakeholders - and works them into multi-functional projects. Each profile also considers how the project might be delivered by a range of partners as a next step.

Twelve distinct Priority Opportunities have been identified, based on the baseline analysis carried out in **Part 1** and the outputs of the stakeholder consultation process. They are:

1. Laying the foundations for a Nature Recovery Network.
2. A green-blue grid for Middlehaven.
3. Station gateway and Middlesbrough 'low line'.
4. Supporting a re-imagined town centre.
5. The 15-minute town: enabling walking and cycling.
6. Blue corridors: enhancing the Beck Valleys.
7. Building an urban tree network.
8. Edible townscapes.
9. Rethinking urban grassland.
10. Network of multi-functional SuDS.
11. Green schools.
12. Low-traffic neighbourhoods.

For each Priority Opportunity detailed in this Chapter, information is provided on:

- The nature of the opportunity
- Its contribution to the range of GBI functions
- Best practice from elsewhere that may inform delivery options
- Potential challenges and risks
- Potential delivery partners, mechanisms and stakeholders
- Indicative delivery time-scales and potential costs.

The Priority Opportunities were identified through an internal workshop, where the key messages of the baseline analysis, mapping and stakeholder consultation were brought together to produce a 'long list' of opportunities. These were then mapped against each GBI theme, and a set of Priority

Opportunities identified which prioritise those opportunities which were the most multi-functional and responded to the most pressing needs identified during the process of developing the Strategy. The Profiles themselves also include a series of icons indicating which of the six GBI themes each responds to.

Figure 3.1 and **Table 3.1** provide a reminder of the Objectives identified for the Strategy and illustrate how each Priority Opportunity responds to those Objectives.

Appendix A provides further illustration of the links between the evidence base and the Priority Opportunities by mapping each one against the 'Emerging Opportunities identified within **Part 1** of the Strategy.

It should be noted that all opportunities outlined are indicative – the ability of each opportunity to deliver the number of functions highlighted is dependent on effective planning, siting and design. The Strategy seeks to identify a range of projects at different levels of ambition. However, given the urgencies of the combined climate-biodiversity-health crises facing the UK, the Strategy calls for an ambitious approach to building a truly transformed GBI network.

This Chapter is designed to provide support for the prioritisation of projects for delivery as funding becomes available or opportunities arise. It can also act as an initial reference point for further detailed feasibility and master planning work. The lists may also be used to help direct developer contributions to key off-site projects or to inform on-site master planning. However, it is acknowledge that not all opportunities will be immediately deliverable in the short term, particularly given the shifting (and somewhat unpredictable) policy landscape which is likely to affect GBI projects in future.

Figure 3.1: GBI Objectives organised by theme.

Objective 1.1: To enable the GBI network to underpin Middlesbrough's ambitious regeneration schemes, 'urban living' agenda and the revival of the Borough's high streets and local centres.

Objective 1.2: To ensure that an enhanced GBI network both 'frames' and connects Middlesbrough's historic environment, and helps to boost the local visitor economy.

Objective 4.1: To boost the resilience of Middlesbrough's landscape to the impacts of climate change, including flood risk and increasing temperatures.

Objective 4.2: To enable Middlesbrough's landscape to play a key part in mitigating against the effects of climate change by expanding the Borough's 'carbon sink'.

Objective 4.3: To increase tree canopy cover across the Borough in line with national targets.

Objective 2.1: To provide a diverse, expansive and well-connected ecological network as a foundation for the Borough's Nature Recovery Network and to enable greater resilience to the effects of, climate change.

Objective 2.2: To provide clear context for the delivery of locally-appropriate Biodiversity Net Gain (BNG) in new development.
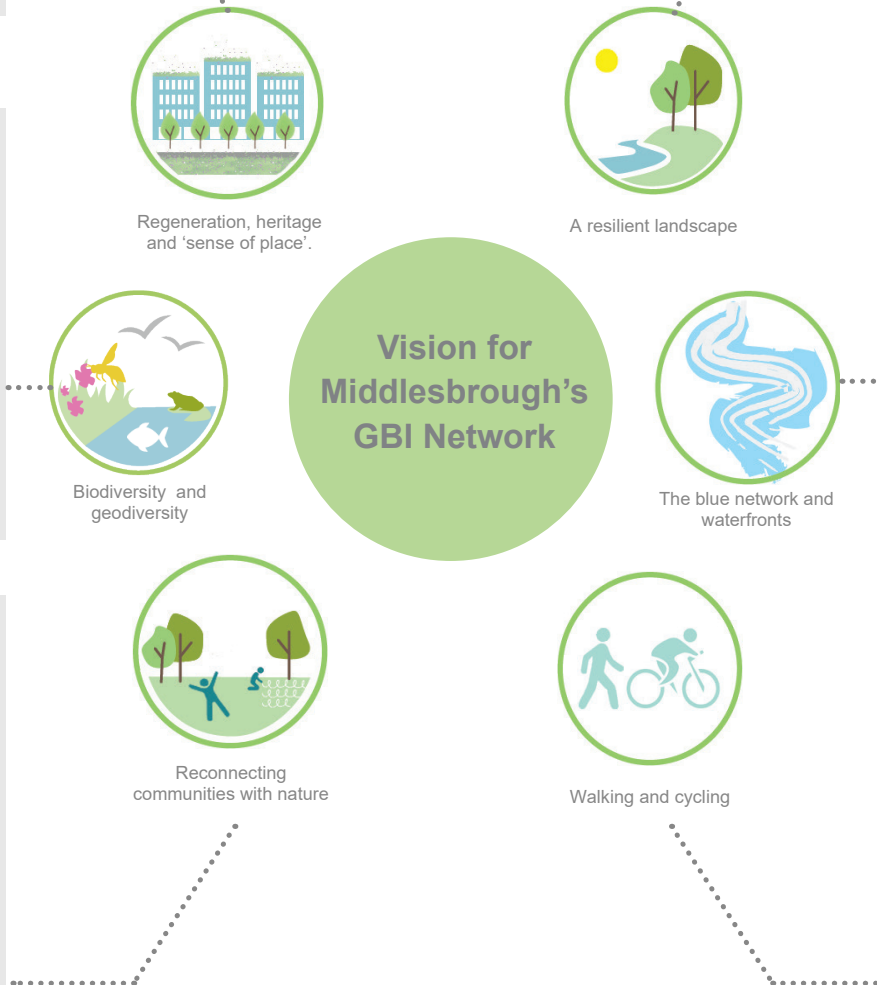
Objective 5.1: To improve the relationship between the town and the River Tees by mending links between urban areas waterfronts, while respecting the integrity of sensitive habitats.

Objective 5.2: To maximise the potential of Middlesbrough's Beck Valleys as green corridors and high quality multifunctional GBI assets.

Objective 5.3: To shift perceptions of the role that sitting water can play in Middlesbrough's landscape when pursuing nature-based and SuDS solutions to long-term flood risk management across a variety of green and blue spaces.

Objective 3.1: To help narrow the gap between the health and wellbeing of Middlesbrough residents and the rest of the UK through the provision and maintenance of a strong, connected and truly accessible green and open space network.

Objective 3.2: To support and enhance the efforts of numerous local community groups working on GBI initiatives.

Objective 3.3: To unlock land for community scale food growing initiatives, in order to support community cohesion, tackle physical and mental health challenges and to nurture 'locally grown' approaches to food provision.

Objective 6.1: To support the Borough's 'modal shift' ambitions toward active travel by creating attractive walking and cycling routes, and better connecting the town's network of greenways.

Objective 6.2: To integrate 'urban greening' features fully into active travel infrastructure schemes and the design of future streets.

Regeneration, heritage and 'sense of place'.

A resilient landscape

Biodiversity and geodiversity

Vision for Middlesbrough's GBI Network

The blue network and waterfronts

Reconnecting communities with nature

Walking and cycling

Table 3.1: Priority Opportunities (POs) mapped against the Objectives of the Strategy

Theme	Regeneration, heritage and 'sense of place'		Biodiversity and geodiversity		Reconnecting communities with nature			A resilient landscape			Blue network and waterfronts			Walking and cycling		Climate change benefits
Objective	**1.1**	**1.2**	**2.1**	**2.2**	**3.1**	**3.2**	**3.3**	**4.1**	**4.2**	**4.3**	**5.1**	**5.2**	**5.3**	**6.1**	**6.2**	
PO1: Laying the foundations for a Nature Recovery Network			●	●								●	●			Significant
PO2: A green-blue grid for Middlehaven	●	●	●	●	●		●	●	●	●	●		●	●	●	Moderate
PO3: Station gateway and Middlesbrough 'low line'	●	●	●			●		●		●	●		●	●	●	Moderate
PO4: Supporting a re-imagined town centre	●	●							●		●		●	●		Moderate
PO5: The 15-minute town: enabling walking and cycling	●			●	●			●			●	●		●	●	Significant
PO6: Blue corridors: enhancing the beck valleys	●		●	●	●	●	●	●	●		●	●	●	●		Significant
PO7: Building an urban tree network	●	●	●	●	●	●	●	●	●		●	●	●	●	●	Significant
PO8: Edible townscapes	●		●	●	●	●	●	●	●							Moderate-Significant
PO9: Rethinking urban grassland	●	●	●					●				●	●		●	Significant
PO10: Network of multi-functional SuDs	●		●	●	●			●				●	●		●	Significant
PO11: Low-traffic neighbourhoods	●		●		●			●						●		Significant
PO12: Green schools	●		●									●				Significant

Priority Opportunity 1
Laying the foundations for a Nature Recovery Network

Key aim: Filling the strategic 'gaps' in the Borough's biodiversity network through habitat creation and restoration, with an emphasis on key focus areas and corridors.

Area of focus: Borough-wide.

Key delivery risks: Delays in landmark legislation requiring Biodiversity Net Gain; fragmented land ownership and permissions.

Mitigation: Require localised net gain through local planning process.

Potential partners: Tees Valley Nature Partnership/ Wildlife Trust; local community groups; developers and housing associations.

Potential funding mechanisms: Developer contributions/ Biodiversity Net Gain; grant funding for restoration of habitats.

Next steps: Promoting use of habitat networks and GBI Strategy priorities as part of negotiations over regeneration schemes and in early conversations on new development proposals.

Delivery time scale

Quick win (next 5 years)	Medium term (5-10 years)	Longer term (10+ years)

Indicative cost

Low £	Intermediate ££	Substantial investment £££

The opportunity

In Middlesbrough, as elsewhere, the reality of dramatic biodiversity decline has resulted in a renewed focus on restoring networks of habitats, primarily through local Nature Recovery Strategies (LNRS) at the sub-regional scale.

Nature Recovery Networks (e) are described by the Wildlife Trust as a:

"Joined-up system of places important for wild plants and animals, on land and at sea. It allows plants, animals, seeds, nutrients and water to move from place to place and enables the natural world to adapt to change. It provides plants and animals with places to live, feed and breed."

It is well accepted that nature reserves alone are not enough to help wildlife recover. Instead, we need to reconnect fragmented sites – stitching back together the natural fabric of wild land and encouraging our green spaces to be richer and more resilient to the changing climate. This will require thinking on a landscape-scale across the Borough and beyond its boundaries.

With the emerging landmark Environment Bill, the UK government is set to introduce new duties to support more effective spatial planning for nature through the creation of Local Nature Recovery Strategies (LNRSs). Creation of these strategies will be led by the Local Nature Partnerships (LNPs) and will include a statement of biodiversity priorities for the area covered by the strategy and a local habitat map that identifies opportunities for recovering or enhancing biodiversity.

This GBI Strategy aims to be cross-compatible with these emerging Strategies, and actions taken forward should support them. As such, this first Priority Opportunity provides a 'keystone' for the remainder of Opportunities outlined in Part 2, and should inform all other interventions in the network and any new development coming forward.

The implementation of new agricultural schemes (ELMS) will be an important step in achieving this on arable and pastoral land, however in more urban environments such as Middlesbrough, the delivery of areas of habitat network through the contributions of new development (in particular, using the new tool of 'biodiversity net gain') will be crucial. In the urban context, this might mean allowing road verges to rewild, installing green roofs, planting more street trees for shade, or encouraging wilder private gardens.

The Tees Valley Nature Partnership and Tees Valley Wildlife Trust will be key partners in this Opportunity, particularly given the importance of linking the local nature recovery network into wider networks across the region. As outlined in **Part 1** of the Strategy, enhancements must focus on the following key areas.
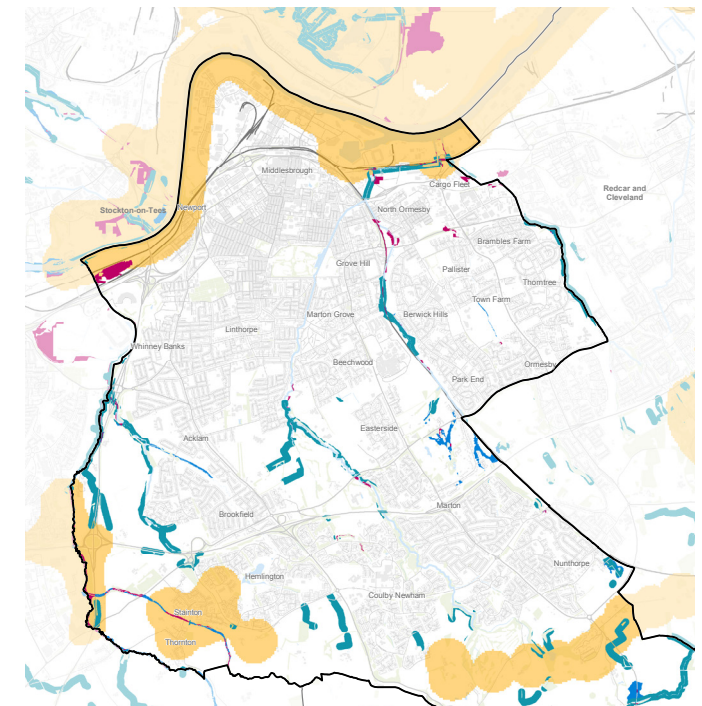
▲ A map from Part One of the Strategy highlighting potential for greater connectivity within the Borough's biodiversity network.

1. River Tees Corridor

This will focus on the expansion of intertidal habitats along the Tees, to improve its function as a strategic wildlife corridor. This restoration work should form an integral part of the redevelopment of the Middlehaven regeneration area (see **Priority Opportunity 2**). The extension of intertidal habitats also provides an opportunity to align with flood resilience objectives (see **Priority Opportunity 10**).

2. Beck Valleys

As home to many of the Borough's priority habitats and species, the Becks form crucial corridors connecting the Tees Corridor and Middlesbrough's rural hinterland to the south. Site-specific recommendations will be required, but may include extension of reed beds, sensitive management of grasslands and positive management of woodland areas - in some places this will require maintaining low levels of disturbance (See **Priority Opportunity 6**).

3. Urban Greening (including associated grasslands and woodlands)

As highlighted in Part 1, 'stepping stone' habitats are a vital complement to the designated site network. Particularly in Middlesbrough's urban context, it is vital that a mosaic of greening features is integrated into future development and regeneration schemes (see Priority **Opportunities 2, 3, 5, 7 and 9,** as well as the 'GBI check list' for new development in **Chapter 5**).

4. Southern Farmland

The limited amount of open space within Middlesbrough's boundaries lies to the south of the town. Much of the enhancement here is likely to come via environment land management schemes (ELMS) as part of post-Brexit agricultural policy, in order to provide greater habitat connectivity via hedgerows, field margins etc.

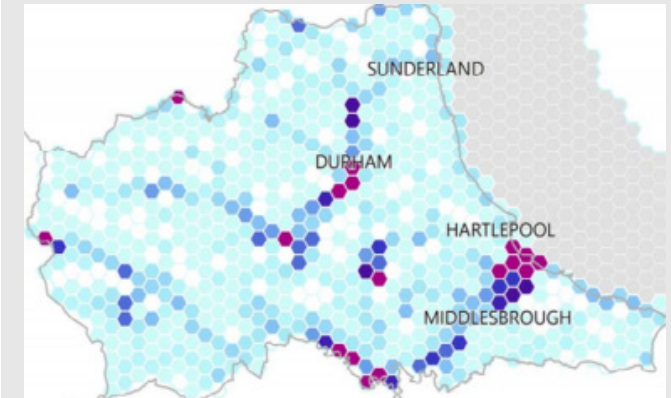A 'bug hotel' in Fairy Dell is an example of how micro-features can both build the nature network and inform.

Hemlington Lake, in the south of the Borough.

Ormesby Beck - The Beck Valleys are crucial links in the Borough's nature network.

Spotlight: Tees Valley Natural Capital Atlas

Understanding the state of our natural environment is the essential first step to improving it. Natural England's series of regional Natural Capital atlases provide an "off the shelf" natural capital evidence base for each county or city region. They use national indicators to measure the quantity, quality and location of ecosystems, and the flow of ecosystem services from them.

The mapping goes beyond biodiversity alone to take into account themes such as cultural services and climate regulation. However it is a useful tool for helping to understand where the 'gaps' in the network are which need to be filled. This offers the opportunity to better align investment and management resources with natural environment priorities.

The Tees Valley Atlas is 'a cut' of the national atlas, using indicators and data sets at a finer resolution. It is designed to understand the state of the natural capital in the Tees Valley region. It will help to identify actions and target areas that could enhance the number of benefits, and help to weigh up trade-offs in the benefits provided.

The maps can be supplemented with locally held data, which will be at a higher resolution, much of which has been used in the development of this GBI Strategy.

Priority Opportunity 2
A Green-Blue Grid for Middlehaven

Key Aim: A 'framework' of green and blue infrastructure that guides the development of the Greater Middlehaven area, based on key assets, opportunities and heritage assets.

Area of focus: Greater Middlehaven.

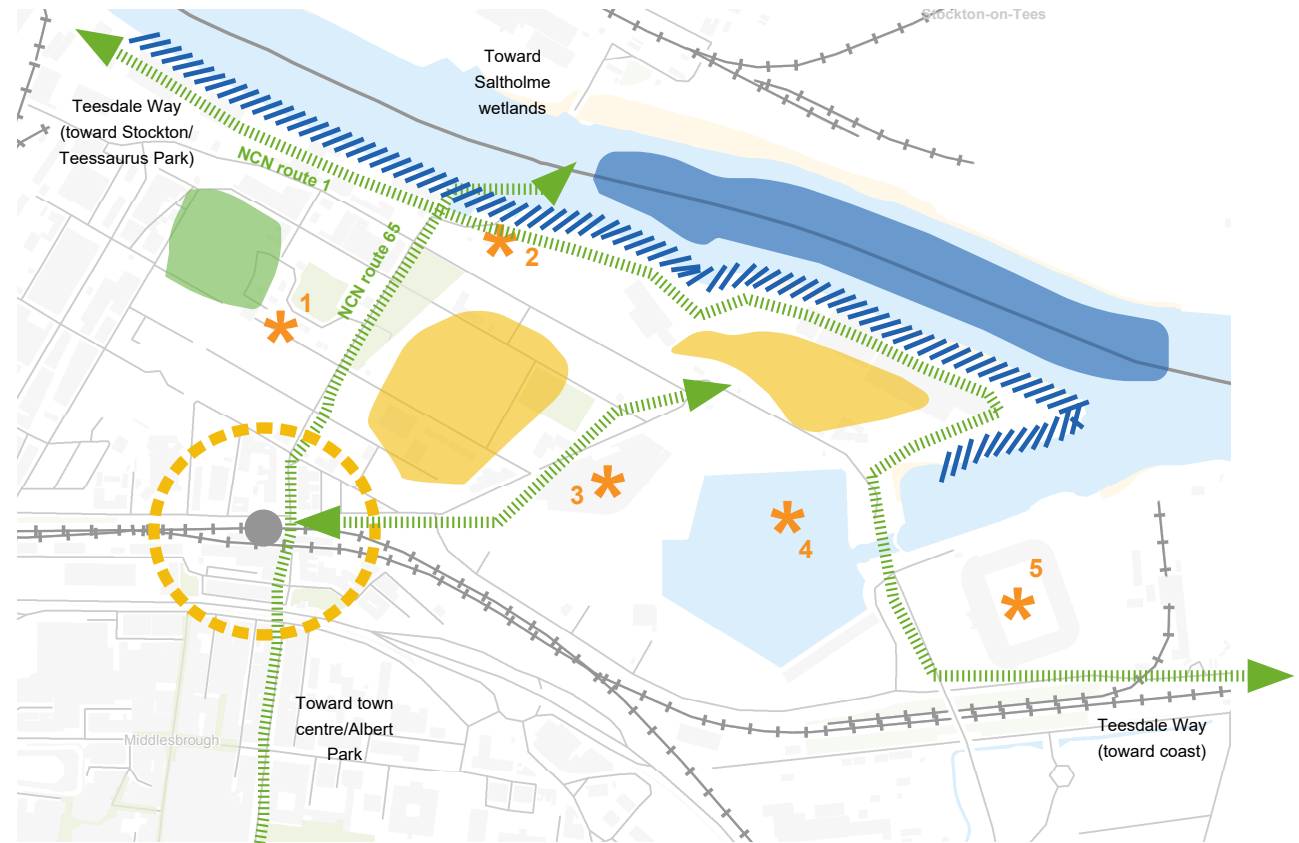**Key delivery risks:** Challenge of reversing stigma around the area; funding, local buy-in.

Mitigation: Provision of high quality green space and green corridors; creation of focal points/activities to draw movement into Middlehaven.

Potential partners: Housing Associations; Developer community; Middlesbrough Environment City; urban farming community; local businesses; Wildlife Trust.

Potential funding mechanisms: Heritage grant funding e.g.. Transforming Towns fund; developer contributions; government grant funding; private investment.

Next steps: More detailed master planning of Middlehaven area; negotiation with developers; community engagement.

Delivery time scale

Quick win (next 5 years)	Medium term (5-10 years)	Longer term (10+ years)

Indicative cost

Low	Intermediate	Substantial investment
£	£ £	£ £ £

A proposed network of key focal points and green routes to focus priorities in the development of Middlehaven.

Stockton-on-Tees

Toward Saltholme wetlands

Teesdale Way (toward Stockton/Teessaurus Park)

NCN route 1

NCN route 65

Toward town centre/Albert Park

Middlesbrough

Teesdale Way (toward coast)

Contains Ordnance Survey data © Crown copyright and database right 2020

Reconnection/opening up of waterfront

Station Quarter (see Priority Opportunity 3)

Sustainable residential-commercial communities, with high quality greening features and growing spaces.

Enhancement and protection of intertidal habitats + interpretation resources (see Priority Opportunity 1)

Key green routes

Focal points for GBI network

Proposed urban 'social farm'

The opportunity

The Greater Middlehaven area is a significant area of opportunity for the future of Middlesbrough. Given the pressures and priorities highlighted in Part One of this Strategy (and the priorities laid down in the government's 25 Year Environment Plan), this is also an area where the future regeneration agenda must be one led by the 'green and blue' rather than simply by the building footprints. Based on the evidence presented in this Strategy, and consultation with key stakeholders, key priorities for this area should be the following:

■ Re-connection with the waterfront.
■ Expansion and enhancement of habitats.
■ A network of 'green routes' throughout Middlehaven, and linking to both the town centre and riverside routes, which enable walking and cycling to be the natural 'mode of choice'.
■ Maximising the potential of Middlehaven's heritage assets, as well as iconic destinations such as the Riverside Stadium.

There are a number of examples across the UK of dockland regeneration schemes, however in the context of a Climate Emergency, regeneration will need to take a different 'starting point' in order to meet 21st century challenges.

As outlined in Part One of this Strategy, the Covid-19 pandemic in 2020 has demonstrated the need for green space and 'wild' areas to be prioritised within urban areas, for the use of residents of various generations. This must be delivered alongside new development coming forward within Middlehaven, and should focus on a number of key focal points:

Key focal point 1: The old Town Hall

The currently derelict Old Town Hall is identified as a highly valuable but under-used 'anchor point' for the future of Middlehaven. This Strategy does not propose a specific use for a restored Town Hall, but proposes that it is resurrected as a community-centred space surrounded by high quality public realm with a focus on the natural environment and food growing (see also **Priority Opportunity 8**). Re-creating a Hub here would also look back to the local heritage of the historic centre of St Hilda's, which was centred on a market square.

▲ A vision of how the derelict Town Hall could be re-envisaged as a market place, community hub and growing space, in order to create a focal point to draw visitors toward Middlehaven.

Charitable trust *Power to Change* sets out the idea that "communities themselves can revitalise their own high streets", highlighting the need to trust and empower communities to take on more ownership of property and have greater influence over where they live, as an alternative to an outdated model dominated by mass retail alone. This heritage asset proves an opportunity to explore this model as part of the future of Middlehaven.[1] Case Study 2 provides helpful inspiration for how this idea might be further developed, and partnership with existing local food/craft businesses should also be pursued.

Key focal point 2: The waterfront and Tees Transporter Bridge

The Tees Corridor waterfront is Middlehaven's greatest asset, but also one which needs careful consideration (see **Priority Opportunity 1**) due to the vulnerable habitats it is home to. As noted in Part One, Middlesbrough has historically turned its back on its waterfront, and the regeneration agenda

1   https://www.powertochange.org.uk/wp-content/uploads/2019/09/PCT_3619_High_Street_Pamphlet_FINAL_LR.pdf

is a valuable opportunity to "turn back" toward the Tees Corridor. This can create a sought-after setting for residential development, however can also deliver high quality public realm for wider residents and the visitor economy. The upgrading of the Teesdale Way - with viewing platforms and interpretation resources to understand natural habitats and local heritage - will be an important feature. Riverside parks, heritage and nature trails and board walks can all be considered to create a successful waterside corridor.

The waterfront opportunity area also opens up the potential to explore further enlivening Middlehaven with leisure uses on the River Tees.

There are strong opportunities here not only for public amenity but for a truly multi-functional GBI corridor. In particular, opportunities to reinstate and extend intertidal habitats must be considered alongside the Council's long-term planning for hard and soft flood defences and for silt management.

Key focal point 3-5: The Docks/Riverside Stadium/ Middlesbrough College

Middlesbrough Docks - surrounded by Middlesbrough College, the Temenos sculpture and the Riverside Stadium - are a key focal point within Middlehaven. They are also an area with high potential for further greening of the public realm. In particular, there is an opportunity for enhancement of habitats within the docks (see **Case Study 1**), accompanied by educational/interpretation resources to help visitors better understand the context of local ecosystems and the surrounding SPA/SAC. The enhancement of this area had strong support from stakeholder consulted as part of this Strategy.

High quality development with integrated urban greening and growing space

Particularly given the renewed emphasis on access to green space discussed above - and the heightened flood risk along the Tees Corridor - it is vital that high standards of multi-functional urban greening are delivered as part of Middlehaven. See the 'GBI Checklist' for new development in **Chapter 5** for further guidance. All opportunities should also be taken to incorporate urban growing space (see **Priority Opportunity 8**).

Key green routes

It is equally important that these focal points are knitted together by a series of green routes and linear parks, where walking and cycling are the natural mode of choice (see also **Priority Opportunity 5**). Two particular routes to be noted are:

■ **Waterfront walking and cycling routes**

Waterfront public realm should be safeguarded to allow for recreational access. While care should be taken to ensure vulnerable habitats are not unduly impacted, this route (the Teesdale Way) is a key corridor and should be a focus of movement in Middlehaven. Interpretation resources will help

residents and visitors under the role of the Tees Corridor as a natural feature and how its ecosystems function.

■ **Links through to Station Quarter and town centre**

Strong 'green routes' and linear parks must link the regenerated station area (see **Priority Opportunity 3)** with key destinations within Middlehaven and south toward the town centre. The route leading from the station to Middlesbrough College (the 'Great Walk') is already a promising example of how movement can be invited down a high quality pedestrian corridor, along with nods to local heritage that help to provide a sense of place. Given the space, these routes can act as 'linear parks' which can strengthen and link the local green space network.

Delivering a greener Middlehaven

Much of the enhancement of Middlehaven will be delivered through developer contributions, phased as development comes forward (see **Chapters 5 and 6**). However there are also opportunities to pursue grant funding to help 'kick start' future phases of regeneration - including heritage-related funding to help bring the Town Hall back into use. Given a renewed emphasis on the national policy agenda for town centre revival, there may be funding opportunities at a national level, which should use these principles as a starting point to elaborate a more fine-grained vision for the various focal areas and corridors.

▼ Precedent images showing riverside regeneration initiatives.

Riverside housing and boardwalk at the Claypits waterfront regeneration in Glasgow.

Waterfront residential uses, walkways and reed beds at Rochester Riverside.

Case Study 1: Bristol Floating Dock and Reed Beds

The reed beds within Bristol's floating docks, with walkway.

As a result of habourside regeneration, Bristol's dock sides have been transformed from a declining industrial area into a popular place to live, serving as a catalyst for city-centre living trends. Key to its success was the integration of environmental features, the provision of waterside walkways and urban greening features.

In particular, the regeneration provides a unique floating reed bed in the heart of Bristol city centre, created as part of the harbourside development at Canon's Marsh. The location was chosen to provide links to the past - when the area (fronting an old gasworks) was populated with self-seeded colonising trees and shrubs, as well as some reeds, along the water line. As such, the design is intended to reflect the original ecosystem.

The reeds are planted within a prefabricated floating raft module that is tied together on site and is highly resistant to storm and flood damage. The reed beds are truly multi-functional GBI assets, as their role was expanded to serve as part of a SuDS system for one of the buildings. They also provide nesting sites for birds, and ensure that runoff from nearby buildings is clear when it enters the harbour, and create an attractive soft edge to the Floating Harbour. The beds are highly popular for recreation and walkers making use of the waterfront. The harbour provides inspiration for how Middlesbrough might enhance the 'blue' assets within Middlehaven.

Case Study 2: Frome Cheese and Grain Market

The restored market hall in Frome because a focal point in the town's wider regeneration agenda, and is managed by the community

The market town of Frome in Somerset has gained a reputation as an somewhere which reversed a sense of decline through thoughtful community-led regeneration, which has resulted in a substantially improved 'sense of place'. At the heart of this regeneration agenda was the re-use of heritage assets such as the 'Cheese and Grain' building. The Cheese and Grain was converted from a former market hall with the support of the town council, and is run as a not-for-profit, member-owned social enterprise. Its aim is to promote and boost Frome's social, cultural and economic list.

In this sense, it offers an interesting model for the use of Middlesbrough's old town hall for community use and as a 'focal' point in the wider regeneration of Middlehaven. In the case of the Cheese and Grain, the building is used as a music and cultural venue, as well as a cafe.

Perhaps the most innovative feature of Frome's approach to this initiative was the role of local governance, with an emphasis on community decision-making and a town council which took risks on substantial loans (including the low-interest Public Works Fund) to bring land and buildings into community use.

Priority Opportunity 3
Station gateway and Middlesbrough 'low line'

Delivery time scale

Quick win (next 5 years)	Medium term (5-10 years)	Longer term (10+ years)
○	●	○

Indicative cost

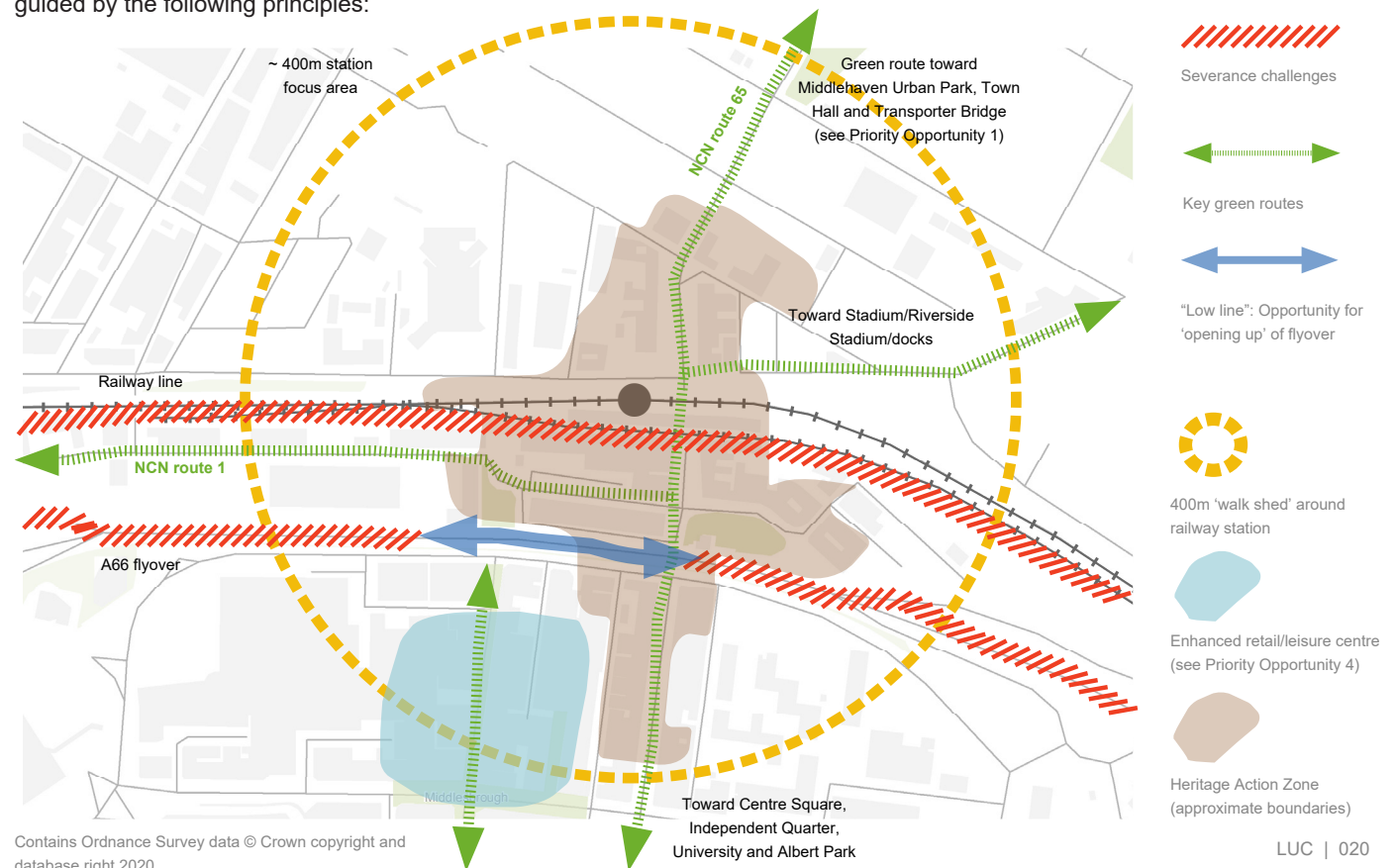| Low	Intermediate	Substantial investment
£	£ £	£ £ £

The opportunity

Part 1 of this Strategy highlighted the issue of a poor 'sense of arrival' for those arriving by train into Middlesbrough. In particular, the sense of severance created by the railway and motorway flyover within the station quarter.

This Opportunity recognises the work being done on the 'Station Quarter' as part of the redevelopment of Middlesbrough station (to take advantage of enhanced train services launching through Middlesbrough) and seeks to ensure that this vision is integrated into the wider GBI network of both the town centre to the south and a regenerated Middlehaven to the north. Actions in this area should be guided by the following principles:

- Creating a green 'walkable zone' with reduced car dominance for those arriving by train, which eases connections between key destinations in the surrounding area.
- Enhanced wayfinding to key destinations and walking routes.
- Use of urban greening within the station 'gateway' to improve 'sense of arrival', as well as to provide shade and 'stepping stone' habitats.
- Combating the severance created by the A66 flyover by 'opening up' of flyover.

A map from Part One of the Strategy highlighting potential for greater connectivity within the Borough's biodiversity network.

~ 400m station focus area

NCN route 65

Green route toward Middlehaven Urban Park, Town Hall and Transporter Bridge (see Priority Opportunity 1)

Toward Stadium/Riverside Stadium/docks

Railway line

NCN route 1

A66 flyover

Toward Centre Square, Independent Quarter, University and Albert Park

Middlesbrough

Severance challenges

Key green routes

"Low line": Opportunity for 'opening up' of flyover

400m 'walk shed' around railway station

Enhanced retail/leisure centre (see Priority Opportunity 4)

Heritage Action Zone (approximate boundaries)

exploring options to progressively 'open up' the area under the flyover - to create high quality public realm and play space, and boost local business as part of the high street recovery agenda.

The 'low line': Combating severance and creating space to meet and play

The future success of Middlesbrough town centre will depend to a large extent upon the seamless integration between the town centre and a regenerated Middlehaven (see **Priority Opportunity 2)**. While the urban greening initiatives proposed for the station area will go a long way to creating a stronger 'gateway' to the town, a bolder vision will require an exploration of the partial 'opening up' of the areas underneath the A66 flyover (between Brunswick St and Wilson St). This offers the opportunity to create a more permeable public realm and a green walkable corridor between Middlehaven, the station and the town centre area. Further investigation and consultation will be required to determine the most appropriate use for this space, however a flagship area of public realm and play space should be considered - ideally providing for space for young people, who have been identified as under-provided for in Middlesbrough (see Glasgow case study). This space is also likely to be a valuable location for local hospitality businesses, sheltered outdoor seating and parklets, and would also provide a valuable opportunity for public art and murals - with the option of engaging local artists to enhance the sense of place and references to local heritage.

This corridor should be part of the focus of efforts to reconfigure the town centre (see **Priority Opportunity 4)** to support high street recovery, and a projected shift toward leisure uses, just as we regularly find railway arches across the UK re-purposed to provide distinctive public realm.

This bold vision could be explored progressively by creating partial permeability along the flyover corridor, and in close consultation with the local business community.

Case Study: High Line (New York)

The New York high line is an iconic example of green infrastructure.

While Middlesbrough itself does not have any disused raised railway lines to make use of, the High Line in New York is an example of the city redeveloping its older infrastructure into public space. As such, it provides lessons for how Middlesbrough might rethink the space underneath the A66 flyover.

The HighLine project is closely related to PlanNYC, a programme introduced in 2007 as a comprehensive agenda covering storm water management, green infrastructure, air quality and carbon emissions.

Saved from demolition by neighborhood residents and the City of New York, the High Line opened in 2009 as a hybrid public space where visitors experience nature, art, and design. It provides biodiversity benefits as a habitat and pollinator corridor, as well as serving as a strong asset for the city's visitor economy. It also has strong community involvement, given that it is operated by Friends of the High Line in partnership with the New York City Department of Parks & Recreation (see Catalyst 2 in **Chapter 4** of this Strategy).

The project in New York has provided the inspiration behind UK-based projects such as the Camden Highline in London.

Case Study: Sheaf Square (Sheffield)

Image source: Academy of Urbanism

Sheaf Square is an example of a heavily used cross-city route connecting the city, residential suburbs, the tram network and the planned Sheaf Valley Park GBI feature. Prior to its redesign, it was a heavily trafficked area providing a poor 'sense of arrival' and contributing to negative impressions of the city. It has since become a highly valued public space, where people can both move from one transport mode to another and also meet, sit and talk. As such, it provides inspiration for how Middlesbrough's Station Quarter could be re-imagined as a new hub of movement connecting Middlehaven and the town centre.

Sheaf Square also provides an example of how local heritage can be used as an anchor for re-imagining these 'gateways' - the design references the geology, landscape, history, and the Pennine setting - the birth place of the steel industry.

The previous access via the subway has been replaced by an at-grade route, to encourage walking and cycling, as part of the wider 'Gold Route' - which links a series of public spaces throughout the city. It is also carefully integrated into a wider landscape plan, which seeks to reshape green spaces behind the station into the Sheaf Valley Park.

The long-term management of the area is aided by 'City Ambassadors', employed directly by Sheffield Council which help police it along with other areas of the Gold Route.

Priority Opportunity 4
Supporting a re-imagined town centre

Key Aim: Providing urban greening features in the town centre which support a 'place-based' approach to high street revival, by reshaping spaces to encourage people to linger rather than simply pass through.

Area of focus: Middlesbrough town centre

Key delivery risks: Getting local business on board and cooperating; availability of funding to kick-start transformation; obstacles caused by underground infrastructure; competing land uses.

Mitigation: Strong communication with local businesses; providing flexible spaces; thoughtful design processes.

Potential partners: Local businesses/BID, National government funding.

Potential funding mechanisms: Government grants e.g.. Future High Streets fund.

Next steps: Promotion of Green Infrastructure Strategy and priorities among those working on town centre regeneration, to ensure agendas are fully aligned.

The opportunity

Even prior to the challenges caused by the Covid-19 pandemic in 2020, local high streets have been struggling to maintain vibrancy, faced with a shift to online shopping and competition from out-of-town shopping centres such as Teesside Park. Concerns over the over-provision of retail within Middlesbrough's town centre pre-dates the Covid-19 pandemic, however this event has brought the future role of the high street into sharp focus. The pandemic is helping to shape new thinking on the primary function of the high street, on the role and function of spaces and the conditions required to allow them to thrive as a social environment.

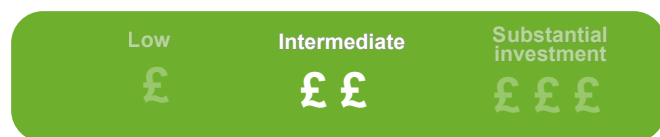As such, across the UK there is an increasing recognition that reviving high streets in their traditional, retail-dominant form is not likely to be an option, and instead town centres need to be re-imagined. However this is a case where a challenge can be re-framed as an opportunity - to build more resilient town centres and communities, which is likely to involve a shift to a greater diversity of uses (and users), including community spaces, leisure and hospitality uses. High streets are therefore increasing focus on improving the *experience* they offer as a place to dwell, shop and meet friends. Often, however, the high street environment fails to serve as such a destination. A stronger GBI network has a vital role to play in creating a new generation of walkable, attractive hubs to support a new role for the high street, as well as helping to reconfigure outdoor for the high street.

▼ An illustration of how Middlesbrough's retail-oriented town centre could benefit from a greener public realm, providing space for play, rest and supporting local business .

Delivery time scale

Quick win (next 5 years)	Medium term (5-10 years)	Longer term (10+ years)
○	●	○

Indicative cost

Low £	Intermediate £ £	Substantial investment £ £ £

space. It will also play a key role in enabling businesses to re-open for business as part of the longer term Covid-19 recovery.

The kind of 'urban greening' features which can contribute to a re-imagined town centre go far beyond street trees alone. Indeed, a diverse 'mosaic' of urban greening features is the most effective in providing a broad range of GBI functions, including flood resilience, recreation and biodiversity:

- Areas of urban meadow in under-used spaces.
- Rain gardens (usually more appropriate when designed in at an early stage)
- High quality incidental natural play areas, to encourage families into the city centre.
- Green walking and cycling routes.
- Street trees - ideally with sustainable urban drainage function integrated into tree pits.
- 'Parklets' (including the conversion of parking spaces for this use)
- Pollinator bus stops (see **Case Study**)

There is strong potential in Middlesbrough for urban greening to support a new vision of the town centre as a residential/leisure hub, rather than only a retail hub. This would allow high streets to once again perform their (often now diminished) historic role as a 'place' and as a social and commercial hub, rather than just somewhere to pass through.

In this way, this Opportunity links strongly to **Priority Opportunity 2 (A Blue-Green Grid for Middlehaven)** and **Priority Opportunity 3 (Station Gateway and 'low line')**, which together form an interconnected suite of interventions to draw people back into the town centre.

Much of the success of these efforts will rest on the ability to limit vehicles from parts of the town centre, creating a more pedestrian-friendly public realm. This reallocation of space also allows for more space to be provided to local hospitality businesses in the form of outdoor seating (see images to the right).

Delivering a greener town centre

As can be seen from the case studies presented below, partnership working will be crucial to the success of a greening strategy. The following principles will be key to delivering a greener town centre:

- Close working between the town centre regeneration teams and the environmental team, guided by the principles and challenges laid down in this Strategy.
- Engagement with local businesses.
- Making use of temporary pilot measures where appropriate (temporary pedestrianisation, moveable planters and seating etc.), in order to 'live test' interventions and judge impact on how people use the public realm of the town centre.

Supporting Middlesbrough's urban living' agenda

The aspirations for an 'urban living' agenda in Middlesbrough's town centre - and the building of a town centre community - will require close attention to the GBI network required to support that agenda.

As was highlighted during consultation for this Strategy, the 'lockdown' experience of the Covid-19 pandemic only emphasised the importance of access to green space and natural features to both mental and physical wellbeing. See also **Priority Opportunity 3.**

▼ Precedent images indicating examples of town centre greening initiatives.

A parklet installed outside a historic pub in Salford as part of an urban greening initiative.

Example of seating with greenery provided within a retail setting

Natural play may find a place in a re-imagined town centre, helping to draw in young families.

Example of a street in Manchester city centre closed to vehicles to support local cafes and restaurants.

An example of SuDs tree pits, with pavement mark-up illustrating their function. .

Case Study 1: URBAN GreenUP (Liverpool)

Source: Mersey Forest

Liverpool city centre, like Middlesbrough, is compact in nature. As such, the city recognised that it needed to think differently about how to integrate green features into its cityscape.

The GreenUp project is a five-year project, using around £3.5 million of European funding to 're-nature urbanisation' on the back of the city's declaration of a climate emergency. It was also based on a recognition that green spaces in the city centre can improve mental and physical health and improve air quality, as well as providing a boost to the local business community and for the visitor economy, focussed on regeneration 'hot spots' such as the Baltic Triangle.

The project took a partner-based approach, with partners including Liverpool City Council, The Mersey Forest, Liverpool BID Company and the University of Liverpool.

The project is designed to retrofit a number of 'green corridors' throughout the city, and key features delivered through the project included:

- A 50-metre 'living wall' on the face of a major shopping centre, visible to pedestrians.
- Rain gardens and sustainable drainage systems.
- Improved pedestrian and cycle routes.
- The re-use of derelict spaces for 'nature based solutions' to climate change.

Case Study 2: Pollinator bus stops in Utrecht

A bus stop in Utrecht fitted with a pollinator-friendly green roof.

The pioneering 'pollinator bus stops' in the Dutch city of Utrecht have set a precedent for how green features and 'stepping stone' habitats can be woven into the urban fabric, by re-purposing even the smallest of under-used spaces. This proves that 'greening the city' does not require the identification of large tracts of green space, but can have a significant impact.

In order to combat a decline in the bee population, Utrecht Council worked with Clear Channel to transform 300 bus stops into bee sanctuaries by installing grass and wildflowers on the roof to encourage pollination. The sedum roofs require little water and maintenance and features energy-efficient LED lights powered by windmills, and bamboo benches.

This approach requires working closely with transport operators, and opens up valuable opportunities for working with local communities and businesses - for example, by offering the opportunity to "sponsor a green bus stop".

Priority Opportunity 5
Supporting the 15 minute town: enabling walking and cycling

Key Aim: The creation of greenways and 'linear parks' to link key green spaces + the 'greening' of key walking and cycling routes to support a modal shift away from the private car.

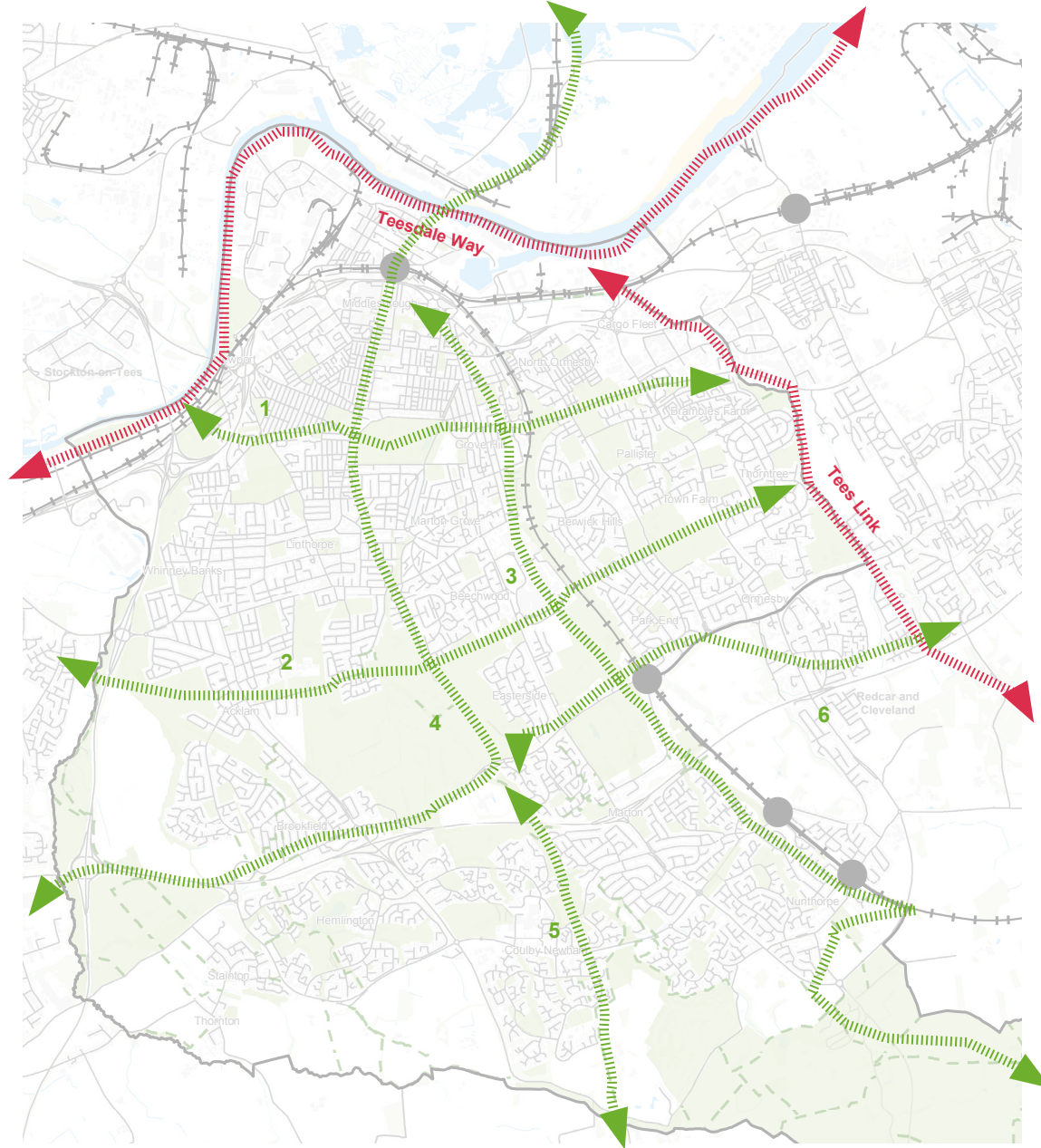**Area of focus:** Borough-wide, but focussed on major arteries.

Key delivery risks: Community opposition to modal shift ambitions; lack of cooperation between departments.

Mitigation: Close consultation with local communities; partnership-based approaches to planning of infrastructure.

Potential partners: Transport planning authorities and regeneration teams; Sustrans; Living Streets; Wildlife Trust; Middlesbrough Environment City.

Potential funding mechanisms: Government funding e.g.. Transforming Cities Fund; developer contributions in some cases.

Next steps: Engagement of transportation department with the priorities and greening options laid down in this profile.

Delivery time scale

Quick win (next 5 years) — Medium term (5-10 years) — **Longer term (10+ years)**

Indicative cost

Low £ — **Intermediate £ £** — Substantial investment £ £ £

Indicative map highlighting potential key routes and connections for greenways/ linear parks connecting GBI assets.

◄┈┈┈► Existing Strategic Routes

◄┈┈┈► Additional indicative key corridors to focus upgrades to network:

1. East-west via Albert Park and Linthorpe Cemetery

2. East-west via the 'Green Heart and Acklam Hall.

3. Ormesby Beck and wider corridor.

4. Marton West Beck and wider corridor, linking across the Tees in the north to Saltholme.

5. Link to southern farmland via Coulby Newham

6. East-West via Stewart Park and Ormesby Hall.

Teesdale Way

Tees Link

The opportunity

The concept of the '15 minute' city or town aims to ensure that daily urban necessities are within a 15-minute reach on foot or by bike. While much of this focus is on the mixing of uses within local centres, it also relies on safe and attractive active travel routes and a significantly reduced reliance on the private car, particularly over short journeys. The concept has become an important part of the call to 'build back better' from crisis and to help to achieve the government's Net Zero targets.

As a compact city, Middlesbrough has strong potential for 'walkability', with many journeys possible by walking or by bike, if appropriate infrastructure is in place. While the 'hard' infrastructure of cycle lanes, parking policy and reconfiguring road layouts is largely within the scope of transport planners, the GBI network has an important role to play in supporting the '15 minute city' in two principle ways: 1) creating/enhancing green corridors and linear parks away from the road network; and 2) ensuring that greening features are integrated wherever possible to enhance the function of on-road cycle ways and walking routes.

1. Greenways and linear parks to link together green spaces

The baseline analysis indicated that, while Middlesbrough benefits from some highly valued green spaces, they are frequently poorly connected for pedestrians and cyclists. For example, there has been significant enhancement to the public realm at the entrance to Albert Park, however beyond this there is much room for improvement in connections to nearby destinations such as the town centre and Linthorpe Cemetery.

While walking and cycling infrastructure must be upgraded across the Borough, the creation of greenways and 'linear parks' focusses attention on a limited number of key routes. Many of these might use existing green corridors (notably Middlesbrough's Beck Valleys - see **Priority Opportunity 6**). However it is vital that a strategic planning approach is taken to ensure that these greenways act as a network, linking key assets within the GBI network like 'beads on a necklace' (see Case Study). The existing network of Strategic Routes in the town can form a starting point, and a consistent wayfinding strategy should also be developed across the network, providing distance markers to key destinations and heritage features.

2. Integration of urban greening features into new walking and cycling infrastructure

The UK government's 'Gear Change'[1] walking and cycling policy is likely to lead to increased promotion of, and funding for, the transformation of active travel infrastructure in the UK, in order to achieve net zero goals and combat the obesity crisis. The design and installation of new routes, and the reconfiguring of road layouts, provides a valuable opportunity to integrate greening features into new routes.

The greening features in question should respond to local priorities and challenges. Given the challenges outlined in Middlesbrough in Part 1, the following features should be encouraged:

- Linear rain gardens (to tackle both flood risk and biodiversity decline).
- Areas of urban meadow (for pollinators and as 'stepping stone' habitats).
- Street trees (for shade).

In order to achieve this, the GBI strategy should be adopted beyond the planning department and green spaces teams, but should also be a key resource for transport planners, to ensure that cycle lanes delivered act as multi-functional GBI assets.

Existing routes such as the Teesdale Way can form the 'backbone' of an expanded network of greenways

An example of high quality wayfinding marker along a greenway

An example of wildflower planting integrated into new cycle infrastructure.

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1   DfT (2020), 'Gear Change': a bold vision for cycling and walking.

Case Study: Connswater Community Greenway (Belfast)

Image source: Connswater Community Greenway

The Connswater Community Greenway is an example of a strategic, regeneration-focussed approach to creating car-free green corridors with multiple functions. Completed in 2017, the project has created a 9km linear park, with 16km of cycles paths, green spaces, bridges, crossings and heritage trails. It follows the course of the Connswater, Knock and Loop rivers, connecting open and green spaces, and also linking residents to leisure facilities, businesses, shopping centres, schools and colleges. It has also become a key asset for the visitor economy, as a 'living landmark' for Belfast.

The greenways is a true example of a multi-functional green corridor. It was developed by local regeneration organisation the EastSide Partnership and delivered by Belfast City Council. It was funded by the Big Lottery Fund, Belfast City Council, the Department for Communities and Department for Infrastructure. An £11 million flood alleviation scheme incorporated into the project has helped to reduce flooding to 1,700 properties, with the involvement of Northern Ireland's Rivers Agency.

Rather than standalone flood alleviation schemes and urban regeneration programmes, the two here have been combined. Community engagement was also a key part of the process, with local residents naming the new bridges installed via a public nomination process.

Case Study: Connecting Leicester (Mill Lane project)

An existing road was turned into a new linear park at the heart of Leicester De Montfort University

The Mill Lane project in Leicester City Centre involves transforming an existing road into a new linear park within De Montfort University and forms part of the city's 'Connecting Leicester' initiative. The initiative involves creating a thriving city centre that takes away the barriers to pedestrian movement and greatly improves the connections between key places within the city.

The linear park replaces an existing highway area of approximately 7,000m² and includes one of the largest areas of rain gardens in the UK. Key design principles included:

- Managing surface water with the creation of rain gardens.
- Crushing and recycling existing hardstanding on site for use in rain gardens as a drainage material.
- Successful delivery through close working relationship between the university and the city council, the design team and contractor.
- Managing cyclists by creating a meandering linked series of spaces.
- Creating a series of flexible spaces that can accommodate a large and varied annual events programme.

Priority Opportunity 6
Blue corridors: enhancing the Beck Valleys

Key Aim: Restoration of the Beck Valleys as multi-functional recreational, educational and biodiversity assets.

Area of focus: All Beck Valleys, with 'pilot' beck to be identified as a model for restoration.

Key delivery risks: Resolution of any fragmented land ownership along the Becks; anti-social behaviour and vandalism; conflict between recreational uses and sensitive habitats.

Mitigation: Partnership working from the outset between different agencies and bodies; encouraging meaningful community co-design and ownership; ecologist input into design and diversion of routes where appropriate.

Potential partners: Environment Agency; Tees Valley Wildlife Trust; Northumbrian Water; local community groups and volunteers; local schools.

Potential funding mechanisms: Environment Agency grants; DEFRA funding; contributions from nearby development.

Next steps: In-depth feasibility study for one identified Beck and 'visioning' exercise with local communities.

Delivery time scale

Quick win (next 5 years) — Medium term (5-10 years) — **Longer term (10+ years)**

Indicative cost

Low £ — Intermediate £ £ — **Substantial investment £ £ £**

The opportunity

As **Part 1** of this Strategy makes clear, the Beck Valleys form part of the 'spine' of Middlesbrough's GBI network, providing important green corridors through heavily urbanised areas, and providing many of the Borough's most important and sensitive areas of habitat. However, in recent years there has been a lack of investment and in some areas they have attracted anti-social behaviour. The renewed ambition laid out in the government's 25 Year Environment Plan (25YEP) calls for a more ambitious approach to corridors such as these.

As such, this Opportunity seeks to focus resources on restoring these as high quality 'green corridors' in order to provide multiple functions. While important initiatives have been taken forward along the becks - with valuable contributions by community groups - the interconnected nature of the GBI network requires a strategic approach to be taken that works on a larger scale. This may take the form of selecting one Beck Corridor as a 'pilot', which can serve as a model for similar schemes along the other becks.

While the details of restoration schemes would have to be individually tailored and informed by local expertise, the overall principle should be the restoration of natural processes wherever possible, and the following will be key considerations.

1. Biodiversity

The Beck Valleys act as important linear habitat areas, including for the protected water vole. While it is important to draw more people along the waterside pathways, it is equally important to balance the recreational function with biodiversity concerns, by enhancing areas of riparian habitat (in close consultation with the Wildlife Trust and others) and considering diverting visitors away from the most sensitive sites.

2. Flood risk

Part 1 of this Strategy also highlights the significant concerns over flood risk in Middlesbrough, and its likely exacerbation over the life of the Strategy as a result of climate change. This requires a re-thinking of the landscape and how water moves

▼ Middlesbrough's Ormesby Beck corridor

through it, to create a more resilient landscape.

River restoration contributes to flood risk management by supporting the natural capacity of rivers to retain water, reducing the likelihood of high water levels, and simultaneously improving the natural functions of the river.

3. Access and interpretation

The becks offer the opportunity for direct access to a rich natural environment for local residents on their doorsteps. There was also a strong feeling among local groups consulted for this Strategy that natural features such as the Beck Valleys have strong educational potential, in order to help local communities understand the role these features play in addressing key challenges such as biodiversity decline, increasing flood risk and climate change. This could be achieved by providing interpretation boards which help visitors understand the role of the becks in managing flood risk, and providing better understanding of the habitats they provide This interpretation of the environment will help overcome the challenge that, while an 'overgrown' beck can provide dividends for biodiversity, it can be challenging for the public to accept.

The approach in general responds to the goals set out in the 25YEP to safeguard our natural environment, be sensitive to its heritage, and increase action to improve the environment from all sectors.

4. Addressing anti-social behaviour

The most effective way of addressing anti-social behaviour is through a combination of greater community involvement and ownership, and creating a busy corridor of movement with assets that draw a wide range of people to the corridor and create natural surveillance.

There are innovative ways to achieve this. A project on the River Mersey in Greater Manchester recently saw a 'cycle-friendly' cafe in a shipping container along the river bank, creating a sense of community and encouraging use of the recreational corridor (see image).

▲ Example of viewing platform and waterside path at remodellled Claypits Park in Glasgow.

▲ New 'cycle cafe' in a shipping container drawing visitors along the banks of the River Mersey.

▲ Example of seating incorporating heritage/nature interpretation along Salford's restored Bridgewater Canal.

Priority Opportunity 7
Expanding the urban tree network

Key Aim: Expansion of woodland cover in order to meet local and national targets, and to provide multiple GBI benefits and combat climate change.

Area of focus: Borough-wide.

Key delivery risks: Poor management of newly planted trees failing to deliver long-term benefits.

Mitigation: Focus on the 'right tree in the right place' and provision of long-term management arrangements in place.

Potential partners: Woodland Trust; Forestry Commission; housing association/private developers; local schools; community groups; the Land Trust; large land owning institutions, including utility companies; the Orchard Project; Middlesbrough Environment City (MEC).

Potential funding mechanisms: National government tree planting funding; Woodland Trust grants/resources; agri-environment schemes (ELMS).

Next steps: Analysis of constraints to identify suitable areas for woodland planting; consider launching initiative e.g.. 'a tree for every resident/pupil'.

Delivery time scale

Quick win (next 5 years) — Medium term (5-10 years) — **Longer term (10+ years)**

Indicative cost

Low £ — **Intermediate £ £** — Substantial investment £ £ £

The opportunity

As Part 1 of this Strategy makes clear, the UK's 'net zero' targets will require a significant increase in tree planting across the country, with the Committee for Climate Change (CCC) recommending an increase in forestry cover from 13% to at least 17% by 2050. However, currently tree cover across Middlesbrough stands at 11.8%, and will require significant expansion to meet targets.

1. Urban tree planting

Due to the urban character of Middlesbrough and a general lack of space for large-scale tree planting, it will be essential that tree planting initiatives make best use of the space available through better use of existing green spaces and through extensive street tree planting.

Tree planting has numerous benefits within densely populated urban environments - bringing both shelter and beauty. Functions include: improving local air quality; reducing heat island effects through providing shade and cooling mechanisms; increasing wildlife habitat and movement corridors; managing surface water drainage; providing visual amenity and climate change mitigation and adaptation.

Middlesbrough Council have recently been active in tree planting throughout the town. The Urban Tree Challenge (UTC) Fund provided for the planting of 1,800 large trees across the Borough. Charity Groundwork and Thirteen Housing Group have been key partners for the Council in delivering planting projects. However there is potential to increase tree planting further in street and park settings.

Areas to focus urban planting may include

- Alongside major roads to combat air quality;
- On verges where appropriate (in combination with **Priority Opportunity 9**);
- Along beck corridors (see **Priority Opportunity 6**) and;
- Key active travel routes (See P**riority Opportunity 5**);
- Within school grounds (see **Priority Opportunity 11**);

and

- As part of 'low-traffic neighbourhoods' (**see Priority Opportunity 12**).

2. Expansion of natural woodland areas

Within less urban landscapes such as the southern fringes of Middlesbrough, woodlands are also vitally important in restoring fragmented habitat networks, increasing flood resilience and helping to restore water quality. Forestry can also create new jobs and sustainable timber.

Along the Beck Valleys, there are further opportunities to positively manage and expand wooded areas as part of the

▼ A map from Part One of the Strategy highlighting existing woodland cover in Middlesbrough.
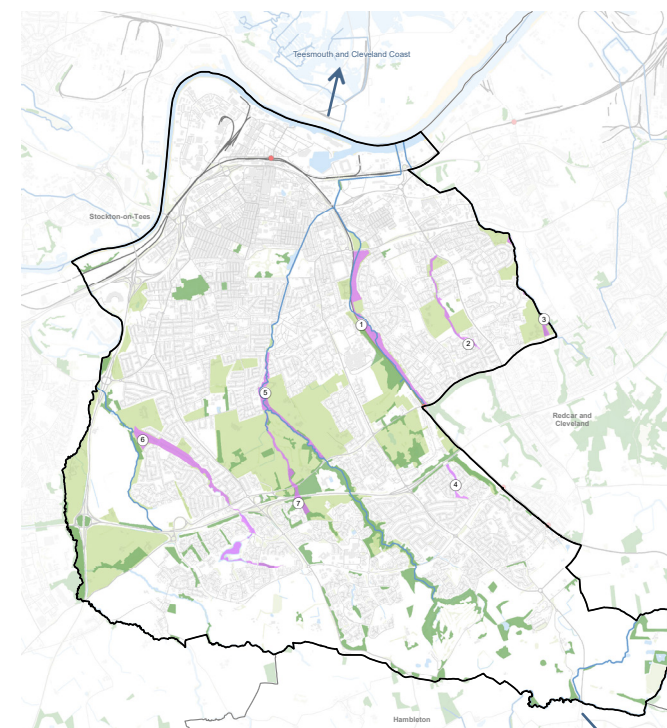
mosaic of habitats, which also include wood pasture, meadow and species-rich grasslands.

There should be a clear focus on the buffering and expansion of:

- The edges of ancient and semi-natural woodland at Stainsby Wood (mapped as Network Enhancement Zone 2 in Part 1 of this Strategy);
- The mixed woodland along Marton West Beck at Fairy Dell;
- The steep valley sides of Newham Beck and in Thornton .

This would strengthen these areas and restore links between areas that have become separated. The quality of woodland in Middlesbrough is known to be varied, which should be reflected in site-specific recommendations for positive management and control of access to limit disturbance. The siting of new trees is an important consideration and must ensure that increased tree cover does not get prioritised to the detriment of other valued habitats.

There is further opportunity to prioritise riparian woodland creation to deliver additional benefits such as flood alleviation and restoration of water ways along the beck corridors. The Environment Agency 'Working with Natural Processes project data' should be used to help identify 'floodplain re-connectivity potential' and 'floodplain woodland potential'.

Existing wooded areas would benefit from detailed review to prescribe positive woodland management, such as creation of glades, selective thinning, further expanding species diversity (to protect against new pests and diseases such as ash die-back) or delineation of recreational access (to maintain understory structure and groundcover).

Within farmed landscapes, the most promising opportunities for woodland expansion will likely come from agri-environment schemes in response to a changing agricultural policy context at the national level. This will take the form of Environmental Land Management Schemes (ELMS).

Case Study: Leeds Urban Orchard project

Middlesbrough's Nature's World site also provides fruit trees which are looked after by the community, a model which could be replicated elsewhere, as part of a more ambitious strategy such as in Leeds. Image source: Friends of Nature's World

Orchards are one way of both expanding tree cover and providing multiple functions within the GBI network - in particular, they can help contribute to the 'edible townscape' referenced under **Priority Opportunity 8**.

The Leeds Urban Orchard is part of national charity Orchard Project, which aims to "bring orchards into the heart of urban communities". Its goal is to ensure that every household in the UK's towns and cities be within walking distance of a productive, well cared-for, community-run orchard. Their model involves providing expert advice and training community groups in orchard management skills for long-term sustainability and they only plant orchards if there is a genuine community desire to have one.

In Leeds, there are now orchards in 50 locations, and the project plans to expand further. In doing so, they hope to strengthen communities, improve wellbeing and build resilience. The harvesting period provides an opportunity for community events and for volunteers and local children to get involved with the process in a way that provides opportunities for community bonding and awareness-raising about local food systems.

Middlesbrough Green and Blue Infrastructure Strategy: Part 2

Middlesbrough Council

▲ At Middlesbrough's Avenue of Trees, mature trees provide the landscape setting for one of the Borough's foremost heritage assets.
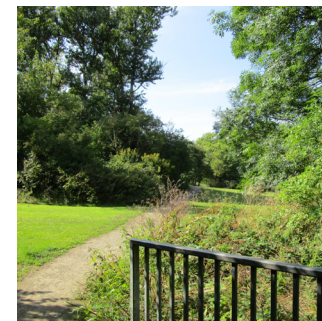
▲ Much of Middlesbrough's existing tree cover is concentrated on the Beck Valleys, including Bluebell Beck.

▲ Mature trees provide shade and visual interest on one of Middlesbrough's existing cycle routes.

▲ The more rural southern fringe of Middlesbrough (here, around Nunthorpe Hall) is home to farmed landscapes with potential for expansion of existing woodland, and new planting through agri-environment schemes.

Priority Opportunity 8
Edible Townscapes

Key Aim: Identifying and transforming under-used areas of land for urban growing and requiring integration of food growing space into new development.

Area of focus: Borough-wide.

Key delivery risks: Availability of suitable land; buy-in from developers.

Mitigation: Working with key land owning partners and making expectations clear for proposed new development.

Potential partners: Middlesbrough Environment City; Middlesbrough Food Partnership; Incredible Edible; Barefoot Kitchen CIC; Green Spaces team; developers and housing associations.

Potential funding mechanisms: Developer contributions; National Lottery Climate Action Fund; public health-related grant opportunities.

Next steps: Audit of Council-owned land to identify under-used land with potential for growing; cooperation with partners on food map; consider dedicated Planning Advice Note on food growing.

Delivery time scale

Quick win (next 5 years) — **Medium term (5-10 years)** — Longer term (10+ years)

Indicative cost

Low £ — **Intermediate £ £** — Substantial investment £ £ £

The opportunity

Opportunities for food growing are an increasingly important component of the GBI network, particularly in a Borough like Middlesbrough facing severe health and wellbeing challenges, (as highlighted in Part 1 of this Strategy). In the Borough there are 900 allotment plots available across 11 sites, which does not meet the standard set for the Borough. However, in order to achieve diversity of participation, provision for food growing should go beyond traditional allotments.

The Covid-19 crisis in 2020 drew further attention to the value of local food - a YouGov poll in 2020 suggested that 42% of people said the crisis had made them value food more,[1] part of a broader sense that the pandemic may bring about significant changes in our relationship with food, family and the environment.

A renewed emphasis on food can be central to the 'culture of sustainability' Middlesbrough is seeking to develop, particularly when targeted at school-age children.

From the Council point of view, planning for a sustainable food system meets many strategic objectives. As highlighted in Part 1 of this Strategy renewed emphasis on food can be central to the 'culture of sustainability' Middlesbrough is seeking to develop, particularly when targeted at school-age children. Indeed, the Borough's *One Planet Living* framework includes support for an Urban Farming programme and the promotion of land use for growing,

Middlesbrough benefits from a legacy of food growing projects on which to build, and beneifts from the presence of Middlesbrough Food Partnership as a key actor within the town on food-related issues. In 2006-2007 the Middlesbrough Urban Farming project attracted wide attention for transforming parts of the urban landscape into a 'living lab for how urban agriculture'. However it is vital that future strategies go beyond isolated initiatives and are backed up

by sustainable partnerships between various actors, including enabling the work of community groups (see **Catalyst 1**). Local organisations provide a platform to enable more food growing opportunities. A partnership announced between Middlesbrough Council and a local community group in 2020 to develop an Urban Hub & Social Farm as part of future plans for Middlehaven is an example of how food growing can be aligned with a renewed regeneration agenda for Middlehaven (see **Priority Opportunity 2**).

Consultation carried out for this Strategy also revealed strong support for more growing space in Middlesbrough, in spaces of

▼ Middlesbrough Environment City (MEC) already works with community groups on urban growing projects in Middlesbrough.

▼ Vertical growing in tight spaces. Source: Middlesbrough Environment City (MEC)

1   RSA (April 2020), 'Brits see cleaner air, stronger social bonds and changing food habits amid lockdown', [Online] Available at: https://www.thersa.org/about-us/media/2019/brits-see-cleaner-air-stronger-social-bonds-and-changing-food-habits-amid-lockdown

all scales - with the view that growing more food within public spaces can make urban agriculture more 'visible' and improve education strategies. This in turn can help to achieve the shift in mindset and understanding of food systems required to achieve the goals set out in the UK's 25 Year Environment Plan.

Scaling up urban growing: finding space to grow

Non-profit group *Sustain* sets out a number of ways in which planning policies can support urban food growing, by:

- Providing space for growing food within new developments.
- Including edible plants and trees in planting schemes in new developments;
- Encouraging local groups to start a community food growing space;
- Protecting open space under threat from a proposed development;
- Using land for food growing on a temporary basis e.g. pending its redevelopment.[2]

Sustain highlights that both local authorities and Registered Provides of housing (RPs) have an important role to play here because of the large amounts of land - including much open space - that they own and manage. Land surrounding local schools is also a valuable opportunity to find growing space (dealt with under **Priority Opportunity 11**). However private developers also have a role to play (see **Case Study 2**).

Growing space can come in all shapes and sizes - from micro-scale 'pocket allotments' in 'forgotten' spaces, to larger community spaces. Given the surge in demand for growing spaces evident over 2020, this also provides an opportunity for developers to improve the social and environmental attractiveness of development, serving as a major marketing feature.

Further guidance

Sustain has an online toolkit available for both community groups and local authorities to fully understand the role of the planning system in creating more sustainable food systems, and how to play a proactive role in using policies to guide the assessment of planning applications.

2   Sustain (n.d), Transform food planning in your area' [Online] Available at: https://www.sustainweb.org/planning/

Case Study 1: Platt Fields Market Garden, Manchester

Entrance to the community garden, which makes use of a disused bowling green.

This Platt Fields Community Garden has been up and running since 2017 in a suburb of South Manchester and is managed by social enterprise Manchester Urban Diggers (MUD). It makes use of a disused bowling green owned by Manchester Council within Platt Fields Park and is a successful example of community-supported agriculture (CSA). Goals include improving soil quality and biodiversity across the city region, and community health benefits through social and therapeutic horticulture.

The garden runs a vegetable box scheme, employs hundred of volunteers and welcomes visitors to the site on Saturday morning when fresh produce is on sale. As such, it acts as important community hub and market with strong 'placemaking' value (see **Priority Opportunity 2** in this Strategy).

MUD also works in collaboration with Greater Manchester NHS Foundation Trust to provide mini kitchen garden kits to those in isolation across the city suffering with poor mental health. MUD hope to replicate the experience at other sites around the city.

Case Study 2: 'Edible landscaping' at One Brighton

Creative integration of growing terraces into higher density housing.
Source: Fielden Clegg Bradley Architects.

One Brighton is a 172-apartment mixed-use development completed in 2010, which set out to be one of the most sustainable urban communities in Europe and is the first One Planet community to reach completion. Given there was no room available at ground level for growing space, rooftop mini-allotments and balconies with integrated planters suitable for growing food were provided as 'edible landscaping'. Each mini-allotment has its own tool box built into it and the organic waste from gardening is composted in the building's macerator, which also processes kitchen waste from the apartments - the resulting compost is then used on the allotments.

The 28 mini-allotments are rented out to residents who manage their own individual plots, but the space brings residents together around a common interest and helps build a sense of community.

This was backed up by Brighton and Hove Planning Advice Note 06 (Food Growing and Development) from 2011, specifying the need to "recognise, safeguard and encourage the role of allotments & garden plots within developments", and sets a goal of at least 0.23ha of allotment provision to be provided per 1,000 residents, with a maximum of 15 minutes walking time. The aim is to weave food growing into the fabric of development sites and the urban environment.

Priority Opportunity 9
Rethinking urban grassland

Delivery time scale

Quick win (next 5 years) — Medium term (5-10 years) — Longer term (10+ years)

Indicative cost

Low £ — Intermediate £ £ — Substantial investment £ £ £

The opportunity

It is estimated that 97% of the UK's meadows have been destroyed since the 1930s. The positive use of road verges and parks can play a vital role in replicating these important habitats. Concerns over safety and access, budget constraints and a desire for 'neatness' has minimised the habitat diversity within road verges and parks.

Some of the most visible green spaces within Middlesbrough are the road verges and shared green spaces, which should be made a priority in terms of celebrating and promoting the town's cultural heritage, and setting a clear signal about the town's future green agenda. These areas have the potential to act as vital 'biodiversity corridors' for wildlife movement and seed dispersal once restored as grassland habitat or wildflower meadow. Restoring their wildlife function responds to the decline in biodiversity and habitat fragmentation identified within Part 1 of this Strategy and would also help to reduce surface water runoff – aiding in the creation of more resilient landscapes. There is also an opportunity to draw on local natural heritage by investigating using seeds from local Ancient (species-rich) Grasslands.

Given the highly urbanised nature of Middlesbrough, it will be important to identify parts of the townscape where pollinator habitats and corridors can be woven into the urban realm to link between existing sites - such as the herb-rich, calcareous grassland at Teessaurus Park - to support wider ecosystems. These corridors should, where possible, provide links to the cross-boundary Buglife "B-lines".

Positive management has been undertaken in recent years to improve the appearance of Middlesbrough's green spaces (such as planting in Albert Park, wilder areas in Linthorpe Cemetery and along Stanton Way). Partnership working between the Council and Thirteen housing group is also set to deliver 35,000m^2 of wildflower. However there are still extensive areas of closely mown grassland within parkland and along existing road verges. An increase in meadow and wildflower coverage is advised in particular along transport and river/beck corridors (see **Priority Opportunity 6**), through existing and newly created parks, through urban greening initiatives (see **Priority Opportunities, 2. 4 and 11**) and within agricultural areas to the south of the Borough.

However, communication and understanding (both across the Council and the public) of the benefits that re-wilding can bring, and training of council officers, will be vital to the success of this project.

In 2019, on the back of the government's National Pollinator Strategy, the organisation Plantlife produced a set of best

▼ Existing close-mown amenity grassland at Hemlington Lake provides a clear opportunity for wildflower introduction.

▼ Potential for 'rewilding' of roadside verge along main road in Middlesbrough

practice guidelines for managing grassland road verges, based on the overall principle of 'cut less, cut later' and can serve as useful guidelines.[1]

Delivering pollinator corridors in Middlesbrough

Wildflower ground preparation will require a coordinated and thorough action plan. Wildflower meadows require nutrient poor soil to thrive and so the existing topsoil and sward will need to be stripped from the verge. Opportunities for the collection and use of cuttings will need to be considered further but elsewhere this has been treated as a resource to fuel anaerobic digesters - an opportunity with multiple benefits which can be explored in Middlesbrough.

Maintenance costs will likely be lower than existing, however seed would need to be purchased or seeds/green hay sourced from local species-rich grasslands (where possible). The organisation Buglife UK estimates that the wildflower seed costs approximately £100 per kilogram. The development of an annual maintenance programme would be required to allow desirable British native wildflower species to flourish and reduce the vigour of more rampant species.

Careful negotiations are required with the Highways Authority to ensure that safety and access standards are maintained by leaving 'visibility splays' at forward bends to roundabouts and at junctions/ensuring that vehicle sight lines are maintained.

While the 'rewilding' of grassland is gaining increasing acceptance on the back of successful initiatives by other local authorities (see Case Study), there will be a need to carefully communicate changes to the public, in order to avoid perceptions that areas are not being neglected. It is also likely that training will be required for appropriate Council officers on the new management regimes, and valuable 'lessons learned' can be sought from other local authorities which have implemented their own programmes.

Finally, delivery of areas of 'urban meadow' should be sought through new development - both from housing associations and private developers. See 'GBI checklist' for developers in **Chapter 5**.

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1   Plantlife (2019), 'Managing grassland road verges: A best practice guide' .[Online] at: https://www.plantlife.org.uk/uk/our-work/publications/road-verge-management-guide

▲ Example of wildflower integrated into regeneration of housing association property by Peabody (London)

Example of small wildflower area integrated into the transport ▲ network, along with seating and planters.

▲ Croydon Council signage explaining wildflower area

Case Study: Hartlepool wildflower meadows

In 2014 Hartlepool Borough Council launched its first wildflower verge along the A689 running in and out of the town. Since then, the scheme has been extended due to its popularity, when the seasonally changing colour brought by the flowers became a "talking point" in the town.

The scheme was designed to make the best use of limited Council resources as it can deliver savings on maintenance costs by reducing the expense of intensive mowing. The goals were four-fold:

- to attempt to reduce maintenance costs;
- to deliver environmental improvements;
- to create a visitor attraction; and
- to create a "feel good" factor.

The wildflowers also provide an attractive and successful setting for some of Hartlepool's waterfront heritage assets along Maritime Avenue.

The local authority of Rotherham has also gained a name for its experiments with 'rewilding' of mown areas - it also succeeded in engaging local businesses following the success of their new regimes, with a local shopping centre providing funding to re-seed wildflower areas.

Priority Opportunity 10
Network of multifunctional SuDS

Key Aim: Setting higher benchmarks for SuDS to combat flood risk while serving as multi-functional GBI assets.

Area of focus: Borough-wide, but targeted at areas mapped as higher flood risk (see Part 1).

Key delivery risks: Health and safety concerns; poor public perception of SuDS as a potential deterrent to developers; conflict between drainage and biodiversity.

Mitigation: Creating positive public perceptions of SuDS by improving aesthetics, communicating successfully around perceived health and safety risks, and educational strategies; design features such as reduced slopes/use of marginal vegetation as natural barriers.

Potential partners: Private developers and housing associations; local schools; Environment Agency; Wildlife Trust.

Potential funding mechanisms: Environment Agency/ government grants; developer contributions; grant funding for school-based projects.

Next steps: Inclusion of robust SuDS policy within Local Plan requiring multiple functions based on best practice.

Delivery time scale

Quick win (next 5 years)	Medium term (5-10 years)	Longer term (10+ years)

Indicative cost

Low	Intermediate	Substantial investment
£	£ £	£ £ £

The opportunity

Historically in the UK we have treated rainwater as waste, and engineered our towns and cities to quickly channel water into traditional drains. However, particularly in areas of high flood risk such as Middlesbrough, and as a result of more erratic weather patterns, those drains have become overloaded. A GBI-led approach to SuDS calls for planners to embrace water management as an opportunity rather than a challenge.

Flood risk was found to be a considerable concern among local stakeholders in Middlesbrough and is likely to be exacerbated by the impacts of the climate crisis. However, there is strong potential in Middlesbrough for dealing simultaneously with multiple environmental challenges through SuDS. As in the rest of the UK, much wetland habitat in the Borough and wider Tees Corridor region has been lost, and multi-functional SuDS offer an opportunity to create further wetland habitat to help to address biodiversity decline.

However the stakeholder consultation carried out for this Strategy highlighted disappointment in the varying quality of SuDS features delivered to date in Middlesbrough, which were seen as failing to take advantage of opportunities for habitat creation facilities and broader amenity value.

"They are too smoothly excavated and finished, which prevent important micro-niches required to maximise biodiversity gains.... we need to look at the use of water plants of local genetic origin and an array of species appropriate to the area"

- Stakeholder comment.

One of the primary barriers to the delivery of high quality SuDS is the potential for poor public perceptions, frequently due to a lack of understanding of them as a feature. Research by the *Susdrain* partnership outlines - based on public perception surveys - the following recommendations for SuDS features:

- ponds should be made as 'natural' in appearance as possible;

- Marginal vegetation is important and should include natives species;
- Shore slopes should be gentle;
- Nature barriers should be introduced to help manage perceived safety risks;
- Deep water warning signs should be used.
- Benches should be introduced, and picnic tables, walkways and play areas considered;
- Wildlife, including fish, should be encouraged to colonise the system and its marginal areas.[1]

Delivering SuDS via regeneration schemes

Middlesbrough offers a range of opportunities to integrate SuDS features at all scales into the urban landscape. However given the challenges that can arise when retrospectively fitting SuDS features, the opportunity to 'design in' SuDS at an early stage of regeneration schemes should be exploited (see Case Study 1). This is particularly the case within the Middlehaven regeneration zone, which is located in an area of high flood risk (see **Priority Opportunity 2**).

However, in other areas SuDS may be appropriate to retrofit, if more complicated, such as in the town centre (see **Priority Opportunity 4**) and as part of enhanced Beck Valley green corridors (see **Priority Opportunity 6**).

The provision of interpretation boards in all cases will be key in encouraging greater public perception and to boost public awareness of the multi-functional role of sustainable drainage features.

Delivering SuDS via new development

Where new developments are proposed, the ability to effectively drain the site is very important and should be a concern for both the planner and the developer. From the developer's perspective, effective drainage is essential in order to deliver maximum value from investment as

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1   Susdrain (n.d), 'An Assessment of the Social Impacts of SUDS in the UK [Online] Available at: https://www.susdrain.org/files/resources/evidence/HRW_social_impact_summary.pdf

the inability to gain flood insurance on normal terms can significantly affect property values. Further, SuDS features can be a cheaper form of provision than hard engineering solutions. It is vital that early conversations with developers set clear expectations for the integration of SuDS features, particularly in areas at high flood risk, and that all actors understand the need to provide multiple functions. Conversations at this early stage, rather than as a later design detail, are important because the layout of a site can have a substantial impact on the ability to deliver SuDS cost-effectively and manage extreme events in the developed area.

Research by organisation *Susdrain* notes that, while poor public perception of SuDS may be a deterrent for developers providing them at sites, positive attitudes toward SuDS can attract house buyers and raise property values. This is one reason why the educational value of SuDS landscapes is so important - promoting interaction between communities and their local environment and aligning with Middlesbrough's *One Planet Living* principles. Susdrain's research found a general lack of public awareness of the role of SuDS, and recommends the following features in order to drive educational benefits:

- Pre-purchase information on local drainage and SuDS proposals should be provided to householders.
- Educational campaigns should be set up for local community groups.
- Interpretation boards should be introduced around SuDS.[2]

A robust SuDS policy as part of the Local Plan will be crucial in setting clear expectations of how they should be integrated into new development.

2   Susdrain (n.d), 'An Assessment of the Social Impacts of SUDS in the UK [Online] Available at: https://www.susdrain.org/files/resources/evidence/HRW_social_impact_summary.pdf

Case Study 1: 'Grey to Green' regeneration (Sheffield)

Image source: Sheffield City Region.

Sheffield, like Middlesbrough, lies in an area of high flood risk, which is anticipated to become more severe. 'Grey to Green' is a key strategic component in the regeneration of the city centre, and in linking together various parts of the city while providing a range of GBI functions. As such, it provides important lessons in particular for the regeneration of Middlesbrough's Middlehaven area (see **Priority Opportunity 2**).

The public realm is designed to function as a SuDS feature, a gathering space, a sculpture and an active travel corridor - as well as providing a distinctive 'sense of place' to attract both residents and businesses. What makes this approach distinctive is that the SuDS was a primary organising factor in the regeneration rather than an 'add on' and that the scheme celebrates the function of water.

SuDS principles were used to manage surface water, with it being captured, treated at source, controlled and conveyed on or near the surface, allowing the water to form part of the landscape. Runoff is collected via flush kerbs into a series of swales, which are planted with diverse planting, providing seasonal interest as well as opportunities for wildlife.

Much of the design was based on consultation responses and concerns of local business and residents regarding the poor quality of environment and lack of social space. Close working with Highways helped to address fears over the design approach. It was funded by the Sheffield City Region Investment Fund.

Case Study 2: Grey Towers Village (Middlesbrough)

The Grey Towers housing development in Nunthorpe is focused around a central wetland with reed beds instead of a conventional 'village green'.

The Grey Towers housing development in Nunthorpe, built by David Wilson Homes, provides a reference point for how multi-functional SuDS can sit at the heart of new development within Middlesbrough. Aside from flood resilience, the SuDS pond also incorporates seating and provides an interpretation board as a guide to local tree species used within the development.

The scheme serves as an example of the multiple functions which SuDS can provide when expectations are made clear, and these expectations should apply across the Borough area. Developers need to consider site drainage early in the development process, and certainly no later than the stage of land acquisition, since drainage can affect land value. Designers should consult responsible bodies at an early stage before submission of the planning application, which greatly assists planners in reaching their decisions.

Priority Opportunity 11
Low-traffic neighbourhoods

Key Aim: Reclaiming and 'greening' the streetscape in urban neighbourhoods using modal filters.

Area of focus: Pilot in Gresham, followed by roll-out to other neighbourhoods and promoted in new development schemes.

Key delivery risks: Community opposition to low-traffic neighbourhoods can pose obstacles.

Mitigation: Communication will be central to success, - plans should be made in close collaboration with local communities / temporary pilot projects can also be a valuable tool to gain acceptance.

Potential partners: Housing associations; private housing developers; grant makers.

Potential funding mechanisms: Through new development; active travel grants from central government.

Next steps: Prioritisation of sites for pilot and engagement with community members.

Delivery time scale

Quick win (next 5 years)	Medium term (5-10 years)	Longer term (10+ years)

Indicative cost

Low £	Intermediate £ £	Substantial investment £ £ £

The opportunity

Over the course of the 20th century, our streets have been transformed from multi-functional spaces where neighbours can interact, children can play and multiple users can safely use, into single-use 'corridors' designed primarily around making space for the private car.

Recent street design innovations - known by terms such as low-traffic neighbourhoods (LTNs), 'filtered neighbourhoods' or 'play streets' - are an attempt to reclaim the residential streetscape for a range of community users. This also provides a valuable opportunity for integrating green infrastructure elements to improve the public realm, and to provide a broad range of GBI 'functions'. Ultimately the goal is not to eliminate cars but to treat them as 'guests' in the street.

This is often achieved by what are known are 'modal filters' - measures which allow the passage of some modes of transport but not others, commonly used to allow walking, cycling and perhaps emergency vehicles to pass through, but stopping other types of motor traffic. As such, cars are not blocked from entering the street but are unable to

ROAD OPEN TO

An example of how signage can create positive messaging around 'play streets'

How an existing modal filter in Gresham could be enhanced

use it as a 'rat run'. It is common for planters to be used as temporary filters (see image). Once made permanent, these filters can then become good homes for GBI features such as trees, rain gardens and seating, which can be integrated into the new urban form.

These filtered schemes are given explicit promotion as part of the UK government's 2020 *Gear Change* Strategy,[1] which encourages the 'humble bollard' as 'perhaps the single most important tool to promote cycling', with the benefit of being both relatively inexpensive and effective.

Piloting LTNs in Gresham

Middlesbrough's Gresham neighbourhood has been identified as a location with the potential to pilot this design approach - given ongoing regeneration schemes, relatively low car ownership, and higher than average levels of socio-economic deprivation. Recent development proposals for the area have placed emphasis on creating clear movement corridors, and provide a strong foundation on which to build. However, designation of these LTNs should be made only following a street analysis process, including an assessment of traffic patterns, car ownership and other factors, and only following engagement with the local community.

Key considerations

There are valuable opportunities for co-design with local communities when piloting LTNs, offering the community the ability to decide which GBI features are most appropriate and ensuring greater community ownership over the new assets. In Gresham, this could include the involvement of existing groups such as Streets Ahead for Information.

Further, by using signage indicating that the street is 'open' to walkers and cyclists (as an alternative to traditional 'road closed' signs) can be a powerful tool to re-frame the debate.

Planters can be an inexpensive way to create temporary filters for pilot schemes.

Once more permanent, areas of urban meadow can be integrated into modal filters.

Modal filters can be appropriate sites for street tree planting (see **Priority Opportunity 7**)

1   DfT (2020), 'Gear Change': a bold vision for cycling and walking.

Priority Opportunity 12
Green schools

Key Aim: Making use of school grounds for SuDS, urban growing, tree planting and urban meadows, enabling the GBI network to be used as an educational resource.

Area of focus: School grounds across the Borough.

Key delivery risks: Health and Safety concerns within schools.

Mitigation: Thoughtful co-design with schools, based on best practice and lessons learned elsewhere.

Potential partners: Local schools and education authorities; Environment Agency; Wildlife Trust; Middlesbrough Environment City; Trees for Cities.

Potential funding mechanisms: Woodland Trust grants; charitable foundation grants e.g. Greggs Foundation, Big Lottery Fund

Next steps: Engagement with local schools to identify series of 'pilot schools', targeting those in particular in areas of high health deprivation (see **Part 1** of this Strategy)..

Delivery time scale

Quick win (next 5 years)	Medium term (5-10 years)	Longer term (10+ years)

Indicative cost

Low £	Intermediate £ £	Substantial investment £ £ £

The opportunity

It was highlighted during consultation for this Strategy that, in an urbanised Borough such as Middlesbrough, school grounds represent a valuable opportunity to integrate GBI features.

However not only do school grounds present areas of land which provide suitable physical space for SuDs, urban growing, tree planting or wildflowers - but they also offer the opportunity to engage young people in better understanding how the GBI network around them functions, and to help to build a closer connection with the natural environment from an early age. Author Nicholas Louv has identified the phenomena of 'nature deficit disorder' as a key feature characterising Western societies. While not a recognised medical condition, it refers to the increasing lack of engagement with nature in the UK. This tends to begin in childhood (which means that schools play a vital role in reversing this) and as a result, as adults we lack an understanding of the importance of nature to human society, which hinders our ability to build a resilient GBI network.

A report by the National Trust finds that today, fewer than a quarter of children regularly use their local 'patch of nature', compared to over half of adults when they were children. This has a 'knock-on effect' on societal problems such as the 'modern epidemic' of obesity. This puts even greater pressure on the role of schools and the 'outdoor classroom'.

Middlesbrough's *One Planet Living* Action Plan places great emphasis on using educational opportunities to 'create a new culture of sustainability' in order to tackle threats such as climate change and the biodiversity crisis. Education is central in creating a shift in attitudes that help us to combat climate change. Research suggests that 'experiential' education, including that in 'garden classrooms' or other green spaces, can make an important contribution to climate literacy, foster motivation toward the environment and help to improve chances of combating climate change among the next generations.

Projects like the Middlesbrough's Borderlands community-centric arts project included the environment as a key theme with this in mind. However, an integrated approach to building the GBI Network provides the opportunity to make such temporary experiments more permanent by bringing the 'outdoor classroom' directly into school grounds and combating challenges such as localised flood risk simultaneously.

There are a number of features which are likely to be appropriate for school grounds, however the suitability of each school should be considered individually. Possibilities to explore include:

Urban growing opportunities (see **Priority Opportunity 8**)

Sustainable urban drainage features (see **Priority Opportunity 8**)

Areas of urban meadow and wildflower (see **Priority Opportunity 9**)

Tree planting in school grounds (see Priority **Opportunity 11**)

Delivering outdoor classrooms

Achieving these ambitions will require a partnership approach that sees educational authorities and local schools becoming key partners in the delivery and promotion of Middlesbrough's GBI network.

The 'Food Growing Schools: London Partnership', for example, brings together partners including a range of charities and trusts including Garden Organic (lead organisation), Capital Growth, the Soil Association, the Royal Horticultural Association, School Food Matters and Trees for Cities.

The initiative might begin small with a pilot programme, but in the longer term would become more resilient by building a network of 'green schools' working closely with teachers and sharing experiences locally to help plan lessons around the new resources. As projects grow, school gardens can also be used to bring in parents, carers and other members of the community to help maintain the resource, creating a true community asset.

Case study 1: Edible Playgrounds (UK-wide)

A newly created Edible Playground in Birmingham. Source: Trees for Cities.

Edible Playgrounds is a programme from UK Charity Trees for Cities. They transform school grounds into outdoor teaching gardens that inspire hands-on learning and get children excited about growing and eating healthy food. As a result, they seek to improve health and wellbeing, open up access to nature, and provide a fun outdoor learning environment that supports cross-curriculum teaching. There is some evidence that these experiences also lead to more sustainable behaviours in the long term.

Since it was launched, the charity has worked across 12 towns and cities across the UK and the most common subjects taught in the outdoor classrooms are: maths; science; art; and English. In particular, those participating found that the Edible Playgrounds helped working with children with special educational needs or challenging behaviour. It also found that 50% of schools embedded the use of the Edible Playground into their curriculum.

The programme also provides an online set of food growing resources for schools, including curriculum guides and lesson plans to support teaching through food growing.

Case study 2: SuDs for schools (London)

A SuDS installation and outdoor classroom at a school in London. Source: WWT

The 'SuDS for Schools' program run by the Wildfowl & Wetlands Trust (WWT) seeks to find a sustainable solution that uses nature to prevent overloaded drains, flooded homes and polluted rivers.

The program built SuDS in ten schools in a North London catchment found to be at risk from surface water flooding. The installations mimic the functions of natural wetlands to reduce localised flooding, creating green and blue space and improving water quality in streams. However, they also became places where students played and learned outdoors. As a result, the schools became hubs for reconnecting the local people with their stream - the Pymmes Brook.

Co-design, delivery and management with local stakeholders was essential in creating a sustainable legacy and secure the future of the SuDS. Not only did the project reduce peak flows in the Brook and reduce pollution, but also increased biodiversity in school grounds.

A similar programme would be appropriate that focusses on reconnecting young people with Middlesbrough's Becks network. The WWT has a guide to Sustainable Drainage Systems available online that could aid initial planning stages of projects.

Chapter 4
Catalysts for Action

A successful Green and Blue Infrastructure network goes beyond planning 'hard' measures such as new landscaping or planting. Through consultation undertaken for this study, it was clear that success will not be possible without the implementation of soft measures required to aid in the delivery of the ambitious Priority Opportunities identified in Chapter 3.

1.1 What came through very strongly in consultation carried out for this Strategy was that success will not be possible without the 'softer' measures that provide the glue that enables the ambitious Priority Opportunities laid out in **Chapter 3** to be successfully delivered.

1.2 There are two areas in particular which are highlighted in this Strategy which require particular attention, as further detailed below. Both require a partnership-based approach to achieving change within the GBI network:

- Green Prescribing
- Enabling Community Action.

Catalyst #1

Green Prescribing

1.3   Green space has been shown to have significant benefits to both physical and mental health, as well as societal benefits. However, once a GBI asset has been delivered, there is no guarantee that it will be used by a wide range of community members. As detailed in Part 1 of this Strategy, true accessibility involves a complex set of interrelated factors.

1.4   'Green prescribing' is a core aspect of 'social prescribing' (the referral of patients to local non-clinical services available in the community), but one which makes use of nature-based interventions for a variety of long-term conditions. As a part of what has been described as the 'Natural Health Service', these practices can play an important role in linking NHS patients with sources of support within the wider community through the voluntary and community sector. These non-medical interventions can operate alongside existing treatments to improve health and wellbeing, as highlighted by Natural England.

> *"The Strategy should link and exploit employment, health and wellbeing benefits of positive GBI."*
> *(*Stakeholder comment)

1.5   The nature, health and wellbeing sector provides an increasing number of nature-based interventions, comprising

- Nature-based health promotion services – providing informal opportunities for people to engage with nature in their community (for example through community gardening projects); and

- Green care services for individuals using contexts such as conservation or horticultural therapy projects and care farms. These interventions are also often a cost-effective use of NHS resources and lead to a

more effective use of GP time leading to a cost saving benefit for the NHS.

1.6   Middlesbrough Council have already experimented with a programme of 'exercise referral' by local GPs, and the *One Planet Living* framework looks to expand these. Middlesbrough's Voluntary and Community Sector (MVDA) have also trialled approaches.

1.7   However, there has been a renewed emphasis on social prescribing nationally, regional and locally since the announcement from NHS England in its long-term plan to provide 100% funding for a Social Prescriber in every Primary Care Network across the country, with a target of at least 900.000 people referred to social prescribing by 2023/24.[1] As a result, these link workers are becoming an integral part of the multi-disciplinary teams in primary care networks (PCNs).

1.8   This approach underlines the crucial point that delivering a resilient and successful GBI Network does not lie only in the hands of one actor, but requires a collaborative 'place-based' approach that builds bridges with those actors not traditionally involved in the planning and maintenance of green space - in this case, the public health sector. Research from the *Centre for Sustainable Healthcare* has found that, while GPs understand the benefits of exercise, there are barriers to prescribing it. As a result, it is vital that there is engagement with this GBI Strategy from public health colleagues and that new partnerships are formed. This might initially involve a pilot programme and will benefit from the close involvement of local community groups and charities (see Case Study).

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1   NHS England (2019), 'The NHS Long Term Plan'.

Case study: MyPlace (Lancashire)

A runner exercising in Middlesbrough's Albert Park

A 3-year research project by Leeds Beckett University[1] analysed the impact of the Lancashire Wildlife Trust's MyPlace scheme, which specialises in eco-therapy and is run in partnership with Lancashire Care NHS Foundation. It works in green spaces to empower people and their communities to connect with local environments in order to learn new skills, build resilience, meet new people and improve their physical health and mental wellbeing. Some projects are targeted at particular age groups e.g. young people aged 11-19.

Some of the activities involved include:

- Wildlife walks
- Bushcraft
- Gardening projects
- Practical conservation
- Mindful environments

Researchers found that people participating in outdoor nature conservation activities felt significantly better, both emotionally and physically, as a result. They needed, for example, fewer visits to GPs or felt more able to get back into work.

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1   Leeds Beckett University (2019), 'Social Return on Investment analysis of the health and wellbeing impact of Wildlife Trust programmes [Online] Available at: 'https://www.wildlifetrusts.org/sites/default/files/2019-09/SROI%20Report%20FINAL%20-%20DIGITAL.pdf

Catalyst #2

Enabling community action

1.9 One message which emerged strongly from the stakeholder consultation carried out for this Strategy is the strength of local community groups helping to build, maintain and act as stewards of important GBI assets in Middlesbrough. Particularly given limited public resources, it will be vital to make best possible use of these community resources in order to achieve a 'multiplier effect' for public funds.

1.10 In addition, the engagement of community groups can create a powerful sense of community stewardship over assets within the GBI network. This is crucial in beginning to address the challenges highlighted in Part 1 of this Strategy with anti-social behaviour on the network, as well as to ensure long term resilience.

1.11 Based on feedback from local community groups, some important steps should guide activities:

1. Coordination of activities

1.12 A clear message from stakeholder consultation was that, while there is a good deal of activity happening at the community level - there was little sharing of experience or horizontal collaboration. A more proactive coordinating role to engage with groups through the Green Spaces Forum and other forums would help in bringing together and supporting community groups, as well as helping to make their work visible in order to help attract volunteers and participants (see Catalyst 1).

2. Safeguarding community green assets

1.13 Where the local community has invested heavily into a green and blue asset and where that asset has brought the community together around a common purpose, this asset should be safeguarded, given the value it represents, unless there are exceptional reasons that indicate otherwise. Wherever possible and appropriate, these assets should be integrated into any new development schemes.

3. Availability of small grants

1.14 Small-scale actions such as the transformation and greening of Middlesbrough's 'back alleys' may be small but can cumulatively have a significant impact on the strength and resilience of the GBI network. They are often reliant on small grant funding being easily available to community groups.

1.15 It is important that the Council's grant programmes for the community sector is maintained, well promoted and support is provided. Given the urgency of need for environmental progress, health and wellbeing, there could be a 'fast track' process available to projects if it can be shown they respond to the priorities within this GBI Strategy.

4. Community co-design of new GBI assets and regenerated areas

1.16 All of the Priority Opportunities identified by this Strategy should provide as much space as possible for participatory design and community co-design, given that is local communities who are often best placed to understand what will and what will not work in their local area.

5. Devolving power to community groups

1.17 A more ambitious approach, which has been trialled elsewhere as an alternative funding mechanism for GBI assets, is a model whereby part of the responsibility for the long-term management of parks and green spaces can be transferred to 'Friends of' groups and enabling charities - whereby they can provide day to day management in lieu of rent for use of facilities. The NESTA 'Rethinking Parks' project has been an incubator for such fresh thinking on the future stewardship of parks and other GBI assets, in the face of longer term threats to their viability.[1] The project provides a useful set of resources and case studies of governance experiments carried out elsewhere.

A Middlesbrough 'back alley' transformed through community project. Source: Middlesbrough Environment City (MEC).

Children at the Nature's World community project. Source: Friends of Nature's Word

Participatory design should engage a range of community members.

1.18 Another example of such thinking can be seen in the 'Nowhere Gardens' project - where a local community enterprise took part in an experiment which set up a neighbourhood citizens' panel to make decisions on where to spend money on local GBI, as well as maintaining a budget to support community-led projects.[2]

"There is an opportunity to increase small interventions - not all large capital works - and focus on areas with active Friends Groups" (Stakeholder comment)

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1   https://www.nesta.org.uk/project/rethinking-parks/

2   NESTA (2020), 'News from Nowhere Gardens' [Online] Available at: https://www.nesta.org.uk/report/news-nowhere-gardens/the-citizens-panel/

Chapter Five
A GBI 'check list' for new development

Chapter 5
A 'GBI checklist' for new development

This 'GBI check list' is designed to provide a simple way to guide early discussions regarding both residential and employment-led development schemes in Middlesbrough. This will help to ensure that scheme design aligns with the evidence base and priorities set out in this GBI Strategy. It should complement other policy tools such as emerging Biodiversity Net Gain requirements and SuDS policies.

An example of a scheme design integrating a mosaic of urban greening features, opportunities for natural play and resources for pollinators as part of the public realm.

1 | Strengthening the nature recovery network

Has the development taken into account its position as part of the habitat network mapped as part of Priority Opportunity 1 of this Strategy? And does the design include features which respond to filling 'gaps ' in this network?

2 | Links to the walking and cycling network

Is the development designed to make walking and cycling the 'mode of choice' in line with national policy? Do routes through the development provide easy access to green corridors? Does the development illustrate full integration of Sport England's 'Active Design' principles?

3 | Biodiversity 'micro features'

Are 'hedgehog highways', swift boxes, bat boxes and similar features provided at new development, unless there is a well justified reason not to?

4 | SuDs

Where SuDS are required, are they designed To: serve as attractive recreational features? Respond to the wider landscape? Provide additional habitats for wildlife? Is educational material provided to users? Do they meet the Tees Valley Authorities Local Standards for Sustainable Drainage (2017)?

5 | Amenity grass land

Have all opportunities been considered to create wildflower planting or other areas of richer habitats within areas of amenity grassland provided, rather than mono-functional landscaping?

6 | Natural surveillance

Are green spaces overlooked by adjacent propertes and busy public spaces?

7 | Growing space

Has community growing space been provided at residential sites unless there is a well justified reason that this is not possible?

8 | School Routes

Do routes through the development link into local walking and cycling paths to local primary schools serving the development? Will residents be discouraged from using the private car for the school run?

9 | Safe streets

Have all opportunities been taken to incorporate filtered roads, 'home zones' and 'low traffic neighbourhoods', in line with Sustrans guidance. Have GBI features (such as parklets, street trees, seating and rain gardens) been integrated into the layout?

10 | Play

Are play spaces designed to be multifunctional GBI assets and to allow for self-led independent play, based on best practice? And are play areas available within walking distance?

11 | Long term stewardship

Are adequate procedures and funding in place for GBI features to be managed sustainably over the next 20-30 years?

Chapter Six
Delivering the GBI Network

Chapter 6
Delivering the GBI Network

The NPPF (2019) and legislative context provides strong support for enhancing Green and Blue Infrastructure because of the wide range of benefits it affords.

Local Plans should give further expression to this by setting an overarching vision of GBI delivery during the Plan period. This section sets out a series of recommendations on how to 'embed' GBI in these replacement Local Plan policies, followed by outlining a series of delivery mechanisms which can be used to enhance the network.

Recommendations for embedding GBI in the Middlesbrough Local Plan

1.19 Planning policy can play a critical role in the delivery of GBI, by setting clear expectations for it as part of long-term development plans. Middlesbrough Council has a duty to act on climate change, generate employment, maintain healthy functioning ecosystems, maximise physical and mental well-being, and protect and promote cultural and heritage assets. The GBI Priority Opportunities identified in this Strategy will help achieve these aims.

1.20 However, despite the recognised multiple benefits of GBI, it can often be difficult to deliver policy expectations due to competing policy priorities. As such, GBI is often treated as a lower tier requirement at the application stage, particularly in Section 106 negotiations. There is potential to strengthen the Council's GBI policy approach in the emerging Local Plan Review that will allocate sites for housing and employment uses, designate sites for environmental protection and contain policies to guide and manage development up to 2037.

1.21 When designing a set of replacement policies, it is important to ensure that GBI is fully embedded within the Local Plan rather than dealt with through an isolated policy alone. An updated dedicated GBI policy should be accompanied by a Local Plan structure which 'mainstreams' GBI by weaving references throughout various policy areas. This will allow it to move outside any policy 'silos' and support (and be supported by) other agendas, including health, economic and social policy areas. It is recommended that replacement policies are tested through the 'Mainstreaming GBI' toolkit developed by the Nature Environment Research Council (NERC), an assessment process based on a content analysis of Plan wording[1].

1.22 In accordance with the tool, two principles should guide replacement policies, focussing on providing both breadth and depth of policy coverage:

1.23 Functional coverage i.e. the extent to which GBI is covered across all other chapters, including the introduction and vision for the Plan; and,

1.24 Strength of policy wording i.e. the phrasing used to articulate the treatment of GBI.

1.25 The toolkit also includes a set of 'exemplar GBI policies' which can guide those developed for Middlesbrough, both for a 'primary GBI policy' and for supporting policies and stewardship requirements. There is strong emphasis within the toolkit on more explicit recognition of the value of 'place-making' as a uniting concept for GBI.

1.26 The team which developed the tool recommend that scoring is undertaken independently by two assessors and then compared and that both forward planning and development management staff are involved.

1.27 It is recommended that the Council considers supporting these replacement policies by preparing a Supplementary Planning Document to provide guidance on addressing GBI needs and what will be expected to be delivered through development. In addition to setting out and providing detail on the expectations for the Borough, the SPD would also provide the opportunity to summarise design considerations and standards for GBI (including open spaces and play space), providing examples and precedents where appropriate.

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1   See Scott and Hislop (2019), 'What does good GBI policy look like? Town and Country Planning, 88(5) [Online] Available at: https://www.tcpa.org.uk/Handlers/Download.ashx?IDMF=a70fd808-eee1-4b50-bb9d-805e5c017d26

Securing GBI via the planning process

1.28 Mechanisms 1-2 detailed in the following pages discuss the primary mechanisms for securing GBI enhancements via the planning process, as new development comes forward in Middlesbrough over the Plan period. This currently largely relies on Section 106 agreements or the Community Infrastructure Levy (not currently used by Middlesbrough Council). However, the emerging requirement for mandatory Biodiversity Net Gain (BNG) through the forthcoming Environment Bill is set to provide an important investment mechanism for delivering GBI going forward, and it will be important for Local Authorities to adequately prepare for its impact.

1.29 As highlighted below, the Priority Opportunities outlined in this Strategy should be used by Development Management officers in their early discussions with developers and ultimately in the determination of applications. As such, these considerations would be treated as a material consideration in planning decisions, adding weight to the GBI opportunities and increasing the potential for their delivery. The additional 'GBI checklist' provided in **Chapter 5** is a further tool that provides a series of simple questions to guide early conversations with developers.

1.30 It is vitally important that the question of how a new development or regeneration scheme responds to the GBI network and the priorities of this Strategy is discussed at the earliest design stages. This will allow for GBI to be 'designed in' at an early stage, which proves far more cost effective for developers than applying requirements to a scheme at the later stages of design.

Securing GBI outside the planning process

1.31 It is also important to recognise that not all enhancements to the GBI network will be delivered via the planning process, despite innovations such as Biodiversity Net Gain.

1.32 While not exhaustive, **Mechanisms 3-6** detailed in the following pages provide an indication of some of the sources which should be pursued in order to create and maintain Middlesbrough's GBI network. This will require partnership working and a level of engagement with the GBI Strategy that goes beyond the boundaries of the planning department and includes bodies such as public health authorities, community groups, utility companies and local businesses.

"Development holds the biggest opportunity for improvements, but needs to be harnessed"

- Stakeholder comment.

Mechanism 1: Developer Contributions

There are two major existing mechanisms by which financial contributions to GBI can be secured from new proposed development through the planning process: S106 agreements and the Community Infrastructure Levy (CIL).

Section 106 Agreements

Section 106 agreements are a tool which makes a development proposal acceptable in planning terms, which would not otherwise be acceptable. There are three legal tests which must be met before S106 payments can be collected against a particular requirement. It:

- must be necessary to make the development acceptable in planning terms;
- must be directly related to the development; and,
- must be reasonably related in scale and kind to the development.

The limitation of Section 106 in the past had been that contributions could not be pooled (beyond 5 developments) to invest in a strategic site. However, the Government lifted this restriction in 2019. This means that S106 can now be used to enhance or promote the wider GBI network, and could fund Borough-wide opportunities.

In negotiations over S106 it is particularly important, given concerns raised during consultation for this Strategy, that GBI assets provided are 'future proofed' i.e. that adequate provision is made for their management and maintenance, including the responsibility for these activities and their funding.

Community Infrastructure Levy (CIL)

The Community Infrastructure Levy was introduced through the Planning Act (2008) as a levy payable by developers towards the cost of local and sub-regional infrastructure to support development. This does not need to be directly related to the proposed development.

Middlesbrough Council does not currently implement

CIL. If CIL were to be implemented, it is important that key GBI priority projects are included within an accompanying Infrastructure Funding Statement.

'Designing in' GBI features early

Early conversations with developers are crucial to allow GBI features to be 'designed in' at an early stage rather than retrofitted later, which generally incurs greater expense. This also provides valuable certainty to the developer. GBI within development must be well designed, multi-functional and managed, rather than mono-functional landscaping. The simple 'GBI check list' provided in **Chapter 5** is a tool that may help structure early conversations. .

Another valuable tool, which goes into greater detail, are the *Building With Nature* standard is used in early discussions with Development Management teams and in the assessment of applications - the standard seeks to raise the standard of GBI over time and improve the quality of GBI coming through the development pipeline. However, when articulating expectations of development, it is important not to be overly prescriptive as this may leave insufficient flexibility to account for local circumstances and lead to poor design choices. The key focus should be outcomes for the GBI network.

The GBI Strategy and the Infrastructure Delivery Plan (IDP)

The purpose of an Infrastructure Delivery Plan (IDP) is to act as a 'living' document that sets out a schedule of infrastructural projects required to underpin the growth outlined in the Local Plan. This schedule then helps to direct developer contributions to priority areas. As such, it is important that the schedule for Middlesbrough meaningfully incorporates the Priority Opportunities set out in this document. In this way, the IDP can help to 'translate' the evidenced need outlined in the Strategy to a project-level schedule, and will link particular projects to strategic sites once identified through the Local Plan process.

Mechanism 2: Biodiversity Net Gain

Biodiversity Net Gain is "*an approach to development that leaves biodiversity in a measurably better state than before.*" It has the potential to be a powerful investment mechanism for delivering enhancements to the GBI network as new development comes forward. It will also provide increased certainty to developers.

BNG is already part of the NPPF (Paragraphs 170, 174 and 175) however there is no specific percentage gain required. The forthcoming Environment Bill (in draft form at the time of writing) is set to include a requirement for all development of land to deliver a mandatory 10% biodiversity net gain. Compared to previous approaches, the quantitative targets (using a net gain 'calculator' or metric) are likely to focus attention at early design stages. This helps to mathematically hold new development to account and to have value as an iterative design tool, that helps both developers and planners understand how to provide for richer and more ecologically divers landscaping, often through relatively simple changes to the landscape palette.

Due to the BNG 'hierarchy', the emphasis is likely to be on retaining and enhancing biodiversity within the boundary of the development site. However it is likely that off-site contributions will have to be made in some cases, raising the prospect of channelling resources to strategic GBI priorities across the Borough. The delivery off site BNG in a geographically constrained Borough will be challenging at larger scales, so key consideration should be given to the strategic delivery of net gain through the intertidal reach and associated wetland habitats, and to the increasingly intensively farmed southern rural belt.

Once the Environment Bill gains Royal Assent, BNG requirements are expected to come into effect over a two-year transition period. However it is important for Local Authorities to begin preparing for mandatory BNG, to leverage net gain through the NPPF, and to consider including local policies within their own plans.

Mechanism 3: Structural Investment Funds for GBI

Particularly in the UK regions outside London, much funding for larger-scale GBI initiatives in recent decades has come from European Structural and Investment (ESI) funds. However, this funding will no longer be available from 2021 and an adequate replacement for this funding will need to be sought within the UK's post-Brexit policy context.

The UK has announced the creation of the UK Shared Prosperity Fund (UKSPF) in order to serve a similar role. However, at the time of writing there are few details available regarding its scale, design and implementation. Nevertheless, in the longer term funds such as this offer the potential to support larger scale, more 'transformational' GBI initiatives than those which can be funded via developer contributions - such as those proposed for the Beck Valleys and Middlehaven regeneration zone.

Mechanism 4: Changes to 'business as usual'

It is important to bear in mind that not all GBI enhancements require expensive capital investment. **Priority Opportunity 9** (Rethinking Urban Grassland) is an example of an initiative which requires a change in normal practices - in this case, mowing regimes in green spaces - which offers the potential to in fact generate savings in maintenance budgets over the longer term. This emphasises the importance of changing mindsets and public perceptions, 'seeding' an awareness of GBI across departments and working with partners beyond the boundaries of the Council planning department to strengthen the GBI network. This would also assist the Council in meeting climate change targets.

Mechanism 5: Alternative Financing Options

Traditionally, most public green spaces have been managed by Local Authorities, and has drawn on a relatively limited suite of investment models - from public sector provision, to public sector grants, private developer investment and community-level action. However, due to resourcing constraints in the public sector, there has been a recent (flurry) in experimentation around 'alternative financing options' for delivering GBI.

The NESTA 'Rethinking Parks' project is a valuable source of case studies on options which may be appropriate in Middlesbrough, and for delivering some of the Priority Opportunities within this Strategy.

The experiments vary widely. However the following are some alternative approaches which have been piloted elsewhere and promoted by NESTA and others:

- Leasing of parks and allotments to a charitable trust (Newcastle Parks Trust).
- Using parks for renewable energy generation in the form of ground source heat pumps (Powering Parks, Scotland).
- Assisting Friends Groups to take on more formal management responsibilities for green spaces (Everton Park, Liverpool).
- Use of social prescribing in parks to tackle health inequalities and issuing of community shares (Par Track, Cornwall).
- Engaging local businesses in supporting parks as part of a commitment to the local community (Walsall Connecting Green Spaces).
- Using parks and maintenance programmes to help build skills in the local community (ParkWork, Bristol).
- Installation of SuDS in a school in exchange for a reduction in chargeable surface area from water company (Moorland Junior School SuDS, Sale).

The matching of the most appropriate option to each GBI opportunity must be done on a case-by-case basis, however these pilot programmes offer valuable inspiration and lessons learned for alternative ways to think about building the GBI network.

The Greater Manchester Natural Capital Investment Plan (NCIP) is another promising model for re-thinking how GBI features are delivered using a broader range of models.

Mechanism 6: Grant Funding

As Local Authority budgets have been reduced over recent years, funds for the maintenance of the green space network and other GBI assets has become increasingly reliant on grant funding. This type of funding is likely to continue to be important for Middlesbrough's GBI network.

Funding will be dependent on the type of scheme, its origins and functions, and in some cases particular grant sources are indicated within the Priority Opportunity profiles.

Applications for grant funding from bodies such as the National Lottery, landfill funds and other grants should make full us of the evidence and priorities laid out in this GBI Strategy in order to establish a robust case for investment.

Appendix A
Linking the Priority Opportunities to the Evidence Base

Appendix A
Linking the Priority Opportunities to the Evidence Base

The Priority Opportunities presented in Part 2 of this Strategy build upon the evidence base detailed in the Part 1 document.

This Appendix provides a clear indication of how the two parts of the Strategy relate to each other.

1.33 **Part 1** of this Strategy outlined the evidence base relating to each of the six GBI themes identified. For each theme, a series of Key Issues were identified, which in turn led to the identification of a series of Emerging Opportunities. These Key Issues and Emerging Opportunities were also informed by the output of the stakeholder consultation process carried out using an online survey, interactive mapping and series of virtual stakeholder workshops, as detailed in **Part 1**.

1.34 The following pages provide a summary of those Emerging Opportunities, organised by theme. **Table A.1** maps these Emerging Opportunities against each Priority Opportunity presented in **Chapter 3.**

1.35 This serves to make clear the link between the identification of issues to be addressed (within **Part 1** of the Strategy) and the identification of Priority Opportunities which respond to these (within **Part 2** of the Strategy). As such, it provides an 'audit trail' for the proposals made by the GBI Strategy, rooting them in the baseline evidence.

'Emerging Opportunities (from Part 1 of Strategy)

Theme 1: Regeneration, heritage and 'sense of place'

- **RG1:** The GBI network has a key role to play in the next phase of Middlesbrough's regeneration, building on existing interventions within Middlehaven and the town centre to create an ambitious landscape-led regeneration agenda.

- **RG2:** A GBI-led town centre revival, whereby the integration of green and blue features into the public realm helps create a vibrant multi-purpose town centre, to boost 'liveability' and stem urban flight among young people.

- **RG3:** Better integration of historic environment assets into the GBI network to boost accessibility, as well as to draw on precedent from elsewhere to integrate their features into wider 'greener' landscapes.

- **RG4:** Expansion of urban tree canopy cover in order to enhance the public realm, provide attractive places to live and work, and provide functions such as flood resilience and urban cooling.

- **RG5:** Expansion and enhancement of key 'green corridors' and enhanced wayfinding, in order to better link key assets and destinations, and to support the Borough's visitor economy.

- **RG6:** There is an opportunity for investments in the GBI network to create jobs, including in forestry and woodland and in ecological restoration work.

Theme 2: Biodiversity and geodiversity

- **BD1:** Protection and restoration of important habitats in the Tees River Corridor, linking into the regeneration of Middlehaven. Supporting peripheral areas include tributary watercourses and wetland which may offer opportunity for habitat creation associated with soft engineering for flood defence.

- **BD2:** Restoration of the Beck Valleys as green corridors with more robust supporting habit for target species in the Borough, along with interpretation resources to enhance understanding of importance.

- **BD3:** Better integration of 'stepping stone' habitats as part of the roll out of urban greening. Opportunities remain in the regeneration of residential areas such as Gresham and Grove Hill, and in association with biodiverse brownfield sites, particularly where this serves to span transport corridors. This might include planting of street trees in association with traffic calming measures, urban SuDS, as well as retro fitting green architecture (walls, roofs and screens).

- **BD4:** Identification and understanding of key 'gaps' in habitat corridors, to inform the Nature Recovery Network, including across Borough boundaries. For example, the need to relate to farm owners and managers across the southern belt, which transitions out toward the wider rural landscape.

- **BD5:** Re-invigorating the drive to redefine how areas of urban grassland and scrub (including roadside verges and parkland) are managed to provide greater resources and connectivity for pollinators and other fauna.

Theme 3: Reconnecting communities with nature

- **RC1:** Enhancement, expansion and improved connectivity of the town's green space network as a physical/mental health and wellbeing resource.

- **RC2:** Expansion of 'urban greening' features to combat air pollution, including street trees, hedging and other features.

- **RC3:** Creation and expansion of attractive 'green routes' through the town in order to reduce dependence on the private car, enable active travel modes and combat localised air pollution.

- **RC4:** Experiments in 'social' and 'green' prescribing can be built upon, and greater partnership with public health authorities would help to form a more integrated approach to addressing health challenges through the GBI network.

- **RC5:** Green space and/or urban greening features provided as an integral part of Middlehaven regeneration plans, as well as other residential areas such as Gresham. This will improve the 'liveability' of these areas and support the 'Urban Living' agenda.

- **RC6:** Making use of local communities in co-designing and managing the GBI network in order to boost 'community ownership'. Concerns over safety and anti-social behaviour within the GBI network should, wherever possible, be addressed through engagement and inclusion rather than alienation.

- **RC7:** Careful and collaborative design of green spaces and corridors to ensure they are age-friendly and cater for the varying needs of different generations.

Theme 4: A resilient landscape

- **RL1:** Expansion of woodland network, and improved management of existing trees, in order to meet national targets.

- **RL2:** Improved management and restoration of waterways to maximise carbon storage potential, in addition to biodiversity benefits.

- **RL3:** Promotion of nature-based solutions to risk of flooding, including high quality multi-functional SuDS installations. In order to deal with future water stresses, there will need to be a shift in perception regarding the way that water is stored in, and moved through, the Borough's landscape, with more detail provided under Theme 5.

- **RL4:** Expansion of the street tree network and integration of other 'urban greening features in order to provide urban cooling in the most urbanised areas.

Theme 5: The blue network and waterfronts

- **BN1:** The River Tees Corridor should form the framework for future multi-functional development of the GBI network and should support regeneration plans. The Borough's regeneration agenda should be guided by a process of 'turning back' toward the waterfront – both along the Tees River Corridor and the Beck Valleys – helping to repair broken connections, while remaining mindful of the potential conflict between recreational and biodiversity functions.

- **BN2:** Alongside engineered solutions, strategies to reduce flood risk should take maximum advantage of opportunities to implement nature-based solutions to create healthy and multi-functional floodplains which not only mitigate against flooding but provide co-benefits for recreation and biodiversity.

- **BN3:** Expansion and promotion of SuDs features at all scales should be encouraged – including large installations on vacant land and 'micro' features such as linear rail gardens installed along cycle paths to combat

Theme 6: Walking and cycling

- **WC1:** The creation or enhancement of 'green corridors' along the Beck Valleys to give a boost to walking and cycling uptake in the Borough.

- **WC2:** Identification and greening of 'key routes' linking important destinations, including a focus on east-west links.

- **WC3:** The regeneration of Middlesbrough Station, and plans for a direct line to London, provide an opportunity to create a 'node' at the heart of several green walking and cycling routes, both to destinations within Middlesbrough (including Teesside University and the Riverside Stadium) and beyond (including the coast, the North York Moors National Park and the Saltholme Nature Reserve to the north).

- **WC4:** Improved and more consistent wayfinding across the entire Borough, integrated into the various regeneration agendas in the town.

- **WC5:** Opportunities to 'green the school run', including implementing small-scale and incidental nature-based play interventions, to bring excitement and educational opportunities to green corridors serving schools.

Table A1: Priority Opportunities mapped against the 'Emerging Opportunities' identified in Part 1 of the Strategy.

Theme	Regeneration, heritage and 'sense of place'	Biodiversity and geodiversity	Reconnecting communities with nature	A resilient landscape	Blue network and waterfronts	Walking and cycling
Link to 'Emerging Opportunities from Part 1 of the Strategy'						
1. Laying the foundations for a Nature Recovery Network	RG6	BD1, BD2, BD3, BD4		RL1, RL3		WC2
2. A green-blue grid for Middlehaven	RG1, RG3, RG4, RG5	BD1	RC1, RC2, RC3, RC5	RL1, RL2, RL3, RL4	BN1, BN2	WC2, WC3
3. Station gateway and Middlesbrough 'low line'	RG1, RG2, RG3, RG4, RG5		RC2, RC7	RL4		WC3
4. Supporting a re-imagined town centre	RG1, RG2, RG4, RG5		RC2, RC5, RC7	RL1, RL4		
5. The 15-minute town: enabling walking and cycling	RG1, RG4, RG5	BD3	RC1, RC3, RC5, RC7	RL1, RL4		WC1, WC2, WC4, WC5
6. Blue corridors: enhancing the beck valleys	RG5, RG6	BD2	RC1, RC3	RL1, RL2, RL3	BN1, BN2	WC1
7. Building an urban tree network	RG1, RG4, RG6	BD3	RC2, RC5	RL1, RL4		
8. Edible townscapes		BD3	RC1, RC6			
9. Rethinking urban grassland	RG3, RG5	BD5	RC5			
10. Network of multi-functional SuDs	RG6		RC5	RL2, RL3	BN2, BN3	
11. Green schools	RG4	BD3	RC1, RC2, RC6	RL1, RL3	BN3	
12. Low-traffic neighbourhoods	RG4	BD3	RC1, RC2, RC3, RC5	RL1, RL4		WC5