

Middlesbrough Council

**Middlesbrough Green and
Blue Infrastructure Strategy
2021-2037**

Part 1: Setting the Scene


Middlesbrough
moving forward



Document control

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Project

Middlesbrough Green and Blue Infrastructure Strategy

Client

Middlesbrough Council

LUC Project Number

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Project Team

The Strategy has been prepared by a team led by LUC of planners, ecologists and landscape architects.

All comments and contributions to the development of the study are gratefully acknowledged.

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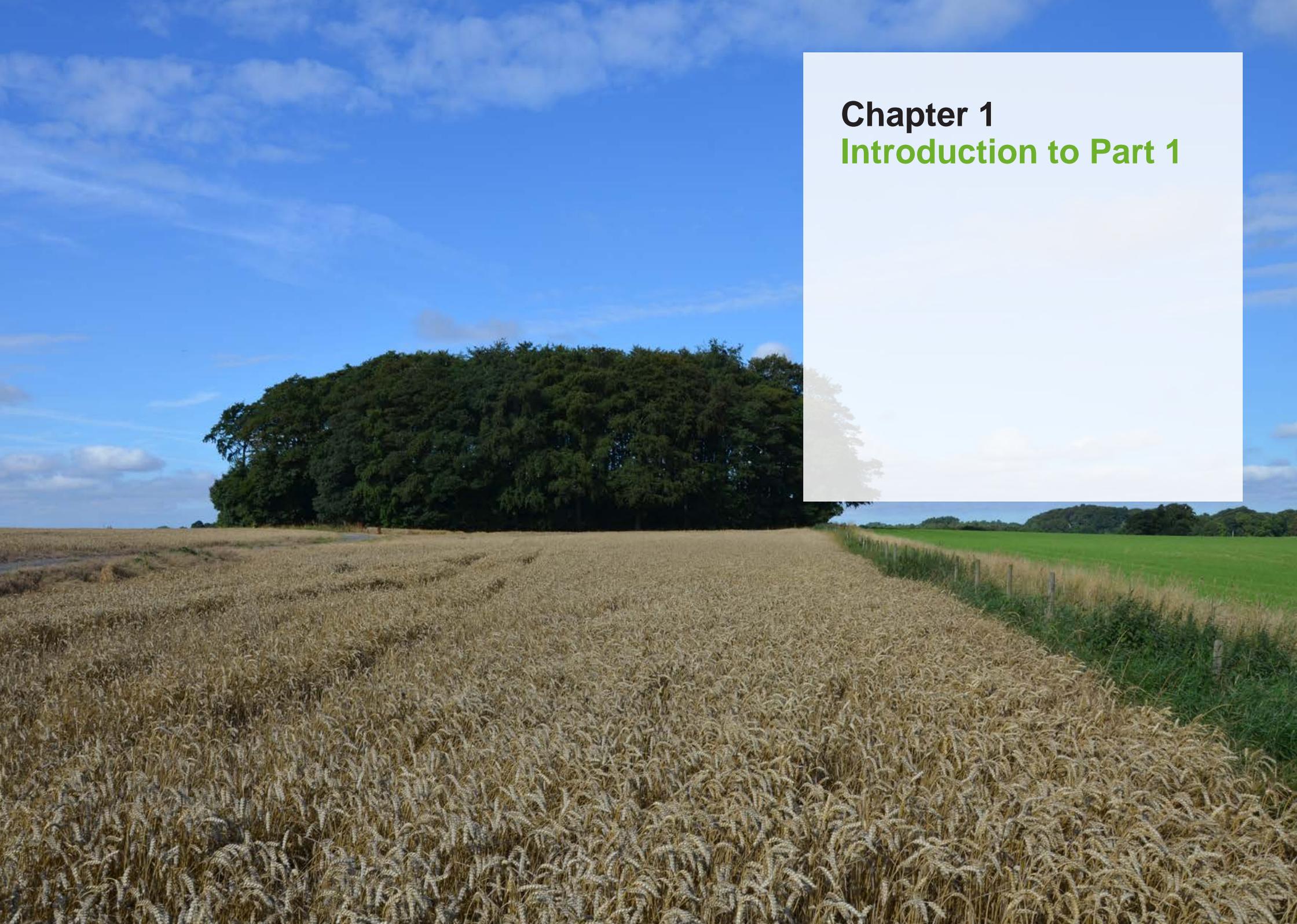
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Chapter 1
Introduction to Part 1

Chapter 1 Introduction to Part 1

This Strategy is designed to identify and prioritise the actions required to strengthen Middlesbrough’s network of green and blue features up until 2037, at all scales. It provides a Vision of a robust network, providing a broad range of functions – from play and recreation, to biodiverse habitats and flood resilience.

1.1 ‘Green and blue infrastructure’ (or GBI) is an essential component of healthy, thriving communities and ecosystems. Working on behalf of Middlesbrough Council, and in consultation with key stakeholders, LUC was commissioned to prepare a Green and Blue Infrastructure Strategy for the Borough. This new strategy identifies opportunities across the Borough to protect and enhance GBI, helping to guide the investment and delivery of GBI and its associated benefits, to support the Council’s new Local Plan. The Strategy is split into two parts:

- **Part 1** ‘sets the scene’ by providing a baseline analysis;
- **Part 2** outlines an Action Plan of Priority Opportunities and delivery mechanisms.

What is Green and Blue Infrastructure?

1.2 Green and blue infrastructure (or GBI) is a term used to describe the network of natural and semi-natural features within and between our villages, towns and cities.

1.3 GBI includes parks and open space but is not limited to the open space network. It captures features at all scales, from river catchments to planters and rain gardens within urban streetscapes.

1.4 The concept has become prevalent across the UK government’s policy agenda and among a variety of other actors, including developers and transport authorities. It has been promoted through the 2018 publication of the 25 Year Environment Plan (25YEP). As the Landscape Institute has urged, “it has never been more necessary to invest in green infrastructure”.



An illustration of the multiple functions (or benefits) which GBI can provide.

1.5 GBI is characterised by its 'network' status and by its 'multi-functionality', which ranges from providing and connecting habitats for wildlife, to providing the open space and recreational assets that communities require in order to help tackle multiple health and wellbeing issues.

The Policy Context for Green and Blue Infrastructure

1.6 The 25 Year Environment Plan (25YEP), published in 2018, sets out the Government's support for habitat creation, multi-functional sustainable urban drainage systems (SuDs), and natural spaces close to where people live and work. It represents an important shift in thinking towards long term positive action to improve people's lives and the environment. It views the planning system as a key mechanism for delivering upon its ambitions. The first action of the 25 Year Environment Plan seeks to embed an 'environmental net gain' principle into development:

"We want to establish strategic, flexible and locally tailored approaches that recognise the relationship between the quality of the environment and development. That will enable us to achieve measurable improvements for the environment – 'environmental net gains' – while ensuring economic growth and reducing costs, complexity and delays for developers."

1.7 It goes on to state that the Government wants:

"to expand the net gain approaches used for biodiversity to include wider natural capital benefits, such as flood protection, recreation and improved water and air quality. They will enable local planning authorities to target environmental enhancements that are needed most in their areas and give flexibility to developers in providing them."

1.8 The emerging landmark Environment Bill sets out to

place the ambitions of the 25YEP on statutory footing, by creating a new governance framework for the environment, to ensure a '*cleaner, greener and more resilient country for the next generation*' as the UK leaves the EU.

1.9 The National Planning Policy Framework (NPPF) explicitly addresses the need for GBI networks, stating that strategic policies in plans should set out an overall strategy that makes sufficient provision for the conservation and enhancement of green infrastructure (Paragraph 20). It also requires that planning policies should aim to achieve healthy, inclusive and safe places, including through the provision of 'safe and accessible green infrastructure' (Paragraph 91) and should plan positively for the provision of shared spaces and community facilities, including open space (Paragraph 92). Regarding new development, the NPPF requires that it be planned in a way that avoids increased vulnerability to the range of impacts arising from climate change, particularly in vulnerable areas, and states that risks can be managed through the planning of green infrastructure (Paragraph 150).

1.10 Paragraph 171 of the NPPF also requires that a strategic approach is used to ensure that, within a plan area, networks of habitats and green infrastructure are maintained, and that planning is undertaken for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

1.11 The full policy context which informed this Strategy (on a national, regional and local scale) is provided in **Appendix A**.

Middlesbrough today: a Landscape Narrative

1.12 Middlesbrough is a town in the north east of England with a population of around 140,000 and is the principal centre of the Tees Valley conurbation. It lies roughly half way between the major cities of Newcastle and Leeds, as well as on the borders of the North Yorkshire Moors National Park.

1.13 The Borough is predominantly urban in character, with only around 30% of the land in agricultural use. Once a thriving steel town, the Borough has suffered population decline since the 1960s. However today, a number of regeneration initiatives provide the opportunity to create sustainable communities, and the successful and expanding University of Teesside and Middlesbrough's colleges contribute to the town's economic prosperity.

1.14 In terms of its landscape context, Middlesbrough is located on the alluvial plain to the south of the River Tees. At the beginning of the 19th century was a small farm of only 25 people, however today much of the underlying landform is masked by urban development.

1.15 Over the years Middlesbrough's landscape has been influenced significantly by industrial development, given the significant growth experienced in the 19th century and into the 20th century. Since iron was discovered near Eston in 1850 and was used to satisfy demand for the expansion of the railway, Middlesbrough became known as the 'iron town' and the Tees as the 'steel river'. This GBI Strategy now offers the opportunity to continue, and accelerate, the process of 'greening the grey', to help the GBI network become a pivotal part of Middlesbrough's identity in the 21st century.

1.16 Because the Borough is predominantly urban, those areas of green space which Middlesbrough does have must work harder. Expansive areas of open space are largely limited to the narrow belt of farmland in the south of the borough. However, the Beck Valleys - flowing northward to the River Tees – provide an important function as green and blue 'fingers' reaching into urbanised areas and linking them with the open countryside to the south. There is also much scope to weave smaller-scale GBI assets through the built-up areas and to further enhance Middlesbrough's park space.

1.17 Looking to the future, Middlesbrough Council has

adopted the principles of *One Planet Living* into the way it plans and delivers its services and was accredited as a One Planet Living Region by international charity BioRegional in 2011. *One Planet Living* is a sustainability framework created by BioRegional in 2002 and comprising of ten simple principles with detailed goals and guidance. Middlesbrough's involvement was built on the recognition that if everyone lived like the average Middlesbrough or UK resident currently does, we would need three planets to sustain our lifestyles. The framework responds to this by seeking to create a more sustainable community which lives within the planet's available resources. As such, there is now an ambition that sustainability considerations underpin all aspects of development in Middlesbrough.

How does this Strategy support Middlesbrough's Local Plan?

1.18 The Green and Blue Infrastructure Strategy serves as part of the evidence base underpinning Middlesbrough's emerging Local Plan.

1.19 Together with Middlesbrough's emerging Green Strategy, this Strategy should also form the basis of expectations and priorities for GBI investment across the Borough. As such, it should be used by:

- The Development Management Team, particularly to guide negotiations with developers over delivery of both on site and off site GBI and to maximise the potential of development to deliver Biodiversity Net Gain where possible.
- The Council Green Spaces team, in informing the management of areas of open space under their control.
- Local community groups, to help co-ordinate initiatives such as neighbourhood-scale projects, urban farming initiatives and Beck Valley improvements.

- Residents and local businesses, to understand the principles and benefits of GBI and how the Council will be delivering improvements in the GBI network across Middlesbrough.

Approach

1.20 The steps taken to develop this Strategy are outlined in **Figure 1.1**.

1.21 The Strategy is structured around a series of six 'themes', that relate to the multiple functions which GBI assets provide. Climate Change has been identified in this Strategy as a fundamental cross-cutting theme which affects and influences the various functions which the GBI network delivers. The six GBI themes, which provide the 'backbone' for this Strategy, are outlined in **Figure 1.2**.

1.22 However, like the regional Tees Valley GI Strategy, this Strategy places greater emphasis on the importance of multi-functional corridors - by identifying not only discrete themes but focusses on the linkages between assets across various themes and how they work together to create green corridors.

1.23 The Strategy is also focussed around a Vision. This was developed during the **Part 2** process, after being 'tested' through consultation. However it is included within Part 1 also (Chapter 2), given its importance in guiding all proposed actions taking place under this Strategy.

Stakeholder Consultation

1.24 In order to provide a successful framework for action, the GBI Strategy must accurately reflect local priorities and challenges. The delivery of GBI enhancements in Middlesbrough will also be the responsibility of a wide range of partners beyond the Planning department, and extends to Middlesbrough's strong network of community groups.

1.25 As such, consultation with key stakeholders sits at the heart of this Strategy. Due to restrictions imposed by the Covid-19 pandemic during the course of the development of this Strategy, the consultation process took place remotely

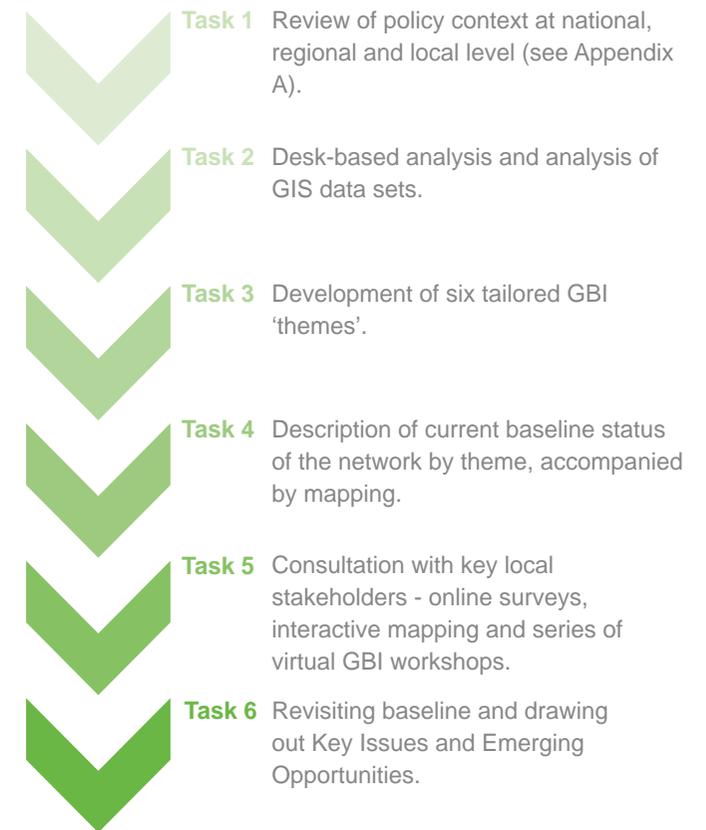


Figure 1.1 Key tasks undertaken for Part 1 of the GBI Strategy

and consisted of the stages set out below. A range of selected local stakeholders with a role in the Borough's GBI Network were invited to take part:

1. An online survey, consisting of a set of questions identifying strengths and weaknesses in the network, and opportunities for improvement.
2. An interactive map identifying assets within the GBI network, providing stakeholders with the opportunity to leave comments.
3. A series of more targeted virtual Technical Workshops, with one workshop carried out for each GBI Theme.

1.26 The results of these workshops were used as a key input into the process of identifying Priority Opportunities for the network, which are outlined in **Part 2** of the Strategy.

1.27 The consultation process was also used to 'test' the proposed Vision for Middlesbrough's GBI Network, ensuring that it reflects a wide range of views and aspirations for the future of Middlesbrough in 2037.

How the remainder of this Strategy is structured

1.28 The Vision for Middlesbrough's GBI network is set out in **Chapter 2** and guides the opportunities identified

in **Part 2** (the Action Plan). This Vision is translated into, and accompanied by, a series of theme-specific Objectives - these Objectives are identified in **Part 2** and will guide actions for the GBI network based on identified assets and challenges to be addressed. The Vision was tested and refined during stakeholder consultation.

1.29 Flowing from this Vision, the remainder of Part 1 of this strategy will set out the baseline for Middlesbrough's Green and Blue Infrastructure network and is structured through a series of six 'themes':

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

1.30 An overview of each 'Theme' finishes with a Summary of Key Issues and a set of Emerging Opportunities.

1.31 A series of Appendices to Part 1 are provided to give further detail on the following parts of the Strategy process:

Appendix A: Policies reviewed as part of drafting the Strategy.

Appendix B: A record of stakeholder consultation carried out for the Strategy.

Appendix C: A 'snapshot' of the virtual whiteboards used to capture discussion during stakeholder workshops carried out as part of the Strategy.

1.32 The separate **Part 2** (Action Plan) document consists of a series of profiles for each identified Priority Opportunity, and identifies how each responds to the Emerging Opportunities identified within this **Part 1** report.

1.33 **Part 2** of the Strategy also contains a Chapter detailing various mechanisms for delivering the Priority Opportunities, including proposed partners, funding and delivery mechanisms.



Figure 1.2: The six GBI 'themes' used for this Strategy.

The image shows a large, blue steel truss bridge structure under construction. The bridge is composed of several tall, lattice-like towers connected by a long, horizontal truss beam. The structure is set against a sky with scattered white clouds. In the foreground, there is a paved walkway that leads towards the bridge, flanked by tall, golden-brown grasses. To the right, there are some industrial buildings and a tall chimney stack. The overall scene is a mix of industrial and natural elements.

Chapter 2

The Vision for Middlesbrough's GBI Network

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 bio-diversity 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.



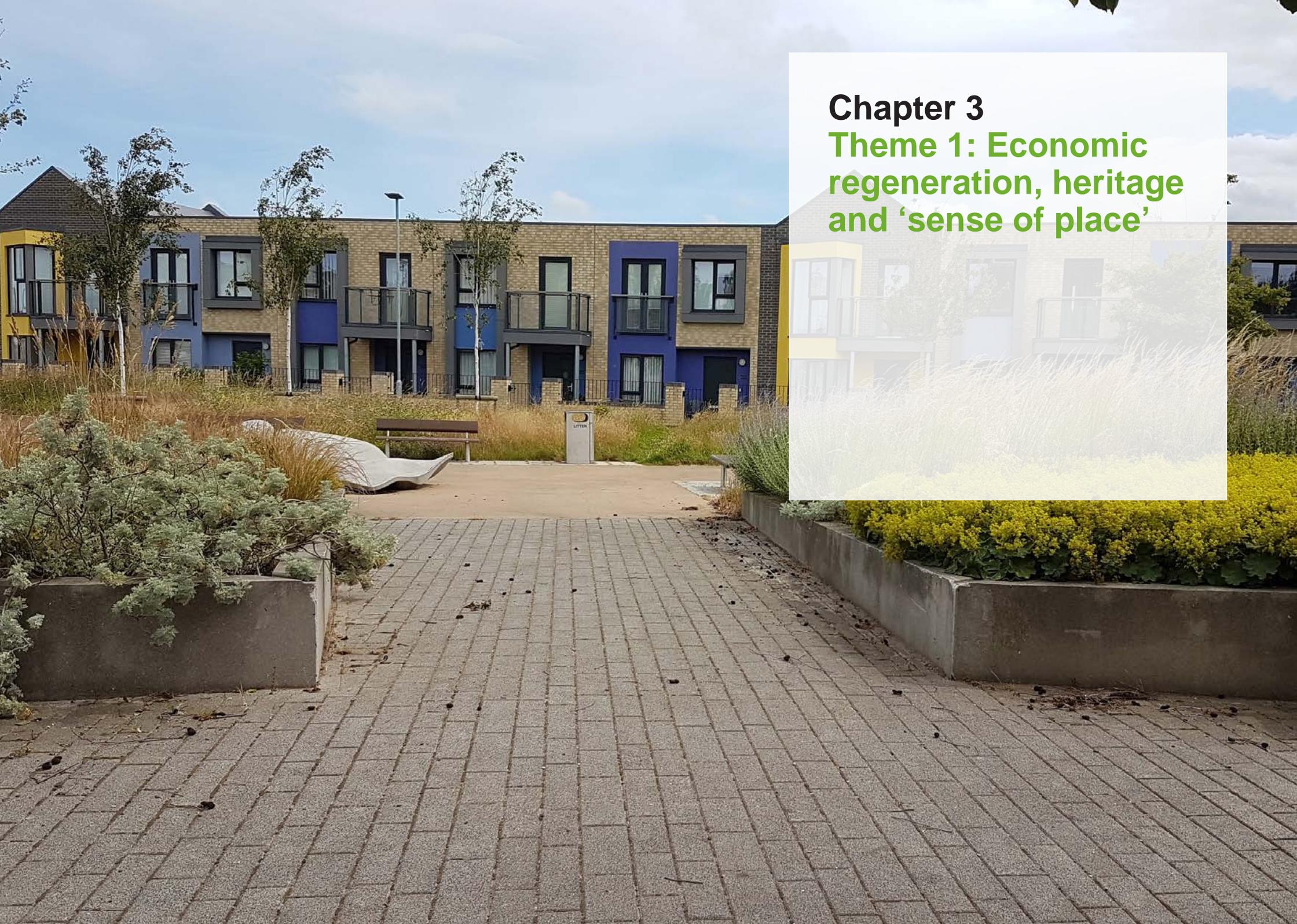
View down the Ormesby Beck green corridor.



Landscape within the Borough's swathe of southern farmland.

Chapter 3

Theme 1: Economic regeneration, heritage and 'sense of place'





Chapter 3

Theme 1: Economic regeneration, heritage and ‘sense of place’

Middlesbrough has made significant steps in recent years to transform from a town with a legacy of ‘grey’ industry to one where the ‘green’ is now celebrated. Urban greening initiatives will be key in underpinning the next stage of regeneration and economic recovery, providing a setting for the town’s heritage, creating ‘sense of place’ and turning around the stigma attached to some areas of the Borough. The green and blue network must be maximised to shape new ‘gateways’, to create greater resilience to climate change, and deliver the kind of liveable neighbourhoods that will attract people to live and work in Middlesbrough.

Regeneration and urban living in Middlesbrough

1.34 Middlesbrough’s growth as a town was driven by the 19th century Industrial Revolution, with major sources of employment in the iron and steel, shipbuilding, heavy engineering and petrochemical business on the bank of the River Tees and surrounding areas. However the decline of traditional industries in the late 20th century had a major impact on the town, leaving a rich heritage but also a legacy of deprivation, particularly in the east and north of the borough. The UK’s Index of Multiple Deprivation (2019) now highlights several of the borough’s wards as being among the most deprived in the country – notably around Middlehaven and other areas along the River Tees corridor, with further concentrations of deprivation around Hemlington and Coulby Newham, as highlighted later in Figure 5.1 (Chapter 5). It has also left a landscape heavily modified by human activity along the Tees (see Theme 4). However recent investments in the decontamination of the Middlehaven area, Middlehaven’s linear park and the redevelopment of Centre Square provide stepping stones towards a different future for the Tees Corridor.

1.35 At a regional level, one of the foremost challenges facing the wider region is the need to reduce economic and social disparities between the North East and other regions. The Strategic Plan for Middlesbrough (2020-2023) echoes this ambition at a more local level, seeking to reverse years of decline by tackling challenges head on, transforming the town centre and reasserting Middlesbrough as a thriving town at the heart of the Tees Valley.

1.36 The current vision for Middlesbrough’s regeneration is set out in the towns Regeneration DPD (2009). However, as

Middlesbrough continues the process of redefining itself as the economic heart of the Tees Valley, the GBI network must be part of that reworked narrative, as it is recognised that an enhanced environment will be central to reaching this vision and in forging a new identity for the town.

“We must continue to invest in place to ensure that we continue to attract and retain the businesses and people we need”

- Tees Valley Strategy Economic Plan, 2016-2026)

1.37 A key challenge will be creating attractive places underpinned by a flourishing environment, and which offer a quality of life that encourages people to stay in Middlesbrough and help to create a shared ‘sense of place’.

“There is need for joined up thinking to maximise Middlehaven’s potential, with walking and cycling prioritised”

- Stakeholder comment

Supporting regeneration

1.38 In order to set the scene for regeneration and renewal areas in the town, the Investment Priorities highlighted in the Middlesbrough Investment Prospectus (2017) are illustrated in **Figure 3.1** and described in **Box 3.1**.

1.39 A GBI-led approach to development and regeneration recognises the need for a holistic approach to the planning and design of new development to meet commercial and public objectives, while also delivering resilient landscapes.¹

¹ Landscape Institute (2013), ‘Green Infrastructure: An integrated approach to land use’, Position Statement.

Box 3.1: Investment priorities in Middlesbrough

- **Greater Middlehaven:** a major mixed-use educational, leisure, sport and entertainment destination centred on the brownfield site at the former dockland and surrounding area framed by the River Tees and reaching into Middlesbrough town centre. Home to both Middlesbrough Football Club and the 'Boho Zone' (designed as a new digital and creative business hub). The master plan for this area is structured around a bold blue/green concept which introduces the use of structural landscaping and water features as the environmental context for regeneration.
- **Centre Square:** the city region's premier office location and cultural/leisure hub, centred on the refurbished Town Hall and surrounding areas.
- **Teesside Media & Innovation Village:** a restructuring of Middlesbrough's centre to create an iconic regional destination for media, digital, creativity, learning and leisure. Located to the west of the town centre and incorporating the former bus station site.
- Various residential-led regeneration schemes in areas of historically high deprivation, including Gresham and Grove Hill.
- **Railway Station and Historic Quarter:** a strategic transport gateway and iconic feature which is part of Middlesbrough's historic heart (St Hilda's) and connects the town centre to the Greater Middlehaven regeneration zone. The station is due to launch a direct rail link to London in 2020 and holds strong potential as a 'gateway' to the town on arrival.
- **University Quarter:** home to Teesside University, with plans for a new student village, a key centre for the evening economy and the focus of public realm improvements. The Quarter lies adjacent to the Gresham regeneration area.

Figure 3.1: Regeneration and placemaking priorities in the north of Middlesbrough

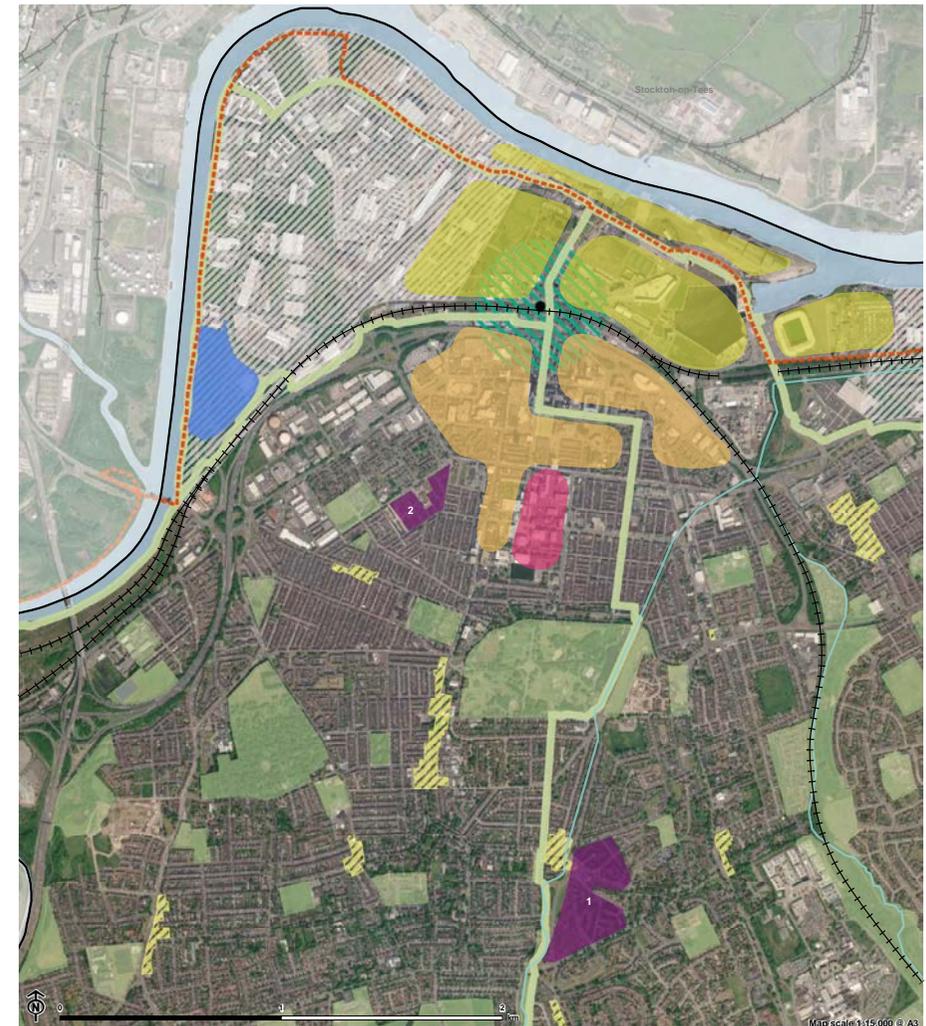


Figure 3.1: Regeneration and placemaking priorities in the north of Middlesbrough



1.40 Continuing Middlesbrough's transformation will require not only hard infrastructure investment, but also the re-establishment of positive perceptions of the town among local people, incoming visitors and businesses, who can all play an important role in the town's revival. The regeneration agenda must not only change the physical landscape but also foster a revived sense of civic pride among local people. A GBI-led regeneration agenda offers the opportunity to pursue a more people-focussed transformation of the borough.

"People have bad perceptions of Middlesbrough. I will lead a campaign to make sure the town's strengths and successes are acknowledged. We will transform how people view our town"

- Mayor's comment in the Middlesbrough Strategic Plan (2020-23)

1.41 Indeed, the Tees Valley Green Infrastructure Strategy "*revolves around achieving closer links between environment improvement and the major development projects proposed in the Tees Valley*" and requires that the GBI network provides an enhanced environmental context for new development and regeneration schemes.

1.42 Particularly over the last decade, the Climate Emergency has forced us to rethink the role of landscape in regeneration. In particular, it has led us to re-evaluate what 'urban' looks like when we are regenerating zones such as Middlesbrough's emerging 'digital clusters'. New urban areas need to be re-imagined for the 21st century and much of this will involve 'softening' landscapes with GBI and encouraging buildings to engage more meaningfully with their natural surroundings, even within the most urbanised areas. This should begin with a design process which 'uncovers' and values the underlying landscapes wherever possible.

Making the business case for the GBI network

1.43 While a flourishing natural environment arguably has

Box 3.1: Mechanisms by which GBI supports economic investment

Providing a vital infrastructural basis for population growth: GBI should form a vital part of the overall urban functioning infrastructure system that successful, growing cities need, just as 'hard' transport and utilities infrastructure does.

Raising property values: While value calculations draw on complex evaluations of social, economic and ecological influences, academic research has illustrated that urban green space can have a significant impact on local housing and commercial markets, where it produces more attractive and functional landscapes. This is particularly relevant in the light of ongoing depressed property values in Middlesbrough.

Boosting resilience to extreme weather events: Particularly given flooding events affecting the Tees Valley in 2013 and 2016 (see Theme 5), the economic costs of future flooding events, as the impacts of climate change are felt, are likely to be significant. The Environment Agency estimated the total economic cost of the UK's 2015-16 winter floods at £1.6 billion, and there is a growing realisation that environments susceptible to flooding are less desirable places to live.

Attracting people and families: Middlesbrough's development strategy rests on encouraging people to

re-populate urban areas, in order to support brownfield regeneration initiatives and attract and retain 'home grown' talent. This will require a strong green space network that supports a high quality of life, particularly for young families. Population projections for Middlesbrough from 2018- 2043 highlight a decline in all age groups under 70 under current scenarios and highlight the ongoing challenge of 'urban flight' (see Theme 3).

Boosting retail revenues on local high streets: The GBI 'audits' being carried out by Business Improvement Districts (BIDs) in various town centres in London and elsewhere point to the role of GBI in helping to reverse the crisis faced by local high streets, particularly in the wake of the Covid-19 crisis of 2020. GBI will play a central role in the 're-imagining' of town centre spaces that act not only as retail zones but as vibrant meeting spaces and attractive, walkable community assets. The creation of a 'sense of place' in which people want to linger, spending more time and money, will be vital in the recovery and transformation of high streets. This will allow the town to build on the platform of success in districts such as Middlesbrough's developing 'independent quarter' around Baker Street, the strength of which rests in large part on its 'placemaking' value.

intrinsic value, which makes it difficult to place a monetary value on, the UK's 2011 National Ecosystem Assessment estimated that the UK's landscape delivered a minimum of £2 billion per year to the country's economy through social and economic benefits, and ecosystem services.

1.44 As the Tees Valley Green Infrastructure Strategy highlights, "*GI can clearly play a major role in improving*

economic success".

1.45 While over Middlesbrough's early history, investment was firmly driven by the prioritisation of 'grey' infrastructure – with chemical plants and factories lining the banks of the Tees – the challenges of the 21st century demand that investment is now focussed on delivery of the 'green' infrastructure. Ongoing investments such as the Tees AMP

advanced manufacturing park are part of this agenda. However, the GBI network must ensure that it plays a vital role in efforts to meet these 21st century challenges.

1.46 Emerging research points to a number of ways in which GBI investment can support economic investment in the context of Middlesbrough, which are further detailed in **Box 3.1**.

1.47 In particular, Middlesbrough town centre has struggled in recent years from competition from out-of-town centres, falling footfall and, most recently, by the additional impact of the Covid-19 pandemic. The Middlesbrough Strategic Plan (2020-23) notes that “*our once fantastic town centre has been allowed to decay and become a pale shadow of its former self*”. This has brought to the fore the need to rethink the role of the town centre, and how the public realm and wider environment might be rethought to support that role. There is an important role for the GBI network to play in enabling this high street revival process.

Supporting Middlesbrough’s historic environment

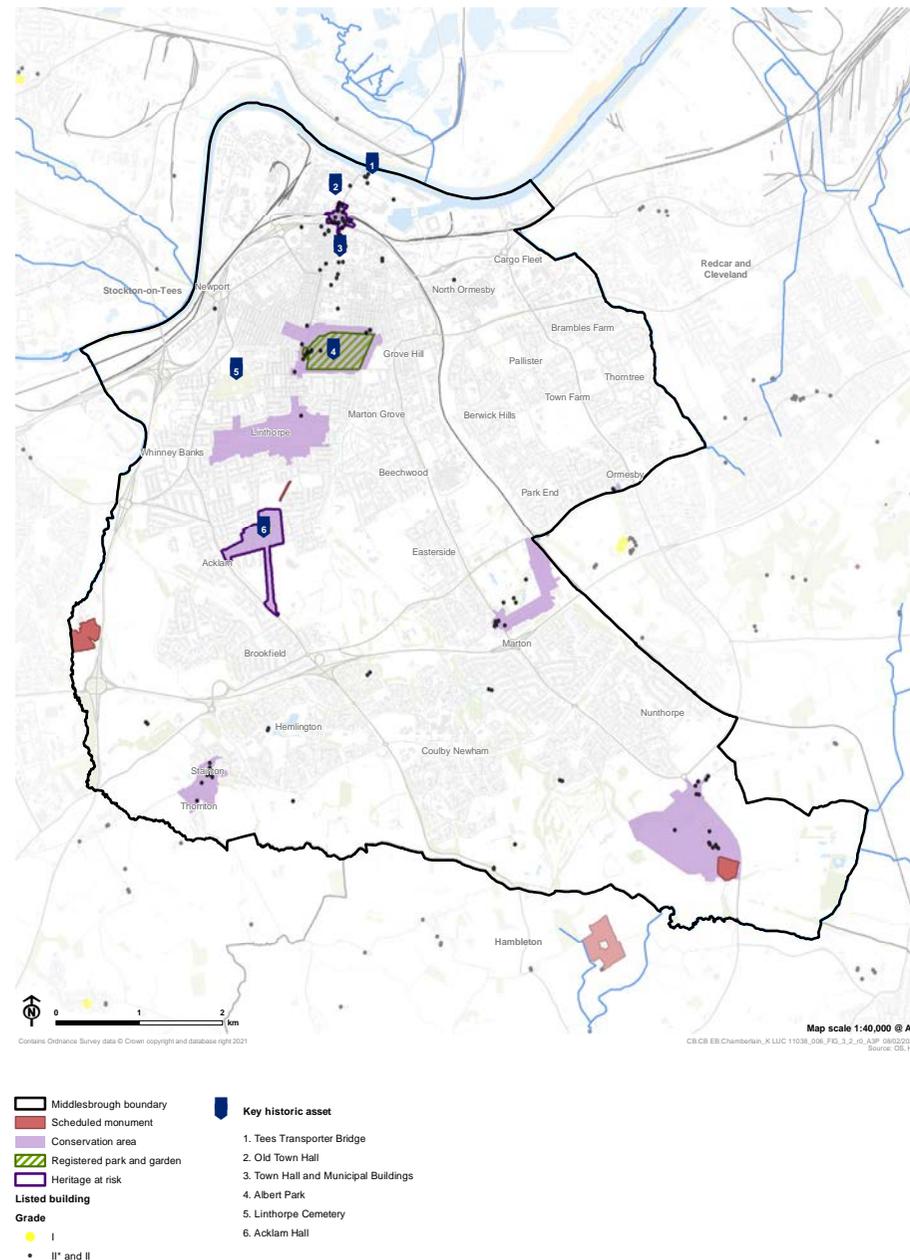
1.48 The Borough’s *One Planet Living* framework places the Borough’s heritage at the heart of its vision of a sustainable future, seeking to increase awareness of, and participation in, Middlesbrough’s culture, local heritage and identity.

1.49 Middlesbrough has been described as the ‘oldest new town’ in the country, thanks to its rapid growth in the late 19th century on the back of the iron and steel industries. As a result, many of the town’s heritage assets are linked to the town’s industrial history.

1.50 The Borough contains eight Conservation Areas and over 120 listed buildings, as shown in **Figure 3.2**. Acklam Hall – lying within the ‘Green Heart’ Green Wedge – is Grade I listed, and Albert Park is recognised as a Registered Park and Garden due to its historic interest. However, the key landmark feature of Middlesbrough is arguably the Tees Transporter Bridge, which opened in 1911 and now lies on the edge of the Greater Middlehaven regeneration zone in the northern edge of the Borough. The bridge not only serves as a heritage asset but (when operational) provides a route to the Saltholme Nature Reserve on the northern side of the River Tees.

1.51 However, both Acklam Hall Conservation Area and the town’s

Figure 3.2: Middlesbrough’s Historic Environment and Key Heritage Assets



Historic Quarter are currently on Historic England's Heritage at Risk register – with the former being highlighted through stakeholder consultation for this Strategy. The stakeholder consultation process carried out for this Strategy also revealed a perception that existing heritage assets are being overlooked due to lack of attention to their setting.

1.52 Part of Middlesbrough's regeneration trajectory will entail the uncovering and re-valuation of the Borough's historic environment assets, helping to establish a sense of distinctiveness and a tangible link with local history. The GBI network plays a central role in this, by providing the setting for heritage assets and creating connections between them and other parts of the Borough. As the Tees Valley GI Strategy highlights, "*many historic features are important in providing informal recreation and enjoyment of open space.*"

1.53 Work is already being done to strengthen the role of heritage assets in the town through the High Streets Heritage Action Zones programme. This work is focussing on reinvigorating the Historic Quarter with its handsome Victorian buildings and includes a significant amount of public realm improvements. Efforts to improve the town centre GBI network should align with work already being done through this programme. Concerns were raised by stakeholders around a need to link heritage assets more effectively (such as Acklam Hall and Ormesby Hall, industrial features such as the Transporter Bridge and the riverside walk) into green space development.

1.54 Middlesbrough's historic environment goes beyond buildings, and touches on the history of the landscape itself. The GBI strategy offers the opportunity to better understand historical land use patterns against a backdrop of a landscape heavily influenced by human activity, and where appropriate to start to 'uncover' natural landscapes and preserve them as part of the network. This might, for example, inform interventions around the historically industrialised Tees River Corridor, and the continued enhancement of the Beck Valleys (see **Theme 5**). However, it can also seek to incorporate

features that give a nod to the Borough's industrial heritage. This helps to reinforce local identity, rather than erode it, when managing change. Preserving these landscapes requires equal levels of attention to that of preserving listed buildings.

Middlesbrough's street tree network

1.55 Trees in urban areas play a number of roles, including removing harmful greenhouse gases from the atmosphere, improving air quality, regenerating soil, providing shelter to wildlife, providing shade during summer and warm temperatures (regulating the urban heat island effect) and enhancing the streetscape. They can also provide visual focus to an area and support high quality, navigable and inspiring urban design and streetscapes.

1.56 Tree cover across the borough is generally low at 11.8% of total land area. There are aspirations within the Council to increase cover to 16%, bringing it more in line with national targets. In late 2019 Middlesbrough Council secured funding from the Urban Tree Challenge (UTC) to plant 1,200 trees across the town, from street trees to community woodlands. This forms part of a wider agenda to plant 10,000 trees across Middlesbrough. These trees are to be targeted in some of the Borough's most deprived wards, including: Newport Park, North Ormesby, Brambles & Thorntree, Berwick Hills & Pallister, and Longlands & Beechwood.

Supporting the visitor economy

1.57 New green spaces or semi-natural spaces can make an important positive contribution to the visitor economy.

1.58 An estimated 10 million visitors visit Middlesbrough each year.² This includes both tourists and business travellers. There is an ambition to grow this, with the Middlesbrough Town Centre Strategy (2019-2023) recommending the launch of a destination marketing campaign. Green routes,



▲ Regenerated public realm around Centre Square.



▲ Murals bring alive Middlesbrough's burgeoning 'independent quarter'.



▲ Acklam Hall, and the Avenue of Trees that create its setting, are LUC | 016 key heritage assets in the GBI network.

connections and 'gateways' will form a key part of this offer, in transforming perceptions of Middlesbrough as somewhere to both visit and invest.

1.59 The Riverside Stadium – within the Middlehaven regeneration zone – is a key destination for the Visitor Economy, and forms a key destination within that zone, as well as an important node on various strategic active travel routes, notably the Teesdale Way. Nearby, the Tees Transporter Bridge, as an iconic symbol of the region's engineering heritage, is a draw for tourists and will benefit from any 'green corridors' connecting it with the Station Area and other sites to the north.

1.60 Within the town centre area, the ambitious refurbishment of Middlesbrough Town Hall has provided a premium event space. However, this needs better support from a more inspiring and better-connected wider public realm that reaches beyond the site itself and connects more seamlessly to the regenerated Station as a 'green gateway'.

Growing new jobs: GBI and employment

1.61 The GBI network also has the potential to directly create jobs itself. There are several areas where this can be the case:

- Ecological restoration work;
- Wastewater management;
- Tree planting;
- Forestry and woodland conservation; and
- Horticulture.

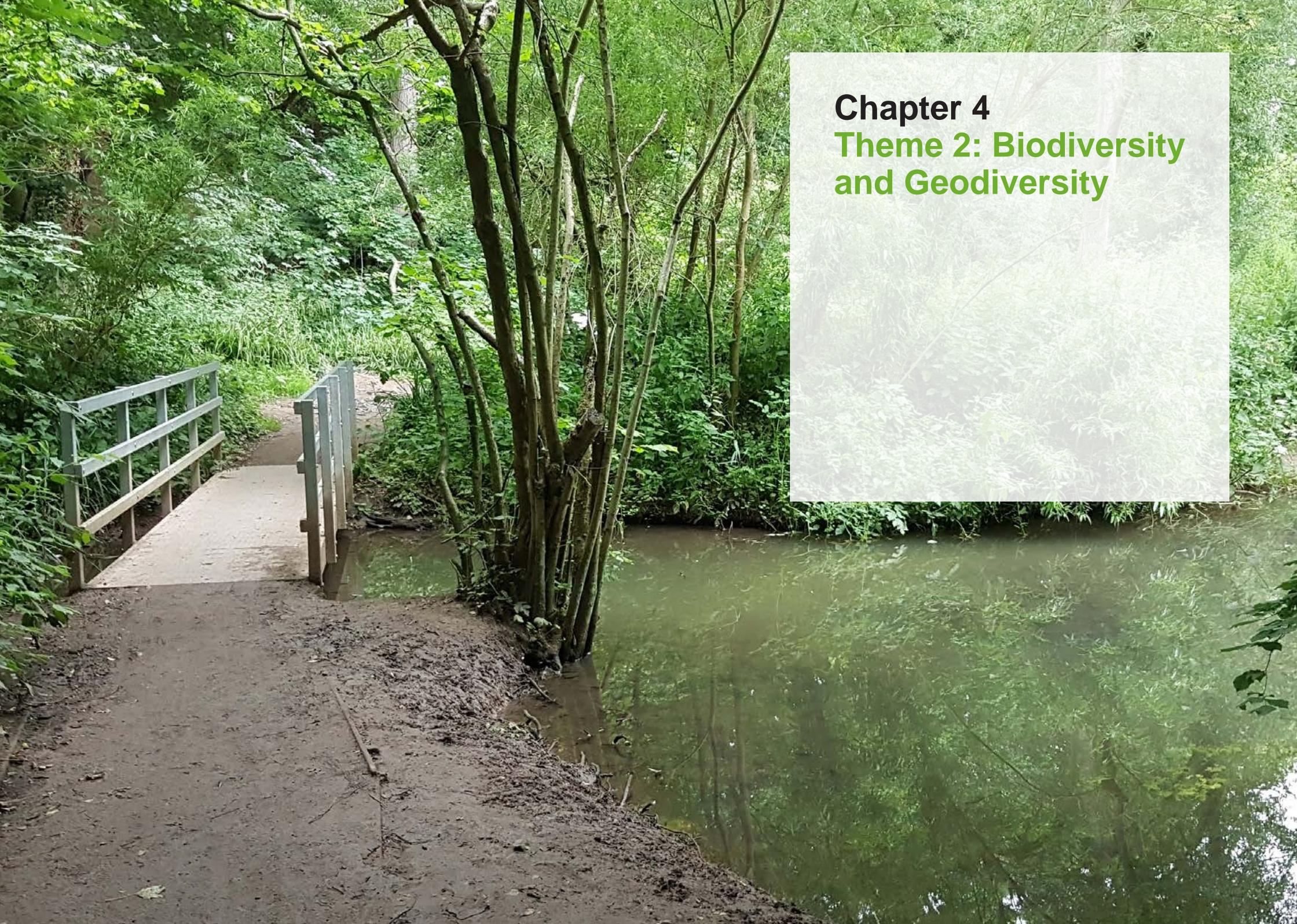
1.62 In particular, the UK government's ambitious targets for woodland creation across the country and the local policies which reflect those ambitions, will require skill building in woodland management. It will also present an opening for using land for tree nurseries which can supply planting efforts with local tree stock (which is currently largely imported).

Summary of Key Issues

- Development which has taken place at Middlehaven to date incorporates some valuable areas of landscape and public realm, however, it is currently disjointed and needs to maximise the GBI network and key green routes.
- Middlesbrough's town centre has struggled in recent years as a result of competition from out-of-town centres and, most recently, by the dramatic impact of the Covid-19 pandemic. The GBI network has a key role to play in ongoing and future efforts to revive the high street and will require collaboration between various actors in both the public and private sectors to support its shifting role.
- Middlesbrough's historic environment, both industrial and otherwise, sits at the heart of the borough's vision for a more sustainable future, and provides an important sense of local identity as well as supporting the visitor economy. However, some of these assets are at risk and there is a sense that they are currently overlooked within the network.
- Tree canopy cover in Middlesbrough's urbanised townscape is low, and street trees will be an important part of the response.
- There is a current perception that heritage assets and key destinations (such as the Riverside Stadium and Tees Transporter Bridge) have great potential to support the Borough's visitor economy but are currently poorly linked together.

Emerging Opportunities

- **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.



Chapter 4
Theme 2: Biodiversity
and Geodiversity



Chapter 4 Theme 2: Biodiversity and Geodiversity

Middlesbrough is a landscape heavily modified by human activity, and today the landscape presents a unique mosaic ranging from industrial and residential areas to valuable wildlife habitats, particularly along the River Tees Corridor and Beck Valleys. Against the backdrop of a global biodiversity crisis, actions taken under this Strategy should focus on both protecting existing habitats and linking them together to form the basis for a Nature Recovery Network.

A network-led approach

1.63 A network-led approach to understanding the character, distribution and condition of our ecological assets underpins our ability to develop a vision for its recovery. This vision is one of thriving wildlife, which is resilient to the pressures of climate change, and which reflects local character whilst knitting into the wider regional network.

1.64 Key drivers include the Government's 25 Year Environment Plan (25YEP) 2018, which calls for a national Nature Recovery Network as “an expanding and increasingly-connected network of wildlife-rich habitat”, with Local Nature Recovery Strategies (LNRSs) designed to deliver this at the sub-regional scale. The ambitions of the 25YEP include the creation or restoration of 500,000ha of wildlife-rich habitat outside the protected site networks by way of supporting “thriving plants & wildlife”. In broad terms, this would roughly translate into the creation of an additional 113 hectares of habitat within Middlesbrough.

1.65 The UK's Planning Practice Guidance (PPG) aspires for planning authorities, neighbourhood planning bodies and other partners to “work collaboratively with other partners to develop and deliver a strategic approach to protecting and improving the natural environment based on local priorities and evidence”. It states that together “they need to consider the opportunities that individual development proposals may provide to conserve and enhance biodiversity and geodiversity and contribute to habitat connectivity in the wider area including as part of the Nature Recovery Network”, as described in the 25YEP.

1.66 The National Planning Policy Framework (NPPF) also states that ‘planning policies and decisions should “contribute to and enhance the natural and local environment by...

minimising impacts on and providing measurable net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.”

1.67 This GBI Strategy has an important role in identifying the opportunities to strengthen the nature network, ensuring optimal value for biodiversity and the ecosystem services this provides.

1.68 The ecological character of Middlesbrough is principally driven by the River Tees Corridor and the tributary Beck Valleys landscape areas. Both were identified within the wider Tees Valley network in 2017 (see **Figure 4.1**). Two broad opportunity areas were identified within the borough – in the industrialised north within the meander of the Tees, and in the rural southeast toward Langbaugh Ridge.

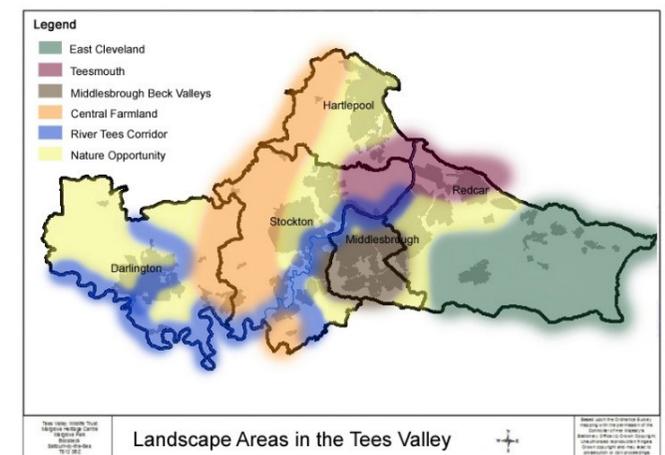


Figure 4.1: Biodiversity Opportunity Areas within Middlesbrough as part of the wider Tees Valley network (from Tees Valley Nature Partnership)

1.69 Within the national Natural England nature recovery network mapping shown in **Figure 4.3**:

- Both the Tees corridor north of the A66 and the ancient woodland corridor of Stainsby Beck in the west, are mapped as Network Enhancement Zone 2, indicating land which immediately joins existing habitat patches where habitat creation is likely to help reduce the impacts of fragmentation.
- Extensive stretches of Network Enhancement Zone 1 (unlikely to be suitable for habitat recreation but where other types of land management or GBI interventions may help reduce the effects of fragmentation) extend through the southern belt at Stainton/Thornton in the southwest and through Nunthorpe in the southeast.
- Data on the potential for woodland connections highlights a number of linear areas (largely along the Beck Valleys), which would address habitat fragmentation as well as helping to address flood risk. This is considered further under **Theme 5**.

1.70 Key to the local Nature Recovery Network will be the need to bring habitats into areas which are currently deficient – principally in Middlesbrough these areas include those of the built environment but also those of intensively managed agriculture on the fringes.

Middlesbrough's existing network of designated sites

1.71 Given its heavily urbanised nature, Middlesbrough has a relatively sparse coverage of sites designated for conservation. However, whilst some may be of local nature conservation value, their value may be elevated owing to the scarcity of local coverage. Connections to sites beyond the Borough's boundaries are important to consider as part of this Strategy.

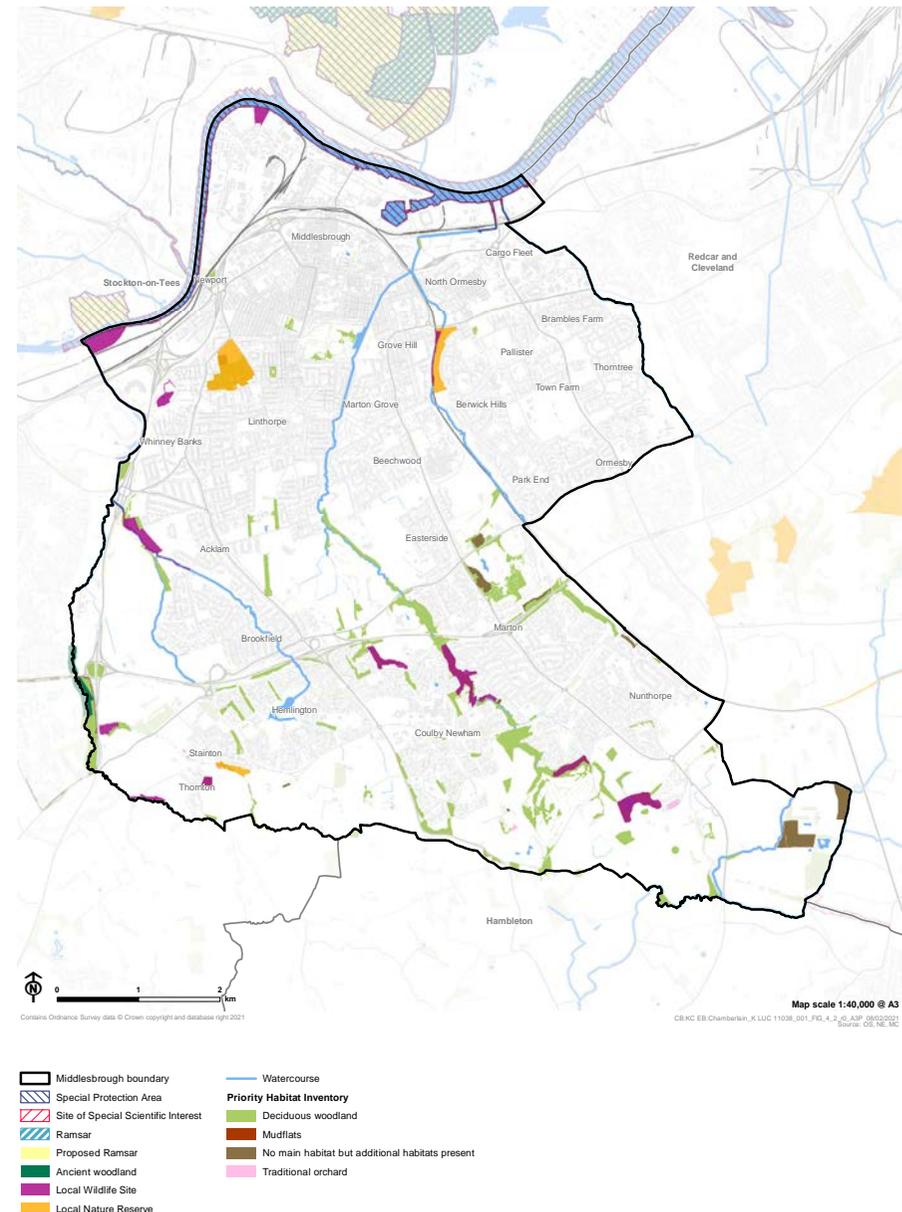
1.72 As shown in **Figure 4.2**, the River Tees, which flows along the northern boundary, is internationally recognised as a wetland, and for the bird assemblage it supports throughout the year. At the south eastern extent, Middlesbrough abuts the Langbaugh Ridge SSSI, identified as being of national geological importance. This is separated from the town by open farmland interspersed with copses and becks.

1.73 Within the Borough, there are nineteen designated Local Wildlife Sites (LWSs) and three Local Nature Reserves (LNRs), also shown on **Figure 4.2**. These form an important part of the wider network that supports the internationally designated sites along the Tees Estuary. The majority lie along the Tees but those more widespread include:

- Linthorpe Cemetery LNR and Berwick Hills LNR within the urban heartland, and;
- Stainton Quarry LNR on the southern rural fringe.

1.74 There are no geological designations (such as Local Geological Sites) within the Borough, however features alongside Stainsby Beck lie

Figure 4.2: Biodiversity assets in and around Middlesbrough



on the boundary with neighbouring Stockton Borough.¹

1.75 In 2018/19 the Council reported to DEFRA that 72% of Local Wildlife Sites were under positive management.

River Tees Corridor

1.76 The River Tees Corridor is an important route for community and migrating fauna and home to locally important habitats and species. The river is likely to be an important fly-way for birds, so this is where the greatest ecological returns are likely to be gained.

1.77 The whole of the River Tees along the north borough boundary forms a strategic wildlife corridor, part of the Teesmouth and Cleveland Coast SSSI, SPA and Ramsar designation which extends out to the coast and north, inland, to wetland habitats within the adjoining Stockton-on-Tees local authority area. The designation was extended in 2020 and forms part of a connected ecological network within the Boroughs of Hartlepool, Stockton and Redcar & Cleveland, highlighting the need for cross-boundary cooperation in its enhancement.

“Intertidal habitats are really important. The Tees has been modified over 100 years and much of this habitat has gone. There are opportunities to expand this habitat.”... “The River Tees used to be dead through Middlesbrough. It has improved massively since then and there is scope for more improvement in the long term.”

- Stakeholder comments.

1.78 With the 2020 extension, the Tees Estuary became a single, landscape-scale designation of nearly 3,000 hectares, to support its contribution to the ‘blue belt’ of marine protected areas around England. The protections cover areas of sand dune, saltmarsh, mudflat, grassland, lagoons and estuarial waters, along with the qualifying species they support. As such, it has been described as *“one of England’s most*

surprising areas for wildlife”.²

1.79 There is one sizeable relic of saltmarsh along the old route of the River Tees adjacent to the A19. Stretches of intertidal mudflats are present along the length of the River Tees within the borough boundaries, and there is one site for open mosaic habitat on previously developed land at Maze Park on the southern bank of the River Tees, lying in the west of the Borough.

1.80 The designated habitats in large part depend upon water quality. Middlesbrough Council has a duty to have regard to the Northumbrian River Basin Management Plan and to ensure the protection and improvement in quality of the water environment. This is also in accordance with the overall objective of the Water Framework Directive to achieve *“good ecological status”* in all water bodies (including surface, ground and coastal waters) and not allow any deterioration from their current status. The water quality of our rivers is now recognised to be a national priority.

1.81 The coastline in the wider area is influenced by dynamic processes of sediment movement. Protection of intertidal habitats through managed realignment has been suggested in previous studies. 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.

1.82 The 2007 North East Wetland Feasibility Study³ noted that important wetlands had been subject to significant historical decline through land drainage and development pressures. The Study recognises the role of wetland habitats and soil processes in cycling materials in the aquatic environment and helping to remediate poor water quality. The Study identifies a number of priority areas for wetland restoration taking into account superficial geology, soil, flood, etc, which in Middlesbrough are largely concentrated along the Beck Valleys and on the Borough’s western boundary.



▲ The Tees Corridor viewed from the Teesdale Way.



▲ The Beck Valleys: Marton West Beck North



▲ The Southern Farmland: Stainton Vale.

¹ Tees Valley Wildlife Trust (2018) LWS and LNR in Middlesbrough, references two geological features which fall within the boundary of Stainsby Wood LWS, although these do not form part of the site description.

² Natural England (May 2019), ‘Press release: Estuary wildlife of the River Tees gets increased protection’ [Online] Available at: <https://www.gov.uk/government/news/estuary-wildlife-of-the-river-tees-gets-increased-protection>

³ Environment Agency & RSPB, 2007.

The Beck Valleys and Southern Farmland Swathe

1.83 Aside from the international importance of the River Tees Corridor, most of the priority habitats and species are located within the Beck Valleys, often in mosaics of different habitats, as shown in **Figure 4.2**. The Becks act as green corridors, providing links from the rural hinterland into the urban area, flowing northwards into the River Tees.

1.84 This mosaic of habitats takes in woodland, wood pasture, meadow and species-rich grasslands. Ancient and semi-natural woodland is present in Stainsby Wood on the slopes of Stainsby Beck along the western borough boundary. Broadleaved mixed woodland is present along Marton West Beck at Fairy Dell, on the steep valley sides of Newham Beck, at Grey Towers Park (formerly Poole Hospital), and in Thornton Wood south of Hemlington. The quality of woodland is known to be varied, which should be reflected in site-specific recommendations for positive management and the extent of public access, such as Ormesby Beck which in select stretches is subject to excess disturbance. Some steeper valleys, for example, are more species-rich and may best be served by maintaining low levels of disturbance.

1.85 Lowland meadow is present within the complex of Bluebell Beck, although not necessarily managed to optimise biodiversity. Other neutral grasslands that are species-rich are found scattered along the Beck valleys. Reed bed is surprisingly uncommonly recorded; only within the Berwick Hills and Ormesby Beck Complex.

1.86 Outside of the beck valleys, woodland is relatively sparse. Planting opportunities are widespread – ranging from school fields to residential areas. Woodlands planted in the 1990s (including plantation woodland in the beck valleys) are now well-established and would benefit from detailed review to prescribe management, such as creation of glades, selective thinning, further expanding species diversity (to protect against new pests and diseases such as ash die-back) and the delineation of recreational access (to maintain understory structure and groundcover).

1.87 A good number of remnants of both traditional orchards and priority ponds are found scattered across the farmland in the south of the borough. The orchards vary in size and condition and are now maintained mainly for domestic use. The ponds are home to common toad, great crested newt (found in the south west of the borough) and water vole (hotspots for water vole on Marton West Beck, Ormesby Beck and Middlebeck). Otters have been recorded on all becks south of the River Tees around Middlesbrough. The dingy skipper and grayling butterflies are also found in the urban grassland at Maze Park.

Habitat connectivity and the capacity for growth

1.88 Rather than ‘islands of biodiversity’, sites across and beyond the Borough boundaries should be thought of as an ‘ecological network’. To be effective, this network should be “*bigger, better and more joined up*”.⁴ This is important not only to support thriving wildlife now, as aspired to in the 25YEP, but to accommodate an ecological network resilient to climate change. This requires diverse and connected habitats to support the redistribution of species and changing assemblages in response to an increasingly extreme and fluctuating climate.

1.89 Natural England highlights the need to link green corridors in urban areas such as Middlesbrough to form a strategic green infrastructure network, and to address habitat fragmentation. **Figure 4.3** shows that areas of Priority Habitat within Middlesbrough are particularly sparse and isolated currently in the more urbanised north of the borough, despite the presence of extensive areas of important habitat and green space just beyond the Borough boundaries - south toward the North York Moors, north toward Hartlepool, and east toward the coastal areas.

1.90 The Tees Valley GI Strategy (Principal Benefit B3) seeks to maintain and enhance biodiversity and help to reverse

habitat fragmentation by improving the links between sites, as well as helping to cope with the effects of climate change through the creation of new and/or compensatory habitats.

1.91 The emergence of mandatory Biodiversity Net Gain (BNG) as part of the Draft Environment Bill offers the opportunity for securing biodiversity enhancements as part of future development, helping to contribute to a Nature Recovery Network. The requirement for 10% BNG and legacy for 30 years management, is stipulated in the Draft Bill is anticipated to become mandatory in late 2022. The network approach to support thriving wildlife, together with the need to deliver BNG alongside development, will be a vital component of the GBI Strategy.

1.92 Local policy regarding BNG should recognise the value of intertidal habitats. Acknowledging the difficulty in creating these locally distinct habitats, and potentially allowing these to score highly, should not only safeguard their protection but incentivise strategic enhancement of the network.

“Scrub land often gets removed for something that is considered to be ‘better’.”

- Stakeholder comment.

Permeability – of people and places

1.93 The issue of habitat fragmentation and isolation is greatest within the dense urban areas of Middlesbrough. This restricted permeability applies not only to wildlife within the built environment, but to local residents able to benefit from access to nature. The latest draft of the evolving BNG standard requires a social component to the valuation of biodiversity.⁵ This is of particular relevance to Middlesbrough in assessing current and future social need for a proposed development and applies to both terrestrial and freshwater habitats.

⁴ The Lawton Review (2010), commissioned by the government as an independent review of the country’s wildlife sites, and which continues to underpin the approach to the design and delivery of nature networks today.

⁵ Draft BS8683: ‘Process for Designing & Implementing BNG’.

Support for urban pollinators

1.94 The UK's National Pollinator Strategy (2014) highlights the importance of the country's pollinators in underpinning our wider ecosystems and describes their decline in numbers and diversity in recent years. It asks for the public, landowners, voluntary groups, businesses and local authorities to do their part to help halt the decline. Note that encouragement for pollinators is to support, not detract from, the pressing needs to address declining floristic diversity in grasslands across the borough.

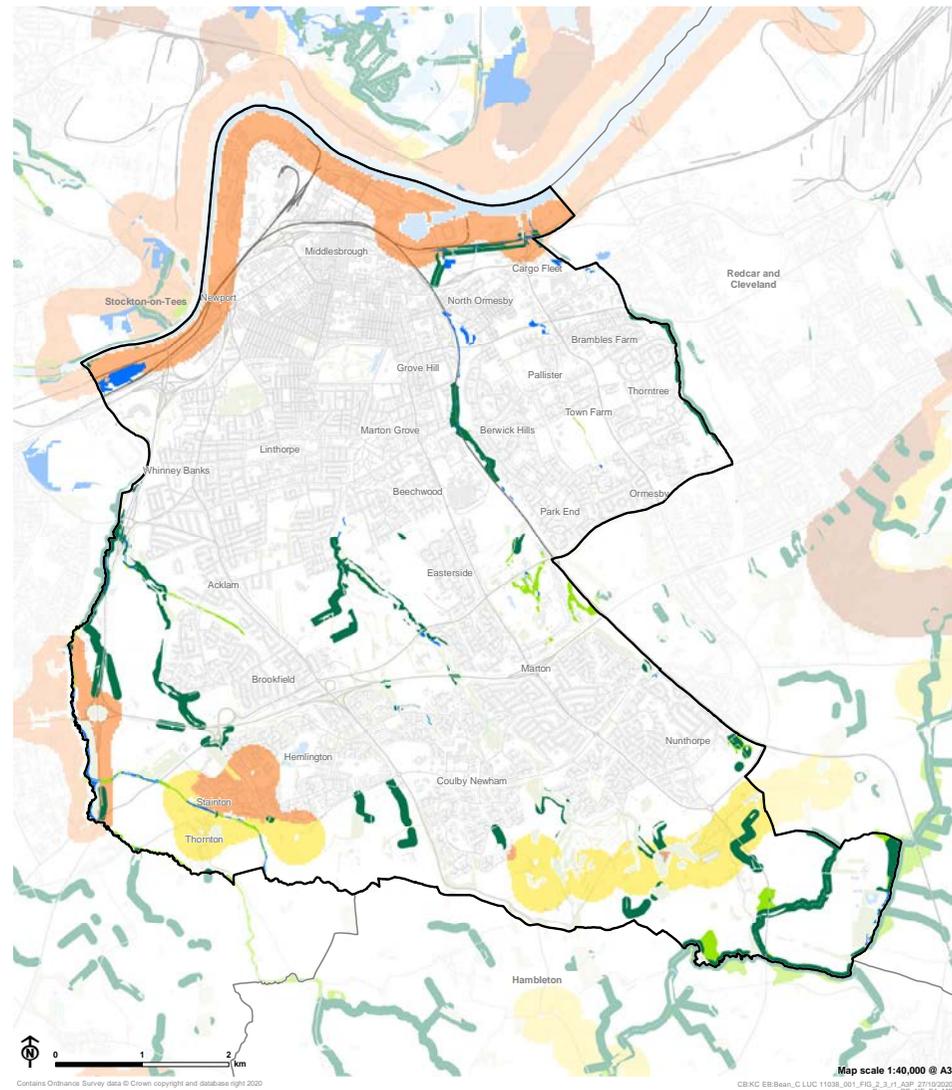
1.95 The 2014 Strategy seeks to achieve “more, bigger, better, joined-up, diverse and high-quality flower-rich habitats (including nesting places and shelter) supporting our pollinators across the country.” Lower intensity management to encourage structural and species diversity is also integral to encouraging pollinators. This corresponds to the term ‘messiness’ in current guidance for developing nature networks.⁶ Recognising that this ‘rewilding’ approach means green spaces (particularly grassland and scrub) will look different throughout the seasons, requires support through education and engagement with local communities – urban or agricultural – to foster ownership.

“Education is key - areas of bramble and overgrown look unsightly for people but are great habitats. Notices explaining that areas are left for wildlife should be put up. Scrub land is really important; mosaics of habitat are key.”

- Stakeholder comment

1.96 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, and to support wider ecosystems. These corridors should, where possible, provide links to the cross-boundary Buglife B-lines.⁷ Positive management to benefit flora and pollinators has been carried out in cemeteries (such as Linthorpe) as well as roadside habitats (including the A19 and Parkway) across Middlesbrough in recent years, targeting various species or conservation objectives. In partnership with the

Figure 4.3: Ecological connection opportunities in Middlesbrough



⁶ Natural England (2020) Research Report: Nature Networks Evidence Handbook. NERR081. ‘Messiness’ is referred to as one of the ‘rules of thumb’

⁷ Buglife (n.d), Our Work: B-Lines [Online] Available at: <https://www.buglife.org.uk/our-work/b-lines/>

Council, Thirteen Housing Group is delivering a programme of over 35,000m² wildflower grassland through collaboration in providing equipment, raw materials and resourcing. Provision of 10,000 fruit trees is also in progress to complement the Borough-wide tree planting programme led by Groundwork.

“The highest profile green spaces are road verges and shared green spaces. These should be given a high priority - to celebrate cultural heritage and as clear signal of the town’s future green agenda.”

- Stakeholder comment.

“There is an issue of the ‘short back and sides’ cut. Acceptance could be improved with more public/councillor education. Education is key - untidiness is reported and then addressed by the council.”

- Stakeholder comment.

Summary of Key Issues

- The Tees Valley River Corridor has been industrialised and modified in the past but is still home to many important and vulnerable habitat types. The protections cover areas of sand dune, saltmarsh, mudflat, grassland, lagoons and estuarial waters, along with the populations they support.
- The Beck Valleys provide a focus for the Borough's priority habitats and species, and form important green corridors integrating urban and rural areas.
- Across the north of the Borough, the built environment dominates, leaving a relatively impoverished ecological resource. The nature, extent and connectivity of ecological features present is typically limited, so the ecosystem function is inherently restricted to some degree.
- In the south east of the Borough, semi-natural habitats are more extensive, however expansion and connectivity, both within and outside the Borough, are still required.
- Creating connections between isolated patches of biodiversity will support the Nature Recovery Network to provide greater resilience to the impacts of climate change.
- Our national decline in pollinators requires action from Local Authorities in providing well-connected and high-quality pollinator habitats through both the urbanised and intensively farmed landscapes within Middlesbrough.

- The delivery of local off site Biodiversity Net Gain (BNG) in a geographically constrained borough will be challenging at larger scales. 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.
- Educational resources play an important role in gaining acceptance of changes to the landscape to improve habitat value.

Emerging Opportunities

- **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.¹
- **BD2:** Restoration of the Beck Valleys as green corridors with more robust supporting habitat 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.

¹ Note that such opportunities need to be led by discussion with the Council flood defence team to coordinate efforts between habitat creation or designation and the long-term planning of hard and soft flood defences.

A photograph of a park scene. In the foreground, a paved path curves from the bottom left towards the center. To the left of the path is a black trash can. In the middle ground, a stone fire pit sits on a small patch of ground. To the right, a large, white, stylized dinosaur skeleton sculpture stands on a circular base. The background features a lush green lawn, several trees, and a blue sky with light clouds. A semi-transparent white box in the upper right corner contains the chapter and theme text.

Chapter 5
Theme 3:
Reconnecting
Communities with
Nature



Chapter 5

Theme 3: Reconnecting Communities with Nature

The success of Middlesbrough’s vision for the future relies not only on inward investment, but also on creating ‘liveable neighbourhoods’. This will bring a focus on the need for access to high quality green spaces of various types within urban areas, to support health and wellbeing. In the 21st century, this will mean responding to the need for a reconnection with nature from an early age – including where our food comes from – and for rebuilding pride in place and creating an open space network that serves all generations and communities.

1.97 Middlesbrough’s ambitious physical and economic regeneration aims are outlined under **Theme 1**. However, it is vital that there is a robust, people-focused approach to social regeneration which is built on an agenda of transformational placemaking.

1.98 One of key aims of the wider Tees Valley GI Strategy revolves around the links between green infrastructure and ‘liveability’, which it describes as “*essentially about creating places where people choose to live and work*”, attracting people as well as business.

1.99 The GBI network should also underpin the health and wellbeing of those already living in the Borough, particularly given the acute challenges that Middlesbrough faces in health and wellbeing.

Health and wellbeing – narrowing the gap

1.100 There is a notable gap between the health level of Middlesbrough residents and the national average, as well as a gap between certain neighbourhoods within Middlesbrough.

1.101 This is a crucial challenge for the GBI network to address, given that emerging research is finding an increasingly robust link between environmental quality and public health, and which identifies poverty as a health risk.¹ Particularly in areas of high deprivation, the green and blue network can play a vital role in regulating the core ‘environmental stressors’ that disproportionately fall on the poorest communities in the UK.

¹ Centric Lab (2020), ‘Covid-19 and Biological Inequality; a London Data Study’. [Online] Available: <https://www.thecentriclab.com/covid-19-poverty-a-london-data-study>

“We will work with communities to improve local health and wellbeing, focusing in particular on tackling obesity, poor mental health and substance misuse.”

- Middlesbrough Strategic Plan (2020-2023)

Physical health

1.102 On the Health Deprivation and Disability sub-domain of the UK’s Indices of Multiple Deprivation (2019), Middlesbrough is ranked as the 6th most deprived local authority in the country.. This deprivation is mirrored in the health of residents. From 2016-18 life expectancy at birth in Middlesbrough stood at 75.3 for males (against a national average of 79.3) and 80 for women (against an average of 82.9). For males, this figure has actually been in decline since 2011-2012.²

1.103 As can be seen from **Figure 5.1**, socio-economic deprivation in Middlesbrough is concentrated in the north and east of the Borough, where the existing green and open space network is also at its weakest.

1.104 In terms of physical activity, Middlesbrough’s Playing Pitch Strategy (2019) identifies that 27.3% of residents aged 16+ are inactive, slightly above the national level (25.6%). In particular, it highlights spatial ‘hotspots’ of inactivity in North Ormesby, Berwick Hills and Coulby Newham.

1.105 One priority in tackling poor health is to increase opportunities for exercise and encourage more active lifestyles. There are some existing resources available in Middlesbrough to encourage walking for health, including

² ONS (2019), ‘Life expectancy (LE) at birth and age 65 by sex, UK, 2001 to 2003 to 2016 to 2018’.

a Heritage and Health Trail at Linthorpe cemetery and a pack of Health Walks provided by the Council.

“The opportunities to benefit from spending time in the natural environment are currently not open to everyone, which can contribute to health and other inequalities”

- Natural England.³

Mental health

1.106 A 2018 report by Public Health England reasserts that protecting and improving our mental health is as important as protecting and improving our physical health.⁴ There is also a growing body of evidence finding strong links between access to nature and both our physical and mental wellbeing, particularly in largely urbanised societies like that of the UK.⁵

1.107 The PHE report highlights some challenges which apply in particular to the north east, including: the mental health of pregnant women and new mothers; vulnerabilities among children; and higher levels of substance misuse and self-harm than average. It calls for a *“more integrated approach to population health, tackling the determinants of poor physical and mental health.”*

1.108 Most recently, the global Covid-19 crisis beginning in 2020 highlighted the importance of both access to nature and resilient communities in overcoming challenging times.

3 Natural England (2017), ‘Good practice in social prescribing for mental health: the role of nature-based interventions’.

4 PHE (2018) ‘State of the North East 2018: Public Mental Health and Wellbeing’.

5 White et al (2019), ‘Spending at least 120 minutes a week in nature is associated with good health and wellbeing’, *Nature Journal: Scientific Reports*, 9.

Communities have turned to natural spaces and the open space network to exercise, for solace and for stress relief, particularly where private open space is limited. Open space and nature’s importance as a restorative influence has become starker than ever.

“The Covid-19 pandemic has given us a real emphasis on how to value and use outdoor spaces, for example for park walks or a book club held outside. The drive is coming from the community.”

- Stakeholder comment

1.109 The existing ‘ExtraLife’ initiative, managed by Middlesbrough Council, supports the promotion of health and wellbeing within various organisations, and is an important platform for future activity.

Air quality

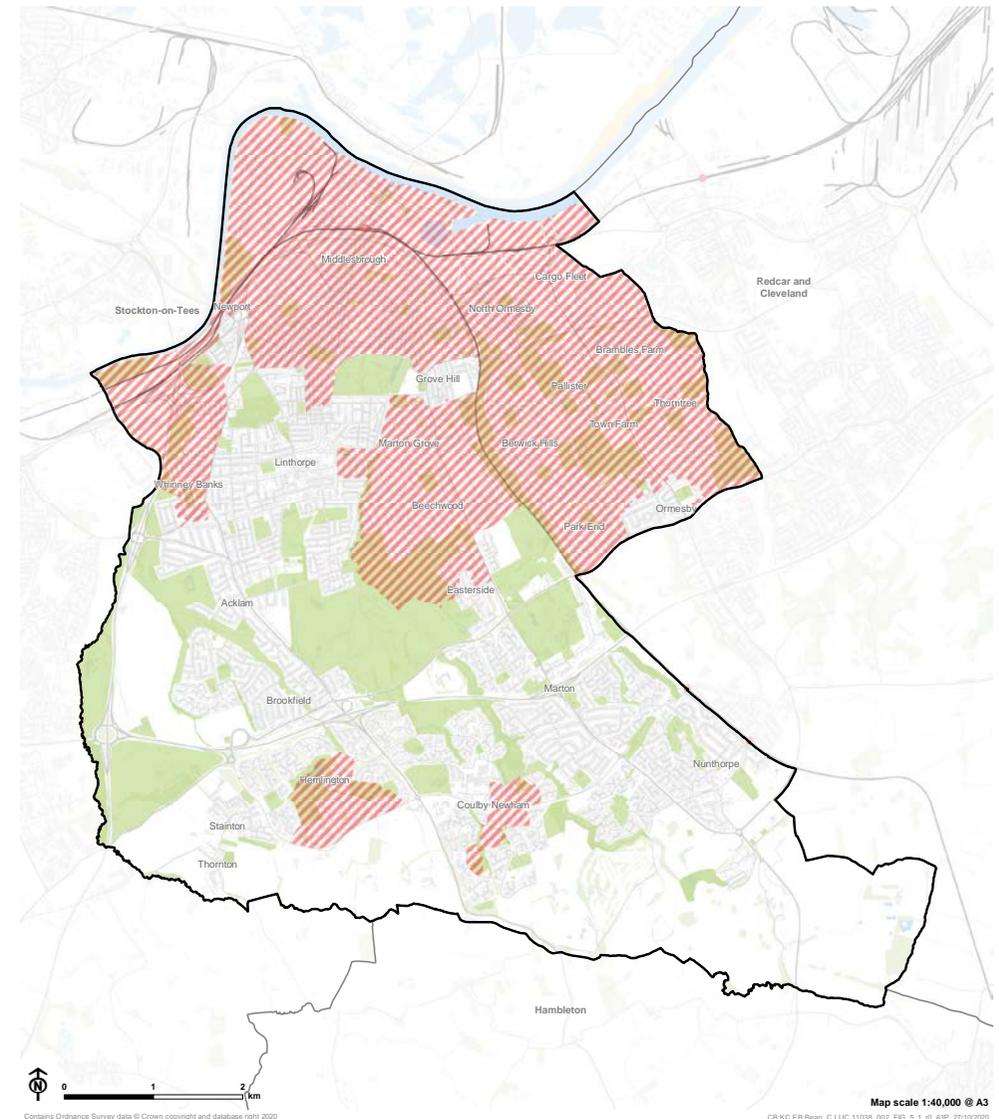
1.110 Evidence from Public Health England (PHE) has highlighted poor air quality as the largest environmental risk to public health in the UK, which also highlights interventions such as active travel routes and well-designed urban greening schemes as key ways to mitigate the impact.⁶ Historically, poor air quality was a legacy of Middlesbrough’s industrial activity. However, today the key source of air pollution is traffic related.

1.111 There are no designated Air Quality Management Areas (AQMAs) currently in Middlesbrough and PM¹⁰ concentrations do not currently exceed legal limits for the UK or EU.⁷

6 Public Health England (2019), Review of interventions to improve outdoor air quality and public health. -

7 Current limits for PM¹⁰ (particulate matter) in the UK are an annual mean of 40µg/m³. See: https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update.pdf

Figure 5.1: Deprivation patterns in Middlesbrough



Middlesbrough boundary
 Green infrastructure asset
 0-10% most deprived (IMD)

However **Figure 5.3** highlights a number of air pollution ‘hotspots’ across the Borough, largely concentrated around:

- The A19 and A66 road networks in the west of the Borough (and to a lesser extent the A172 in the south);
- The denser north of the Borough, surrounding the town centre and residential/industrial areas such as North Ormesby.

The state of Middlesbrough’s green space network

Overview

1.112 The health and wellbeing of communities is underpinned by the green space network they have access to and whether there are any barriers in place to accessing that network. All communities should be able to gain easy access to areas of open space on their doorstep.

1.113 Middlesbrough benefits from some highly valued and successful green spaces – particularly the Borough’s historic Parks and Gardens and the Beck Valleys, which act as linear green spaces. However, given the urbanised nature of the landscape within the Borough’s boundaries, there is a need to maximise benefits from existing green spaces. In particular, **Figure 5.1** illustrates the fragmented nature of the GBI network running northwest to southeast and the lack of connectivity linking the southeast to the northeast.

1.114 The Borough’s 2017 Open Space Needs Assessment highlights some areas of decline in the quality of green spaces since 2012, with the exception of parks and public gardens (such as Albert Park and Stewart Park) and the Beck Valleys. The quality deficit is largely found in the ‘in between’ spaces which are generally amenity and natural green spaces, play areas and youth activity areas.

1.115 The Middlesbrough Open Space Needs Assessment (2017) highlights that there is a total of 998 hectares of Open Space in the Borough, of which 77% is publicly accessible. This network of spaces is shown in **Figure 5.2**, where the

varying condition of those spaces is also highlighted. One of the key considerations of Middlesbrough’s green space network is not necessarily the quantitative provision but the quality and condition of those green spaces. While a number of parks are in good condition and highly valued by the local community, the Open Space Needs Assessment shows that some areas of green space are currently under-valued, poor in quality and in many cases used for fly-tipping and a focus of anti-social behaviour.

1.116 More specifically, the assessment indicates that whilst more formal parks and gardens are kept in good condition and highly valued, there is an urgent need for greater attention to the more dispersed areas of amenity green space which are woven into the urban fabric of the town, supporting the Parks and Gardens as part of the wider network.

“We have a legacy of ‘landscape planting’ that is not performing for wellbeing.”

- Stakeholder comment.

1.117 The Housing Local Plan (2014) outlines a planned network of multi-functional green space and inter-connecting links. These are illustrated on **Figure 5.2** and broadly consist of:

- The Green Wedges (including Middlesbrough’s ‘green lung’ dividing the east and west of the borough);
- A series of high-quality public parks in urban areas (including Stewart Park, Albert Park);
- The Beck Valleys;
- The River Tees Frontage (including the Teesdale Way walking route and series of parks including Teessaurus Park and Maze Park); and
- The “country park” to be delivered around the Stainsby development on the borough’s western boundary.



▲ Lake area within Albert Park, a highly valued formal green space

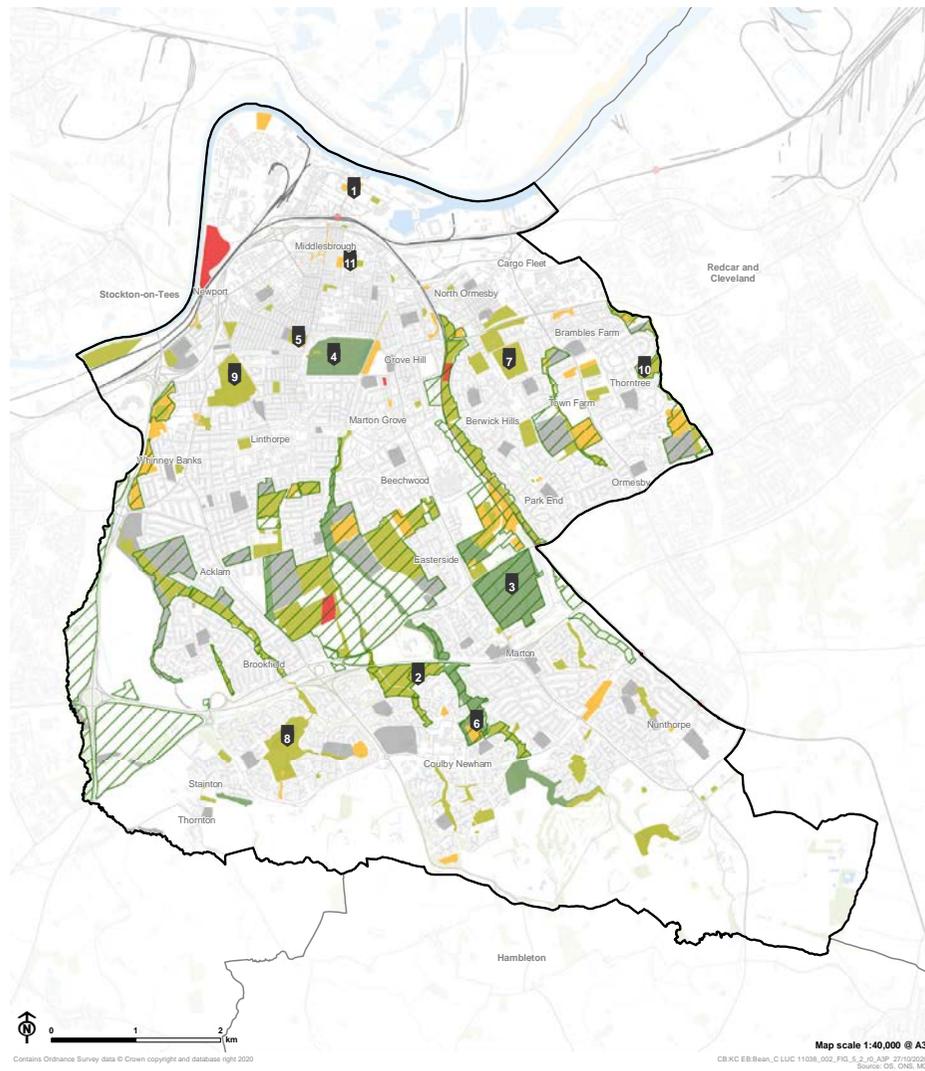


▲ Hemlington Lake in the south of the Borough provides a recreational resource, but there is room for enhancement.



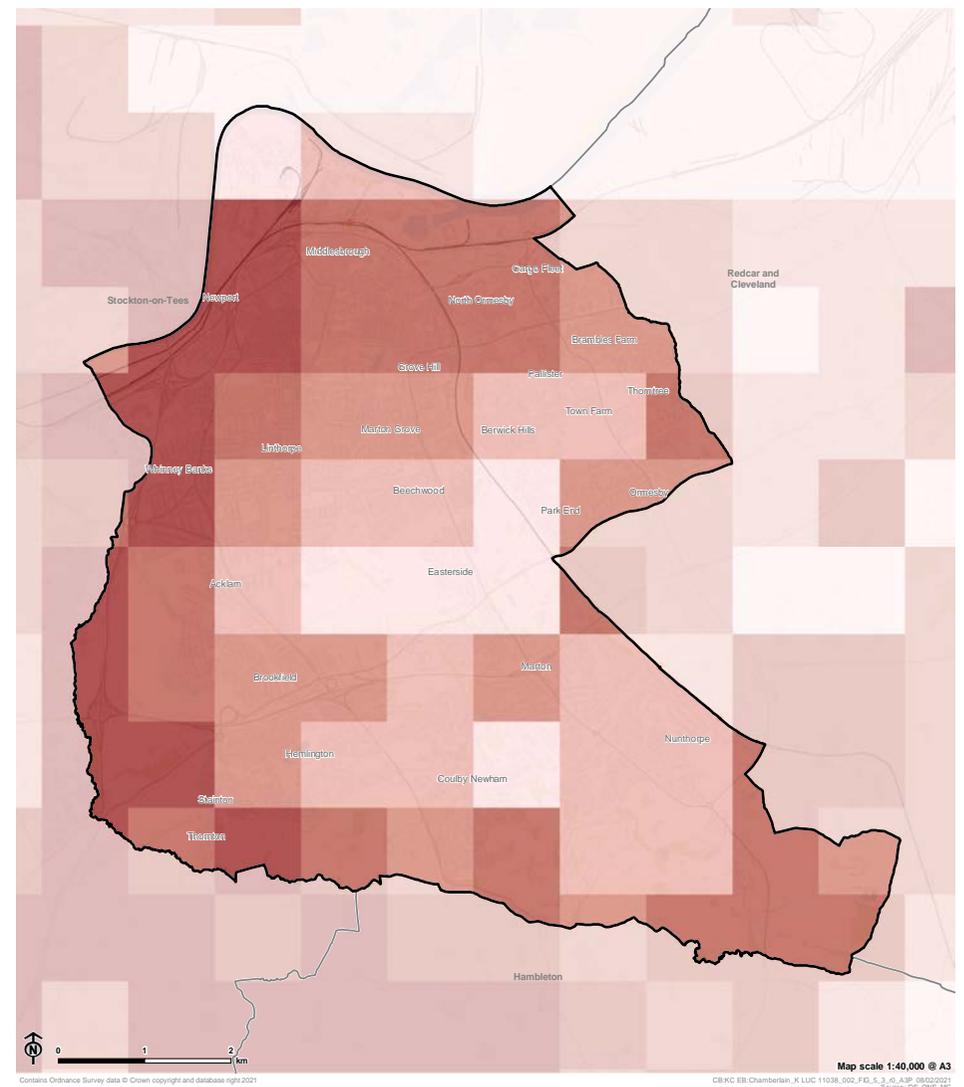
▲ Entrance to Middlehaven Urban Park - an example of high quality green space within an urbanised area.

Figure 5.2: Middlesbrough's green space network and condition



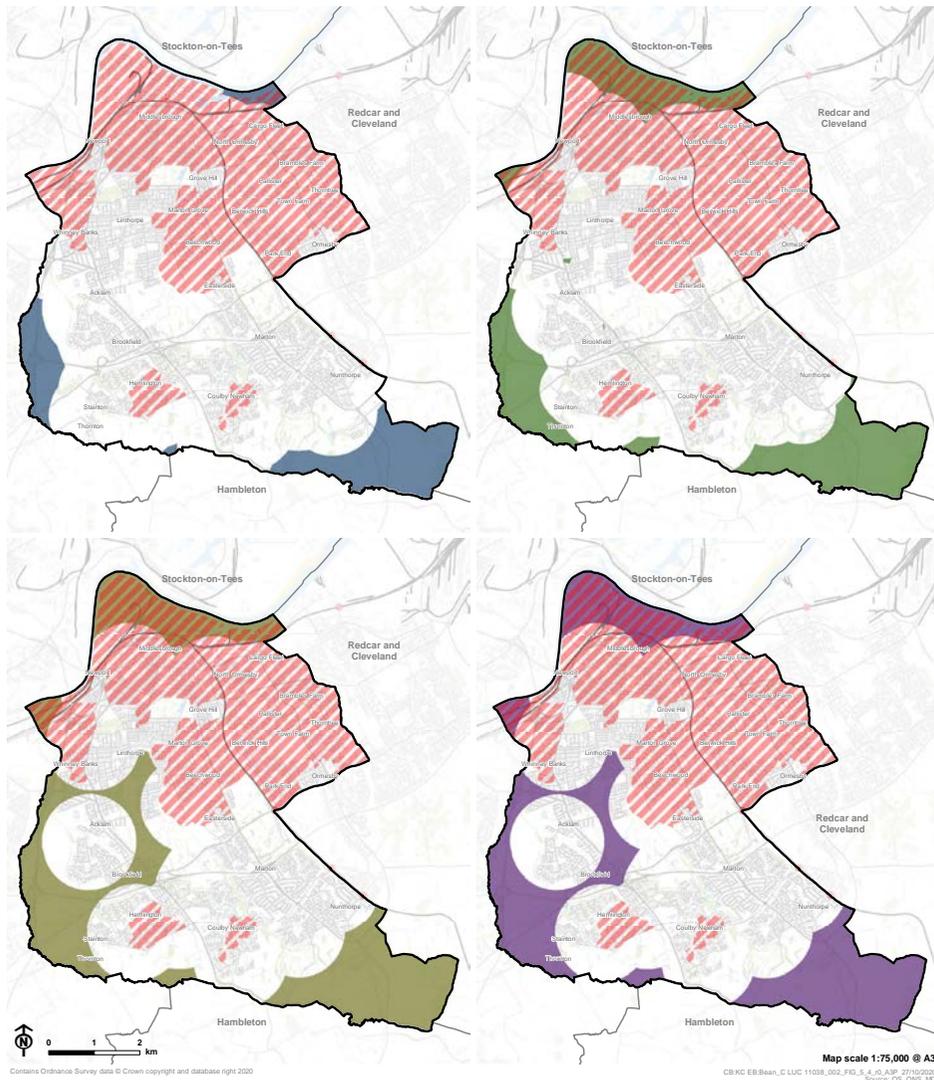
- Middlesbrough boundary
- Green wedge
- Condition of green space
 - 1. Exceptional
 - 2. Very good / Excellent
 - 3. Fair / Good
 - 4. Poor / Very poor
 - 5. No data
- Key public spaces
 - 1. Middlehaven Urban Park
 - 2. Newham Grange Farm
 - 3. Stewart Park
 - 4. Albert Park
 - 5. Ayresome Gardens
 - 6. Fairy Dell Nature Reserve
 - 7. Pallister Park
 - 8. Hemlington Lake
 - 9. Linthorpe Cemetery
 - 10. Thorntree Park
 - 11. Centre Square

Figure 5.3: Air pollution hotspots in Middlesbrough



- Middlesbrough boundary
- Air Quality PM10 (ug/m³ gravimetric)
 - 10.3 - 11.4 (low PM10 = better air quality)
 - 11.4 - 11.8
 - 11.8 - 12.2
 - 12.2 - 12.9
 - 12.9 - 14.9 (high PM10 = poorer air quality)

Figure 5.4: Deprivation and access to green space in Middlesbrough



Green wedges

- 1.118** Middlesbrough contains a network of designated Green Wedges, which act as ‘green fingers’ reaching from the countryside into urban areas, providing recreational space.
- 1.119** The Green Wedges Assessments (2017-18) highlights in particular the ‘Green Heart’ wedge as an interconnected network of open space in the centre of the built-up area, and as an important part of the ‘green link network’ running along Bluebell Beck. **Figure 5.3** illustrates the impact this space has on managing local levels of air pollution.
- 1.120** These areas may be important target locations for the delivery of community woodlands and an associated range of sustainable leisure opportunities for urban dwellers and tourists, including environmental education.

Provision by type of open space

- 1.121** **Table 5.1** outlines the quantitative provision of the major types of open space in Middlesbrough.
- 1.122** **Box 5.1** on the following pages gives a brief overview and assessment of the major



▲ A bench in the Fairy Dell nature reserve not only provides an opportunity to rest for less mobile members of the community, but also an opportunity for public art.

types of green space present in Middlesbrough.

The complex barriers to accessing green space in Middlesbrough

1.123 While accessibility mapping is important, the distance from one’s home is only one way of assessing opportunities for what is known as ‘nature exposure’. True accessibility involves a complex set of interrelated factors, which Natural England seeks to address through its ‘Outdoors for All programme’.

“The green spaces are there, but the question is the quality and how comfortable people feel”

- Stakeholder comment.

1.124 Evidence suggests that opportunities to benefits from spending time in the natural environment are currently not open to everyone, which can contribute to health and other inequalities. Surveys have highlighted significantly lower engagement among BAME groups, the ‘urban deprived’ population and unskilled workers and the long-term unemployed. The first two of these groups held the least positive views toward the natural environment. Barriers highlighted included:

- Being too busy at work or home.
- Limited access to cars and expense of travel.
- Poor health.⁸

1.125 In areas such as Middlesbrough, with high levels of socio-economic deprivation, this further highlights the need for high quality green space within walking distance and creating habits of engagement in nature from an early age, potentially with the collaboration of local schools.

1.126 Existing studies consistently highlight concerns over abuse of public spaces and problems of anti-social

behaviour in public spaces and the green space network. In Middlesbrough, the Landscape and Heritage Assessment (2016) also highlights several areas of the network which appear to be vulnerable to anti-social behaviour, representing a key barrier to access. This concern was echoed by key stakeholders consulted. However, despite these challenges, it does not naturally follow that the response should be to remodel without features – such as seating, shade or other amenities – which might attract disruption. Despite ‘fear factors’, the methods to counter the problem do not necessarily have to result in sterile, alienating places, but instead might benefit from greater public involvement in design and planning of spaces.⁹

“The Beck Valleys are well used, however there is some misuse such as littering and motorbikes... I would like to see beck clean ups led by communities... help them to understand it so they protect it.”

- Stakeholder comment.

1.127 In order to encourage use of the town’s GBI network, the positive promotion of the network among a diverse range of communities, and through various channels, will be crucial.

A ‘whole community’ approach

1.128 There is an identified need in Middlesbrough to improve health and social inclusion and to offer opportunities for all to take part in exercise outdoors, particularly those from low income families. However, a key part of this challenge will be ensuring that the green space network, and the GBI network more generally, caters to all age and socio-economic groups and their diverse needs.

1. Space for young children

1.129 The *One Planet Living* framework includes as a ‘priority action’ initiatives to improve the emotional resilience of children and young people, in part through improving access

to ‘positive activities’. This Strategy argues that opportunities for nature-based, self-led play have a central part in achieving these objectives.

1.130 A further opportunity will be through strengthening the role of schools in providing opportunities to engage with the natural environment.

2. ‘Teenspace’

1.131 Around 12% of Middlesbrough’s population are currently between the ages of 10-19 (slightly higher than the national average).

1.132 While many of the challenges faced by young people in Middlesbrough are mirrored throughout the country, the levels of deprivation in Middlesbrough make these challenges more

| Space type | Target provision (per person) | Performance against target (2017) |
|---------------------------------|-------------------------------|-----------------------------------|
| Parks and Public Gardens | 13.5 sqm/capital | -0.5 sqm/capital |
| Amenity and natural green space | 29.91 sqm/capita | -4.91 sqm/capita |
| Youth activity areas | 351.0 sqm/1,000 | -51 sqm/capita |
| Allotments | 19.7 allotments/1,000 | -5.7 allotments/1,000 |
| Play areas | 0.34 sqm/capita | N/A |

Table 5.1: Open space provision by typology in Middlesbrough (from 2017 OSN assessment)

⁸ Natural England (2012), ‘Monitor of engagement with the natural environment survey (2009-12)’, [Online] Available at: <http://publications.naturalengland.org.uk/publication/4646400?category=6502695238107136>

⁹ Project for Public Spaces (December 2007), ‘Safety and security in public space’ [Online] Available at: <https://www.pps.org/article/safetysecurity>

Box 5.1: Types of open spaces in the Borough



Flagship spaces: Parks, gardens and civic green spaces

The Borough's Open Spaces assessment found 34 parks and gardens of varying sizes and quality, with 7 awarded Green Flag status for 2020. The majority of spaces are considered to be of high quality and good value.

Urban parks like Albert Park and Stewart Park are highly valued assets. Both are municipal parks of the late 19th century and have been identified as key nodes within Middlesbrough's GBI network

Runners in Stewart Park



Wilder spaces: semi-natural green spaces

The provision of natural and semi-natural green spaces within urban areas are important as a supplement to more formal parks and as an opportunity for communities to experience wildlife and natural environments 'on their own doorstep'.

The Beck Valleys are an important part of this network, with 14 becks across the Borough. They are considered to offer good/excellent value, but only fair/good quality.

In addition, there are three Local Nature Reserves (LNR): Berwick Hills, Linthorpe Cemetery and Stainton Quarry. These sites are considered to be of high quality and high value.

Footpaths along Middlesbrough's Beck Valley network.



'On your doorstep' spaces: amenity green spaces

There are 32 amenity spaces in the Borough, the majority of which are within a 750m catchment area of residential areas. The majority are considered excellent or very good for quality and value.

However the Borough's Open Space assessment found that these more dispersed areas of amenity green space require greater attention as part of the network, supporting the role of the more prominent Parks and Gardens, such as Albert Park and Stewart Park, in providing space for recreation closer to home.

Landscaped amenity space within the University Quarter

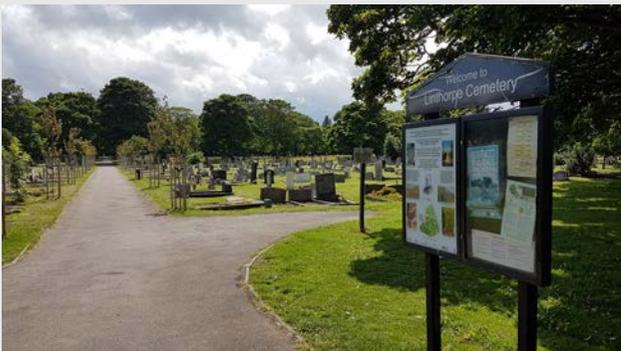


Space for play

There are a total of 27 play areas in the Borough, however the Open Spaces Assessment notes that the quality and value of them are declining over time. Building on emerging evidence of the value of self-led, nature-based play opportunities, there is also potential to 'rethink' play provision to conceive of play areas as multifunctional GBI assets. This would require a new, more ambitious approach to play provision, that goes beyond minimum standards, looks beyond the boundaries of the playground itself, and helps to increase children's' understanding of nature through play, as advocated by Play England.

Similar declines in quality and value is identified for sports and recreation centres, and various types of sport pitches.

◀ Logs near Hemlington Lake provide opportunities for natural play.



Cemeteries and crematoriums

Cemeteries and crematoriums are a distinctive typology of green space which are valued as places for quiet reflection, as green spaces, for their wildlife interest and for their heritage value.

There are a total of 12 sites across the Borough, the majority of which are considered to be in very good or excellent and improving quality.

◀ Linthorpe Cemetery has been listed as a Local Nature Reserve (LNR) since 2003 and has great value for its recreational, biodiversity and heritage functions.

difficult to address.

1.133 Research has shown that, while teenagers have great need for access to natural landscapes (at a time when they are actively establishing their values, attitudes and behaviours), they are often actively excluded from those places through design, policy and society's ambivalence toward them. Open spaces designed specifically for teens are uncommon. Addressing the challenge of teen-centric design is likely to revolve around engagement as an alternative to the inclusion/exclusion framework.¹⁰

¹⁰ Burssoni, M et al (2018), 'Teens in public spaces and natural landscapes: Issues of access and design', in Handbook of Adolescent Development Research and its Impact on Global Policy (Chapter 18). Oxford University Press.

3. Young people and young families: supporting the 'urban living' agenda

1.134 There is a desire to focus more of future home-building in the central areas of the Borough as part of an 'urban living' agenda, in order to safeguard green space in the south. However, it has been recognised that the current green space offer for people wishing to live in the centre of Middlesbrough is limited, and does not fulfil the needs of younger, aspirational people. This also detracts from the ability to attract inward investment, particularly around central regeneration zones such as Middlehaven and the University

Quarter.

1.135 In order to meaningfully encourage young people and families to choose to settle in central Middlesbrough, there will need to be a significant and ambitious push to weave GBI assets into a revived town centre (and surroundings), which will underpin the 'liveability' of these neighbourhoods. This is considered further through **Theme 1**.

4. Adapting for those growing older

1.136 The most recent population projections for Middlesbrough predict an overall population decline of

just over 1% by 2043. However, that stability in population masks a dramatic shift in the demographic makeup of Middlesbrough's residents, with an 86% rise in those aged over 90, and significant growth in all those over 70.

"We need evenly spaced benches on these routes where older people can take a rest, particularly in the south of the Borough."

- Stakeholder comment.

1.137 Evidence from Natural England illustrates that those aged 65 and over are less likely to visit green spaces than the rest of the population, despite enjoyment in doing so, largely because of physical disabilities. They are also less likely to have access to a car.¹¹

1.138 These shifts must be catered for in how the Borough provides green spaces and networks for local communities. Further evidence from Natural England identifies particular barriers to accessing green space for those suffering from dementia – including cost of access, risk aversion and lack of awareness of needs.¹²

Building on the strength of communities

1.139 The GBI network can be a significant source of opportunity for community cohesion, and the Tees Valley GI Strategy urges "*opportunities for greater community involvement*". Where people take an active part in their community, they can raise community value and 'buy in', improve safety and provide reassurance, with the community then better able to tackle crime and anti-social behaviour. As such, GBI assets tend to be at their most successful where local communities are engaged in their design, implementation and management from the outset. Middlesbrough's *One Planet Living* framework

Community groups are frequently involved in enhancing and maintaining the GBI network. Here, a group gathers following apple picking at the orchards within the Nature's World site. Photo source: Friends of Nature's World.



seeks to increase the involvement of residents in the local environment, in part by supporting the Green Spaces Community Forum and in the development of future schemes.

1.140 The stakeholder consultation process carried out for this Strategy highlighted the strength and breadth of community groups contributing to expanding and maintaining the GBI network, as well as a desire for a greater joining up of the "patchwork of groups" through improved communication of projects and a healthier working relationship with the authorities. It was felt that a greater level of trust and autonomy to "*get on with it*" would be a positive. It was also highlighted that the less affluent areas of town have relatively little input into green strategies.

"Could these things be done on a bigger scale? More joined up efforts for funding and sharing of knowledge?"... "when funding finishes, agencies walk away. We need to build resilience into the community to keep going."

- Stakeholder comments.

1.141 Against a backdrop of pressure on public resources and funding, councils and other organisations can draw on community resources, where appropriate, to 'multiply' the impacts of limited resources. Local communities will play an increasingly important role in the delivery of GBI projects.

¹¹ Natural England (2012), 'Monitor of engagement with the natural environment survey (2009-12)', [Online] Available at: <http://publications.naturalengland.org.uk/publication/4646400?category=6502695238107136>

¹² Natural England (2013), 'Greening Dementia: A literature review of the benefits and barriers facing individuals living with dementia in accessing the natural environment and local greenspace.'

Summary of Key Issues

- Middlesbrough suffers from high levels of health deprivation compared to the national average, and disparities in life expectancy and health measures across the Borough largely mirror patterns of socio-economic deprivation.
- Middlesbrough's place in the national 'mental health crisis' calls for a more integrated approach to tackling the determinants, particularly among low-income families, and the GBI network has an important and positive role to play based on emerging research.
- High levels of traffic-related air pollution from the transport network represent a threat to health and wellbeing, particularly at localised 'hotspots' which are largely concentrated around major road infrastructure.
- Middlesbrough is heavily urbanised and as such must maximise the benefits from each area of green space. Historic loss of green space to development has left gaps in the town's 'green lung'.
- While there is relatively strong provision of public parks and gardens per capita in Middlesbrough, there are shortfalls in the provision per capita of amenity and natural green space, youth activity areas and allotments, when considered against local benchmarks.
- Most parts of the Borough lie within acceptable distance of the various types of green space. However, deficits are concentrated around Greater Middlehaven which will need to be addressed as the area becomes more residential in character.
- The condition of green spaces across the Borough

varies significantly. While public parks and gardens are in relatively good condition, quality is often poor and in decline at local amenity spaces, play areas and youth activity areas. Fly-tipping has been highlighted as a local problem.

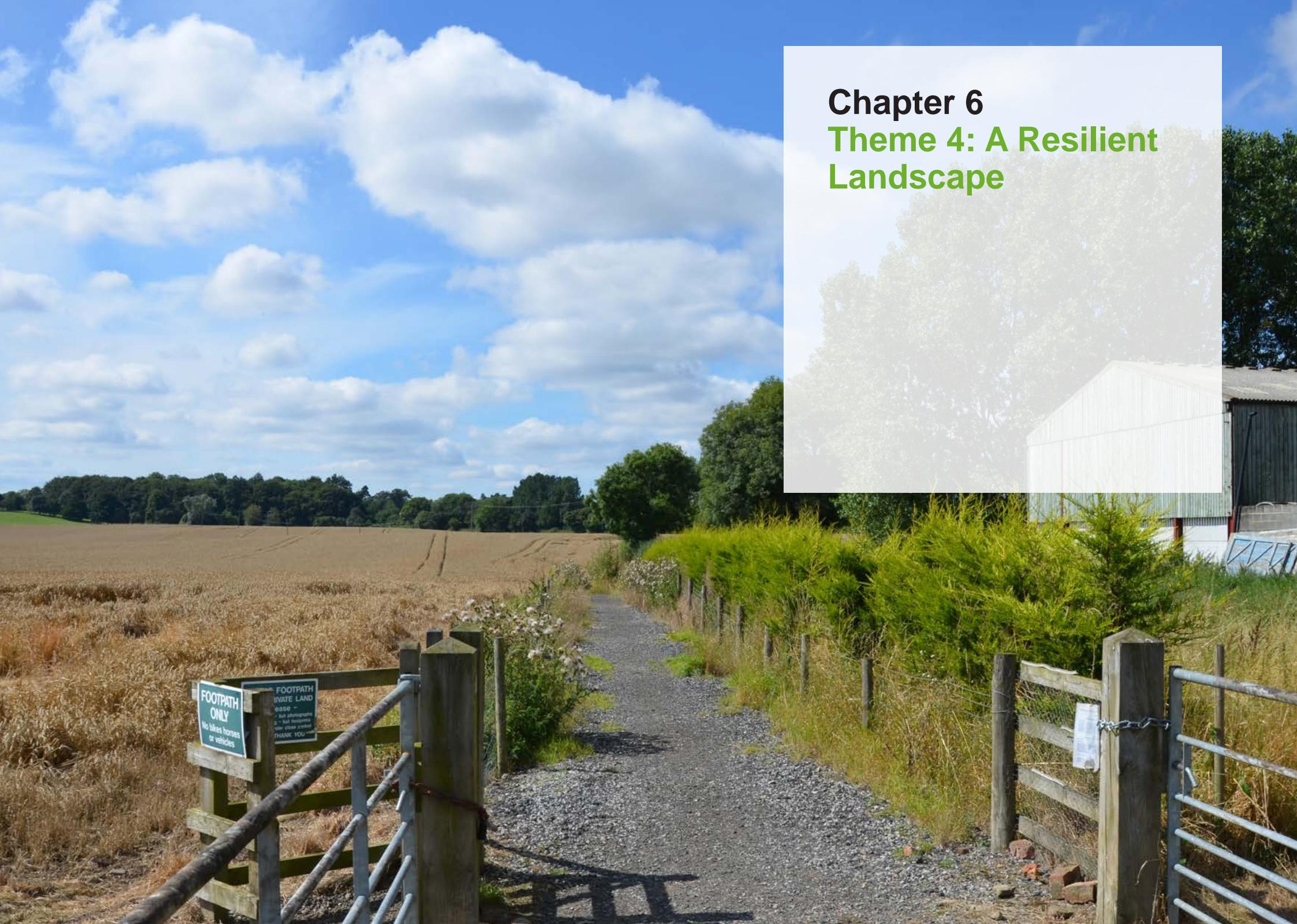
- There are complex barriers to accessing the green space network in Middlesbrough, which go beyond mere distance from home and means of transport.
- There is a need for the green space network to be thoughtfully designed to cater for the diverse needs of Middlesbrough residents at all 'life stages', including children, teenagers, and the elderly (particularly given projections of an ageing population).

Emerging Opportunities

- **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.

Chapter 6

Theme 4: A Resilient Landscape





Chapter 6

Theme 4: A Resilient Landscape

Middlesbrough is a predominantly urban landscape, and one which, like many, has been heavily influenced by human activity. However, the ‘green lungs’ and becks which weave through the urban form are essential to its character. The urgencies of climate change action will require the landscape to play a central role in shaping the future sustainable development of Middlesbrough.

Thinking on a landscape scale

1.142 GBI is an integrated approach to land use. As such it is not characterised by a series of discrete interventions, but rather as a landscape-scale and joined up ‘rethinking’ of the future of an area.

1.143 GBI will play a vital role in unlocking the potential of Middlesbrough’s landscape and to strengthen its ability to respond to various demands on it – from recreational pressure, climate change and protecting vulnerable habitats, to boosting economic growth.

1.144 One of the Principal Benefits (B2) of the Tees Valley GI Strategy is concerned with “*promoting a sense of community and place*” and another (B5) is about improving opportunities to recreate or rehabilitate landscapes, open spaces and historic sites damaged or lost through development or other changes.

1.145 However, as well as providing setting and character to the town of Middlesbrough, the quality of the landscape is fundamental to the town’s resilience, particularly to the impacts of the climate emergency.

Landscape character

1.146 Middlesbrough falls entirely within the Tees Lowland’s Character area outlined by Natural England and is characterised by:

- A broad low lying plain of undulating farmland with the meandering River Tees flowing through the heart, and low woodland cover. This provides the blue and green context for this Strategy.

- A contrast between quiet rural areas with extensive urban and industrial development concentrated along the lower reaches of the River Tees.

1.147 On a more localised scale, two of the five character areas outlined by the Tees Valley Nature Partnership also fall within the Borough, both of which can be seen on **Figure 6.1**:

- The Middlesbrough Beck Valleys – a mosaic of habitats that is home to most of the priority habitats and species. There are some remnants of traditional orchards and ponds, which provide important habitats, scattered across the farmland in the south.
- The River Tees Corridor – stretching out east-west along the river and characterised by a dramatic industrial skyline but also expansive intertidal mudflats, sand dunes and salt marshes.

1.148 Open space within Middlesbrough’s boundaries is limited to a southern fringe of agricultural land and a series of ‘green wedges’, parks and open spaces within the urban area. The Green Wedges are landscape features with a role in integrating open space into more urbanised parts of the Borough (see **Theme 3**).

1.149 The North York Moors National Park lies roughly 1km to the south east of the boundaries at its closest point and is an important factor in the Borough’s wider context.

The role of Middlesbrough’s landscape in the context of the climate emergency

1.150 As discussed in Middlesbrough’s Climate Change Community Action Plan (2010-2020), the Borough’s role in

combating climate change will rest in part on behavioural change and using technological advances to decarbonise industry. However, there is now an increasing amount of attention being paid to how our landscapes can be better shaped and managed to play an important role in adapting to climate change.

1.151 Actions to address the climate emergency tend to fall into one of two categories – mitigation and adaptation. The implications of each of these for Middlesbrough’s landscape is outlined below.

Mitigating against climate change through carbon sequestration

1.152 Just as industry is facing up to the challenge of decarbonising its operations, so too can the landscape of the Tees Valley be reconfigured to help provide natural solutions to the climate emergency. Middlesbrough’s emerging Green Strategy (2020) aims for net carbon neutrality by 2030 and for the town of Middlesbrough to be net carbon neutral by 2040.

1.153 It is also important to note that Middlesbrough is a pilot area for a Natural Capital Accounting study being undertaken by the Tees Valley Nature Partnership. This study is designed to provide baseline data on the region’s nature and the associated costs and benefits it brings.

“Tees Valley is a net exporter of carbon – the natural balance needs to be addressed.”

- Stakeholder comment

1.154 It is now widely understood that any ‘net zero’ target will require a huge increase in tree planting (amongst other measures) across the UK, in order to ‘draw down’ carbon from the atmosphere in an attempt to reach a point where ‘capture’ is greater than ‘release’ over the same period. The Committee for Climate Change (CCC) has recommended an objective of increasing UK forestry cover from 13% to at least 17% by 2050 by planting around 30,000 hectares of woodland per year.¹

1.155 Currently tree cover across the Council area stands at 11.8%, which means that cover is just below the English average of 13% and significantly below CCC targets. The tree cover which does currently exist is largely concentrated along the Beck Valleys and within parks and managed estates, as shown in **Figure 6.1**, with particularly sparse coverage in the north of the Borough.

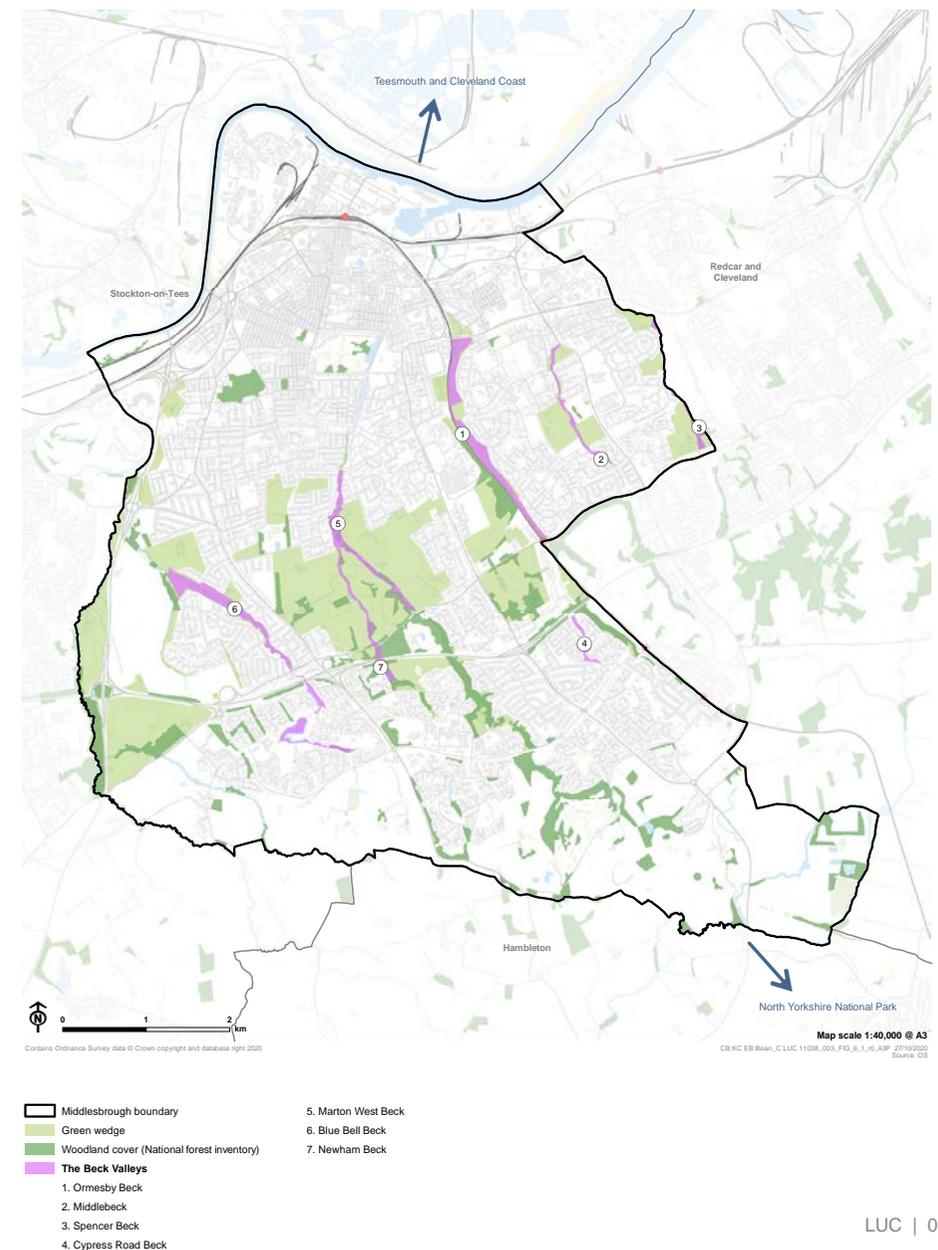
“Middlesbrough has only 11% canopy cover. Increasing this will ensure joined-up GI for the benefit of flora and fauna, but also residents will derive the benefits.”

- The Woodland Trust.

1.156 Large-scale tree planting will, as such, be central to building the Borough’s ‘carbon sink’. In order to achieve the Borough’s target of 16% tree cover, a total of 227.8 hectares (roughly 335 football pitches) will need to be planted.

1.157 However, it is important that any woodland expansion and/or large scale street tree planting within Middlesbrough is targeted to link up with broader initiatives beyond

Figure 6.1: Landscape features and woodland cover in Middlesbrough



¹ CCC (2020), ‘Land use: Policies for a Net Zero UK’ [Online] Available at: <https://www.theccc.org.uk/publication/land-use-policies-for-a-net-zero-uk/>

Middlesbrough's boundaries, in order to help build a 'mosaic' of connected woodlands across the region, as is called for by the Tees Valley GI Strategy. This will also help to achieve the nature recovery goals outlined under **Theme 2**. This may involve exploring the re-launch of a community forest, as a revival of the Tees Forest initiative which has now lapsed.

1.158 An expansion of urban tree cover is already underway as part of the Urban Tree Challenge (UTC) funding granted to the town, an initiative described in more detail under **Theme 1**.

"All developments should have to have tree lined roads as part of planning permission."

- Stakeholder comment.

1.159 It is important that any new woodland in the Borough is managed to produce multiple benefits. This might include recreation (see **Theme 3**), biodiversity (see **Theme 2**) and, where possible, for the production of high-quality timber that can lock up carbon. Fruiting trees can also be a valuable community resource for food growing – as evidenced by the Middlesbrough 'Patchwork Orchard' project run by Middlesbrough Environment City (MEC).

1.160 Diversity of planting will be important for resilience, given that the Climate Change Action Plan for the Tees Valley identifies increased numbers of pests as a climate change-related threat to the region.

1.161 Importantly, despite the policy attention to trees, carbon sequestration opportunities are not limited to woodland cover. Other land uses – notably peatland, coastal margins, river floodplains and healthy soils – are central to the UK's carbon sink. In Middlesbrough in particular, the mudflats and salt marshes along the River Tees Corridor can act as important 'carbon sinks' if restored, as can the Borough's Beck Valleys. This is because a diversity of plants and animals are associated with river corridors and the terrestrial zones they connect with act as an important carbon store. As such, any opportunities to reconnect the river to its

floodplain can be important in building this store.

Boosting the landscape's resilience to climate change

1.162 The Tees Valley Climate Change Strategy outlines the need for the wider landscape around Middlesbrough to adapt to the impacts of climate change. The major risks for Middlesbrough are:

- **Increased flood risk:** As a result of more frequent extreme weather events, combined with an increase in impermeable surfaces in urbanised areas. The low-lying nature of much of the Tees Valley makes it susceptible to rising sea levels and flooding. Outlined in greater detail under **Theme 5**.
- **The 'Urban Heat Island' effect:** As an urbanised Borough, Middlesbrough is vulnerable to this effect, whereby surfaces such as bitumen in roads and building materials can accumulate and store heat during the day and later release it, warming the local environment. This has significant implications for public health and exacerbation of air pollution. Measures to temper the effect range include: street tree expansion for shade; expanding natural surfaces through delivery of more green and blue spaces, green roofs, green walls and other urban greening features; re-painting surfaces with white paint to reflect more light.
- **Dealing with 'water stress':** Water shortages are likely to be one of the key environmental challenges in the UK and globally over the period of this Strategy. While Middlesbrough is not one of the most seriously stressed regions (in a 2013 study, the Northumbrian Water Company Area was identified as being at Moderate Stress),² there needs to be greater attention paid to how water moves through the landscape. See **Theme 5** for more detail.

² Environment Agency (2013), Water stressed areas – final classification [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/244333/water-stressed-classification-2013.pdf



▲ Trees and complex vegetation around the A19 road.



▲ The River Tees corridor is an important part of Middlesbrough's 'carbon sink'



▲ Urban tree planting provides visual interest as well as shade to combat the 'urban heat island' effect.

“We need a mosaic of green walls and roof top gardens, like those at Teesside University.”

- Stakeholder comment.

1.163 Where possible, nature-based solutions for all these challenges should always be explored, alongside engineered solutions where necessary. For example, while engineered flood defences are sometimes appropriate, ‘upstream’ solutions can be more effective in the long term. This could include, for example, bolstering riparian woodland along the banks of the River Tees which can significantly increase resilience to flooding.

Boosting the landscape’s resilience social and economic change

1.164 Aside from resilience to climate change, it is also important that Middlesbrough’s landscape and townscape proves resilience to social change and economic change. This includes a consideration of how the GBI network can help bolster a Borough against an economic downturn, for example through GBI interventions to support local high streets.

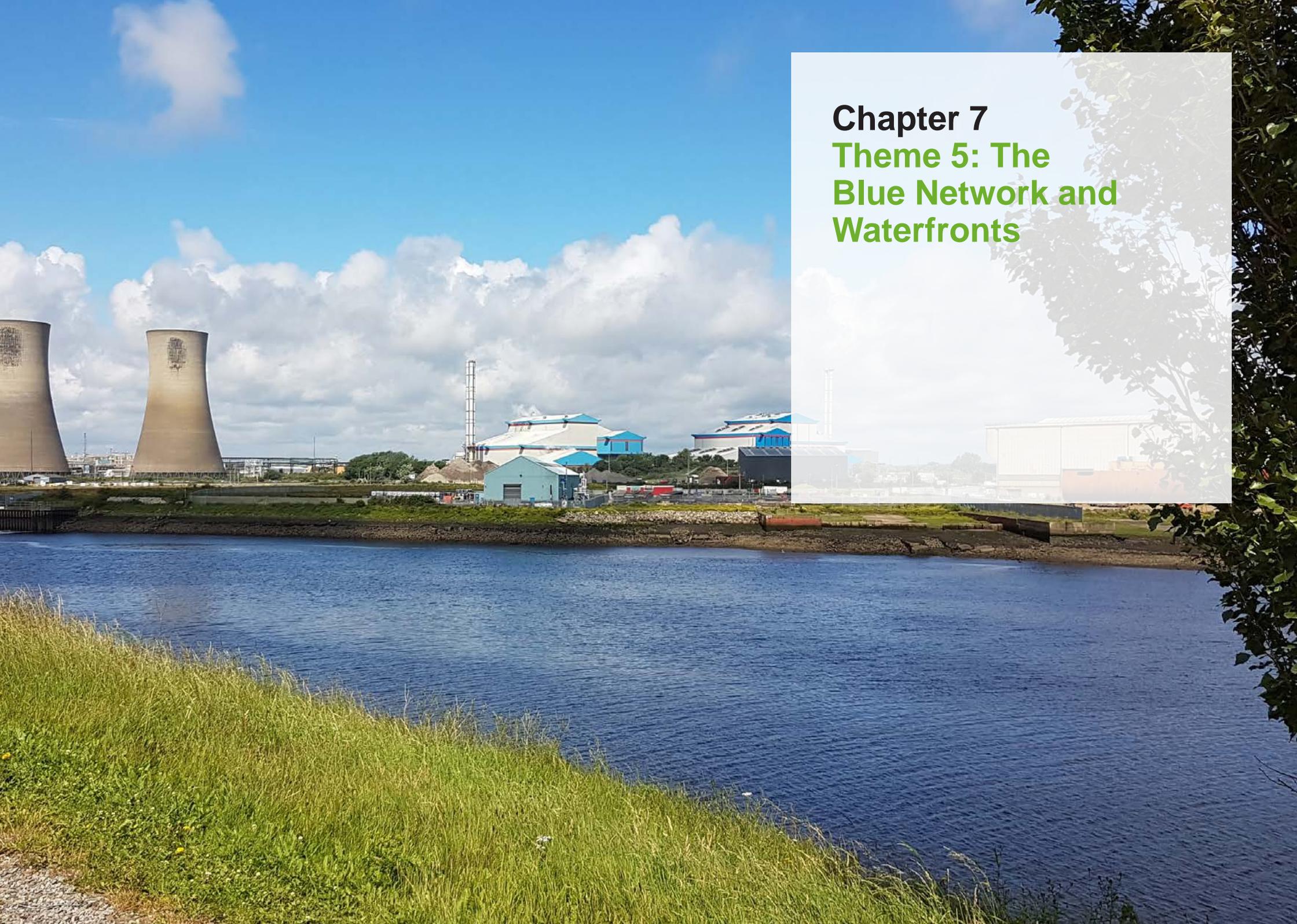
1.165 The Covid-19 pandemic of 2020 has highlighted the importance of green spaces, and future planning of the GBI network should take account of this form of resilience also.

Summary of Key Issues

- Alongside behavioural change and decarbonisation of industry, Middlesbrough’s landscape has a crucial role to play in both mitigating against climate change and adapting to its effects. The Borough’s various landscape areas should be shaped with this in mind.
- Middlesbrough’s tree cover is slightly below national average and required to increase by over 40% in order to build the Borough’s ‘carbon sink’ and meet national targets set by the Committee for Climate Change (CCC).
- New woodland areas following expansion should be managed for multiple benefits, including carbon sequestration, recreation, biodiversity and, where appropriate, sustainable timber production.
- The threat of increased pests as a result of climate change are likely to be an obstacle to woodland expansion.
- Carbon sequestration opportunities are not limited to woodland expansion, and restoration activities on the River Tees corridor can play an important role in bolstering carbon stores.
- Middlesbrough is likely to experience increased climate-change related flooding and nature-based solutions should be prioritised wherever possible, with further detail provided under Theme 5.
- As an urbanised area, Middlesbrough will need to adapt its urbanised landscape to deal with the impacts of the Urban Heat Island effect.

Emerging Opportunities

- **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.



Chapter 7
Theme 5: The
Blue Network and
Waterfronts



Chapter 7

Theme 5: The Blue Network and Waterfronts

The River Tees and the becks form the ‘spines’ of Middlesbrough’s blue network. Making the most of these ‘blue corridors’ will require a reconfiguration of how we think about water in the landscape, celebrating it rather than flushing it out of sight down drains. Storing water in the landscape can provide multiple benefits including creation of valuable habitats, recreational opportunities and nature-based flood risk management.

Middlesbrough’s blue corridors

1.166 The wider landscape in which Middlesbrough sits is dominated by the River Tees, its Estuary and the main tributaries, which forms Middlesbrough’s northern boundary. The stretch of the Tees which runs through Middlesbrough is tidal and passes through a largely urban and industrialised landscape. The Beck Valleys, running south-north, also form an important back bone for the Borough’s GBI network.

1.167 In many ways the River Tees has provided the framework for the growth of Middlesbrough and the town’s landscape character over the years. Indeed the ‘father of Middlesbrough’ Joseph Pease developed ‘Port Darlington’ (now Middlesbrough) on the banks of the Tees specifically to use this blue corridor to supply labour to the new coal port.

1.168 Today the Tees has again become a key catalyst for regeneration in the wider region, with efforts to improve access to the river corridor and help restore it following historic periods of industrial degradation, supporting sustainable forms of leisure, living and travel. The health of these waterways stood out as both a key point of concern, and a highly valued part of the Borough’s network, during stakeholder consultation carried out for this Strategy

“Local rivers and waterways are an asset, for numerous reasons - health, wellbeing and recreation, as well as traditional uses.”

- Stakeholder comment.

Flood risk

1.169 Middlesbrough’s northern boundary is historically low lying, forming part of the natural fluvial and tidal floodplain of

the Tees. The banks of the Tees have been artificially raised over the years to provide flood protection to the adjacent low-lying areas, but the bank levels are not consistent and therefore the standard of flood protection is currently variable. In addition, the effects of climate change and sea level rise will degrade this degree of protection with time.

1.170 Most recently, Middlesbrough has suffered damage to homes and infrastructure during severe flooding events in 2013 and 2016 in particular. The major areas of current flood risk are illustrated in **Figure 7.1** and are concentrated in the north of Middlesbrough and around the Tees Estuary, particularly where Ormesby Beck meets the Tees, and with further areas of risk along the Beck Valleys and in residential areas of Pallister. Flooding in these areas is exacerbated by high tides and the series of urban tributaries that drain into the Estuary. This allows for a mixture of fluvial flooding (along the tributaries) and tidal (in the north).

1.171 Surface water flooding can also contribute to Middlesbrough’s overall flood burden, highlighting the importance of maximising permeable surfaces through the use of SuDS and other mechanisms.

Rethinking the flood plain – taking a multi-functional approach to managing flood risk

1.172 Healthy floodplains have a key role to play in reducing the negative impacts of flooding, however these floodplains have been widely degraded nationally through the pressures of human development. Urban and agricultural development, together with structural flood protection, has disconnected rivers from their floodplains.

1.173 The opportunity for the GBI network lies in the fact that, well as mitigating against the impact of flooding, rethinking floodplain management can also achieve important positive environmental benefits, which should be maximised.

1.174 There is an opportunity to pursue a more ecosystem-based approach to the management of floodplains in Middlesbrough, an approach supported by the government's 25 Year Environment Plan (25YEP). The potential biodiversity dividends of this approach in Middlesbrough are discussed in more detail under **Theme 2**.

“The River Tees has a vast number of tributaries and becks that you can't see. Natural areas that can be allowed to flood would offer great benefit.”

- Stakeholder comment.

1.175 With multi-functionality in mind, the Tees Valley GI Strategy highlights that flood defence schemes should be used, where appropriate, to provide recreational opportunities, to help to create green space and enhance habitats. This might take the form of:

- Wetland creation through provision of flood storage capacity.
- Additional conservation and recreation benefits as part of flood defences.
- Potential for removal of flood defences in certain circumstances to reconnect rivers to their floodplains through re-establishing natural systems.
- Creation of compensatory habitat in response to rising sea levels.

- Naturalisation of modified river channels.

1.176 The Port Clarence and Greatham South Flood Alleviation Scheme, completed in 2018, is a good local example of a scheme that can both protect homes from flooding and simultaneously create almost 50 hectares of new intertidal habitat for local wildlife which flood at heavy tide. As such it forms an important precedent for the expansion of this approach.

“There are opportunities to daylight buried becks and gills.”

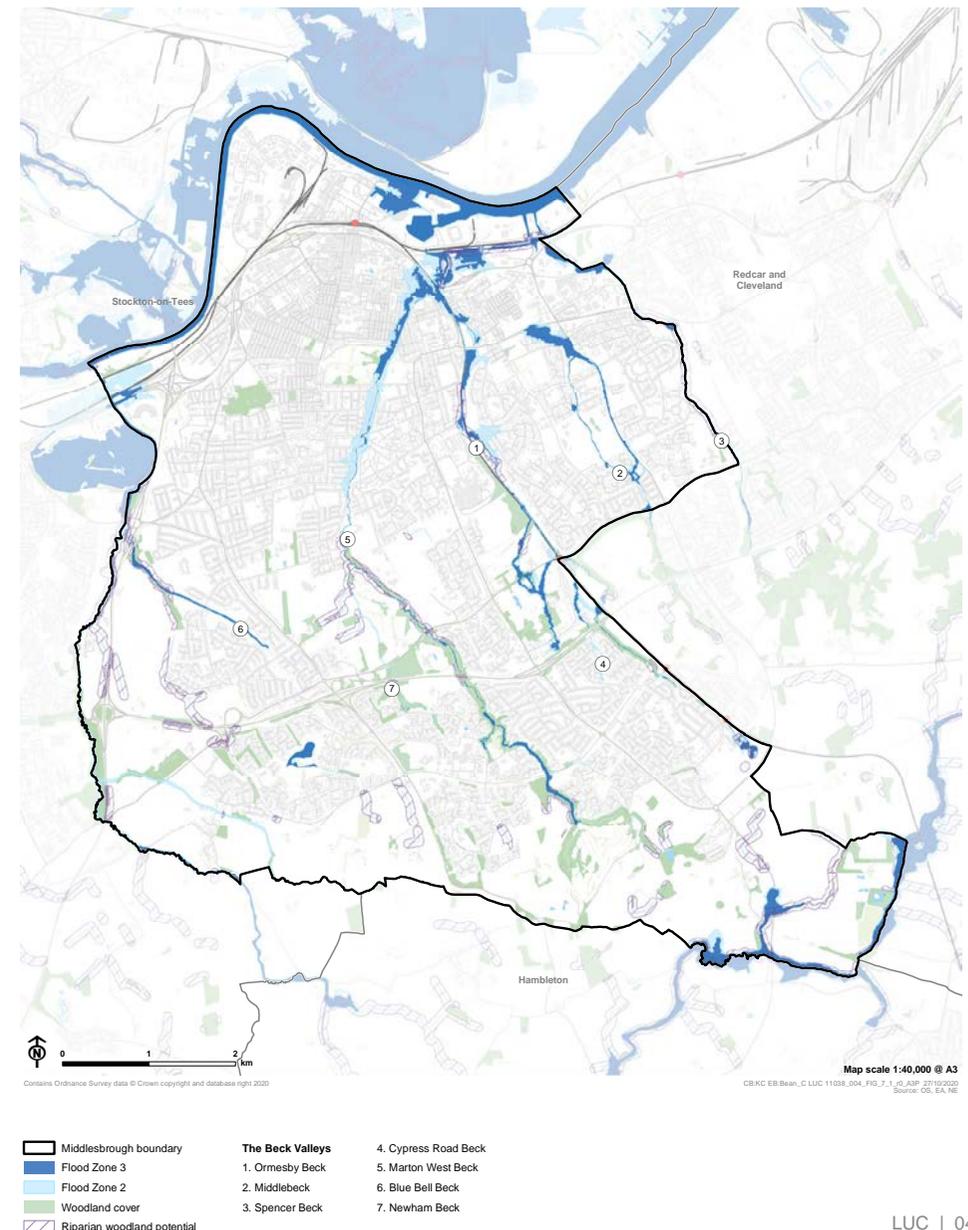
- Stakeholder comment.

Sustainable urban drainage (SuDS) systems

1.177 As a predominantly urban area, Middlesbrough is dominated by impermeable surfaces as part of its townscape. As such, SuDS can be a valuable way to address the risk of surface water flooding by adapting non-permeable surfaces to better 'hold' water in the urban landscape. SuDs should be seen as part of that 'multi-functional' green infrastructure network, delivering multiple amenity, landscape and biodiversity benefits.

1.178 SuDS features form an important part of 'urban greening' measures as part of future development (also discussed under **Theme 1**). The Tees Valley Authorities Local Standards for Sustainable Drainage (2017) provide an important set of locally tailored guidelines and planting regimes which should form the starting point for designing SuDS into new development or retrofitting.

Figure 7.1: Waterways and flood risk in Middlesbrough



“SuDS should not be restricted to areas of potential flooding but all new development – we need to mitigate surface water flooding.” ... “Surface water flooding is a big issue as a result of the clay soil.”

- Stakeholder comments.

1.179 Box 7.1 outlines some of the forms which SuDS can take. However, consultation with key local stakeholders revealed significant concerns that those SuDS installations which have been installed to date in the Borough are disappointing and lack multi-functionality, with some potentially causing damage to existing habitats. There is a desire for a higher benchmark for SuDS schemes in Middlesbrough to avoid conflict in uses and aid in the delivery of multifunctional benefits.

“SuDS developments could be made a lot more interesting at little cost – not rectangles of bland openness with no marginal vegetation.”

- Stakeholder comment.

“Green SuDS provide far more benefit than simple ‘end of pipe’ solutions”

- Stakeholder comment.

Educational opportunities

1.180 There is a significant educational opportunity which should be integrated into Middlesbrough’s Flood Risk Management Strategy, which is built on the need to shift public perceptions of water. This entails a shift in understanding from water as a ‘problem’ to be flushed away, to a greater acceptance of water as a vital part of our landscape, including urban landscapes. Introducing water into our everyday lives and environments can be delivered through interventions such as rain gardens, ponds and other sustainable urban drainage assets.

“Introduction of mapping or interpretation would help improve education and awareness.”

- Stakeholder comment.

1.181 For example, the Borough’s *One Planet Living* framework encourages working with schools as part of its ‘Sustainable Water’ pillar, in order to promote the use of improved natural habitats in beck valleys for teaching and awareness raising of the species present in these locations. In addition, this Strategy proposes that these landscapes, and sustainable urban drainage (SuDS) interventions are used to help to educate school children, among others, in how water moves through a landscape and how nature-based solutions to water management can work to manage those flows and enhance local ecosystems.

“There are lots of opportunities for small scale interventions, introducing small ponds in schools for instance.”

- Stakeholder comment.

1.182 These opportunities also have a strong role in the Borough’s biodiversity strategy (see **Theme 2**).

“Turning back” toward the waterfront

1.183 As is the case with many towns and cities where industrial development has historically sprawled along waterways, Middlesbrough has long ‘turned away’ from its waterfronts. Today, regeneration opportunities in the north of the Borough provide a valuable opportunity to ‘turn back toward’ its waterfront, providing a closer association between urban areas and natural systems. It also opens up opportunities for leisure use on the River Tees - including boating, sailing, canoeing and angling, in line with an improved water environment.

1.184 If achieved sympathetically, by balancing the needs of nature with high quality design through an ‘urban living’ approach, it will be possible to create a thriving built

Box 7.1: Options for SuDS features



▲ A SuDS installation included as part of Middlesbrough’s recent Grey Towers Village development.

Green roofs: designed to intercept and retain precipitation, reducing the volume of runoff.

‘Soakaways’: holes dug into the ground and filled with coarse stone, rubble or other material, allowing water to filter through.

Filter strips: gently sloping, vegetated strips of land that allows for slow conveyance and infiltration of water from upstream development.

Bioretention areas and rain gardens: small depressions in the ground acting as infiltration points for surface water, and can be planted up with appropriate vegetation.

Permeable pavements: providing a surface suitable for pedestrian/vehicular traffic, while allowing rainwater to infiltrate through the surface and into underlying layers.

Detention basins: landscape features which provide habitat creation when wet and leisure uses when dry.

Ponds: Runoff is detained and treated in the pool.

Wetlands: shallow ponds and marshy areas, covered in aquatic vegetation, able to detain flows for an extended period as well as provide significant ecological benefits.

environment that celebrates and enhances the River Tees waterfront.

1.185 This direction is supported by the Tees Valley GI Strategy and is taken up further under **Theme 1** (integrating GBI into regeneration zones) and **Theme 6** (opening up and enhancing walking and cycling routes along the banks of the Tees and Beck Valleys).

*“The riverside area needs some environmental enhancement with trees and green spaces provided.”...
“big barriers turn people away from the water.”*

- Stakeholder comment.

1.186 Local stakeholders are of the view that currently, recreational disturbance of habitats is relatively low along the Tees Corridor (given that to a large degree the river is inaccessible). However caution should be exercised with any opening up of the waterfront, as it would need to be mindful of the impact on areas of biodiversity value.

Summary of Key Issues

- The River Tees and other waterways lie at the heart of Middlesbrough's landscape character, however currently the town does not maximise the full potential of its waterfront location for recreational purposes.
- The low-lying nature of the Tees Valley landscape makes it particularly susceptible to impacts of flooding, which will be exacerbated by the impacts of climate change.
- Middlesbrough is at risk of both tidal flooding (along the River Tees corridor) and fluvial flooding (along the Beck Valleys), and the large extent of impermeable surfaces within the townscape.
- Caution should be exercised with any 'opening up' of Middlesbrough's waterfront, to ensure no detrimental impacts on habitats.

Emerging Opportunities

- **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 flood risk. Retrofitting of existing under-performing SuDS should also be sought.



Chapter 8
**Theme 6: Walking
and Cycling**



Chapter 8

Theme 6: Walking and Cycling

As a compact town, Middlesbrough lends itself to walkability. However, there is currently heavy dependence on the private car. Improvements to the town's public realm will complement investment in 'hard' infrastructure and help to encourage residents and visitors to move in new ways. A well-connected series of 'green corridors' will also enable this shift.

Connections in Middlesbrough

1.187 It is thought that Middlesbrough's name originally comes from its position halfway between Christian centres of Durham and Whitby, highlighting the Borough's role as a place of connection and a meeting of routes.

1.188 However, the Borough today remains largely car-dominated and active travel routes are too often fragmented and unattractive. As Middlesbrough grew, and its boundaries expanded south of the railway line, the old town (St Hilda's) became isolated between the railway and the river. There are opportunities to address these various instances of fragmentation in a number of ways through this Strategy. In turn, this has the potential to provide a number of important benefits for health and wellbeing (see **Theme 3** for further detail).

"This [walking and cycling] needs framing as a public health issue."

- Stakeholder comment.

Walking and cycling opportunities

1.189 Open space has the ability to provide not only recreational destinations but also movement corridors which can encourage pedestrians and cyclists to move around the town in different ways.

1.190 Sustainable Transport is one of the pillars of Middlesbrough's *One Planet Living* framework, and the Integrated Transport Strategy sets 'modal share' targets for 2028 which include 10% of journeys to be undertaken by walking and cycling, an increase of 2% per year, with

pedestrians at the top of the 'transport hierarchy'. While Middlesbrough's compact urban form provides a strong basis for this, creating a landscape that encourages safe and enjoyable walking and cycling will require significant change. While 'grey' infrastructural upgrades are beyond the scope of this Strategy, the GBI network has an important role in 'greening' those routes which encourage modal shift.

"All future infrastructure and road improvements should include areas to add street trees or green spaces."

- Stakeholder comment.

1.191 The Public Right of Way (PROW) network provides the backbone of efforts to boost both 'A to B' (between destinations) walking and recreational walking. The PROW system is strong in some areas and neglected in others.

1.192 Within Middlesbrough's wider Public Rights of Way (PROW) network, there are a number of key routes that might form the prioritised framework for upgrades, as shown in **Figure 8.1** These include:

- The Teesdale Way (running along most of the length of the River Tees).
- The Cleveland Way (National Trail).
- The Tees Link (linking the above routes, in part along Spencer Beck).

1.193 Further, the English Coastal Path – designed to be the longest continuous coastal walking route in the world once completed – is a National Trail and runs through Middlesbrough, creating a valuable connection between urban areas and coastal assets to the east. This is a

significant asset, which allows greater access for Middlesbrough residents to access natural features nearby by walking and cycling, as well as passing by key heritage features such as the Tees Transporter Bridge.

1.194 Two routes of the National Cycle Network run through the Borough – Route 65 from north to south, and Route 1 from east to west and linking to the coast. The majority of the routes are off-road, and they integrate with the Beck Valleys and the town’s ‘green lung’, as well as with the Tees Waterfront.

“The Teesdale Way, England Coast Path and 8 Bridges Way should be further promoted, and their networks developed.”

- Stakeholder comment.

Green corridors

Overview

1.195 Green corridors are multifunctional linear spaces that act not only as active travel and recreational routes, but also have an important role in providing linear connecting habitats for wildlife. They can also play complementary roles in reducing flood risk by holding water, and by cooling urban areas.

1.196 Green corridors in Middlesbrough are largely anchored by narrow north-south valleys, which provide links between urban areas and the surrounding countryside. However the Tees Valley GI Strategy highlights opportunities for better east-west links and further connections to Ormesby Hall, Stainsby Beck and the National Park.

1.197 Any more detailed plans within

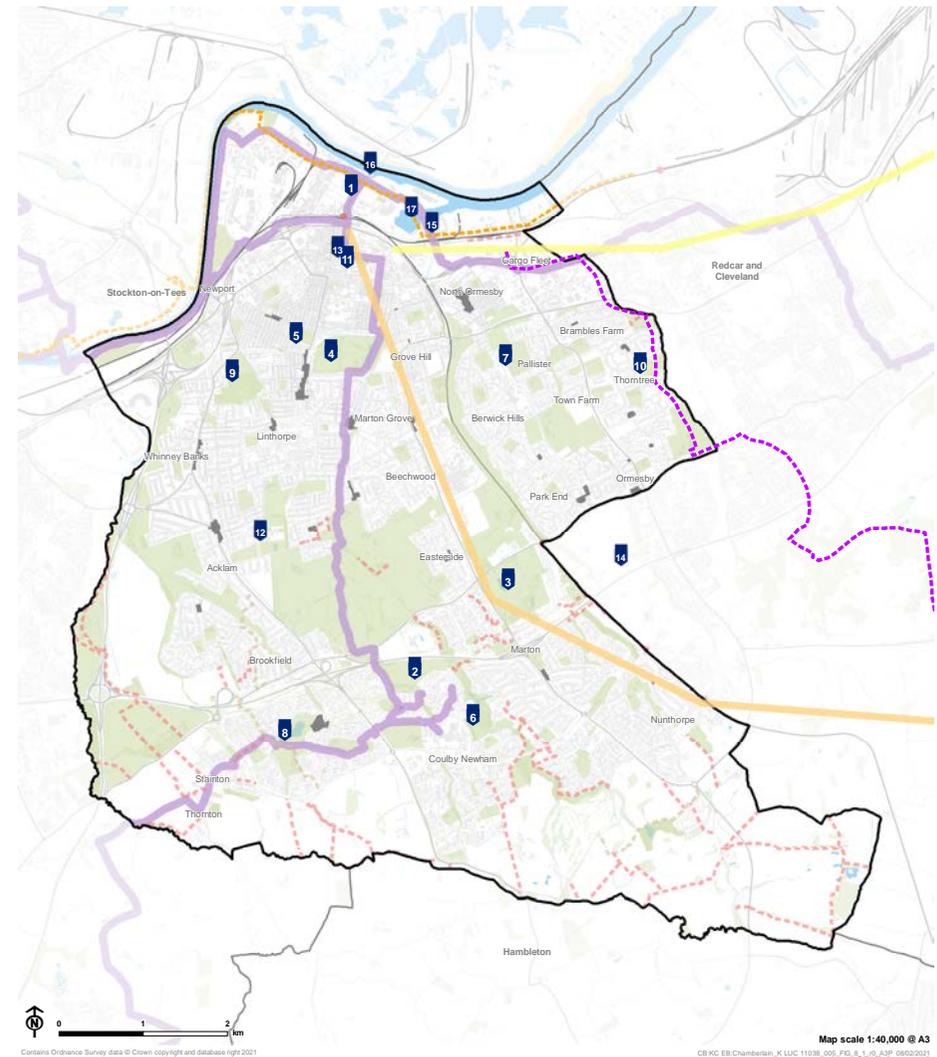
Middlesbrough must take into account the wider context of the Tees Valley and align with key strategic routes. The Tees Valley GI Strategy highlights two broad corridors to focus attention on, as indicated on **Figure 8.1**:

- **Strategic Route 13: Greater Middlehaven - Middlesbrough town centre - South Bank - Greater Eston – Redcar:** A corridor linking key regeneration areas across the region.
- **Strategic Route 14: Greater Middlehaven - Middlesbrough town centre – Marton - Nunthorpe - Guisborough:** This joins up a complex network of open spaces, beck valleys, cycle/footpaths, parks, playing fields etc. It leads outwards from Middlesbrough town centre, through the town’s “green lung” and joins up with long distance footpaths.

1.198 Building on these key routes, the Integrated Transport Strategy seeks to boost active travel through the delivery of a series of Walking and Cycling ‘Super Routes’, which will act as the ‘main arteries’ running through Middlesbrough, connecting into adjacent routes to the wider Tees Valley. These will be wide, traffic-free routes, will be well maintained, lit and served by CCTV. They will be complimented by a series of ‘Superstops’, at prominent public transport hubs.

1.199 The Beck valleys provide an important framework for these green corridors and can provide multiple benefits including recreational routes, active travel corridors, flood alleviation and habitat corridors. These Valleys are described in more detail in **Box 8.1**, based on Middlesbrough’s Landscape and Heritage Assessment (2016).

Figure 8.1: Walking and cycling network in Middlesbrough



- | | | |
|--|---|--|
| <ul style="list-style-type: none"> ▭ Middlesbrough boundary ▭ Local and neighbourhood centres ▭ Green infrastructure asset ▭ National Cycle Network Key walking route --- Teesdale Way --- Tees Link | <ul style="list-style-type: none"> Strategic Links — Tees Valley Strategic Route 13 — Tees Valley Strategic Route 14 Public Right of Way --- Footpath --- Bridleway | <ul style="list-style-type: none"> ▣ Key destinations 1. Middlehaven Urban Park 2. Newham Grange Farm 3. Stewart Park 4. Albert Park 5. Ayresome Gardens 6. Fairy Dell Nature Reserve 7. Pallister Park 8. Hemlington Lake 9. Linthorpe Cemetery 10. Thorntree Park 11. Centre Square 12. Acklam Hall 13. Middlesbrough Town Hall 14. Ormesby Hall 15. Riverside Stadium 16. Tees Transporter Bridge 17. Temenos and Middlesbrough Dock |
|--|---|--|

Linking together key destinations

1.200 When prioritising resources for green corridors and active travel provision, there must be a focus on routes which link key destinations and attract significant activity. In these areas it will be important to achieve a modal shift to walking and cycling, including as part of multi-modal journeys which combine public transport and active travel. Walking and cycling should be both seamless and effortless ways of moving around, both within the Borough and linking beyond its boundaries.

“There are good green spaces but there needs to be more connectivity.”

- Stakeholder comment.

“In the centre there is the cemetery, Albert Park and Ayresome Gardens. However, these green spaces are standalone and the network is not visible.”

- Stakeholder comment.

1.201 Certain destinations lie at the heart of Middlesbrough’s regeneration ambitions, notably among them the Riverside Stadium, Teesside University, Middlehaven and the train station and more formal parks such as Albert Park. These destinations are shown on **Figure 8.1**. The success with which these destinations sit as key ‘nodes’ within the GBI network and active travel routes will be crucial as to how well the network performs.

1.202 Both the master plans for the regenerating Station Area and the Middlesbrough City Centre Strategy (2019-2023) highlight the need for improved wayfinding facilities within the town centre which signpost both residents and visitors to key destinations and ‘gateways’. While some wayfinding facilities are provided, these are inconsistent across the town centre and wider Borough.

Connecting the GBI network with public transport hubs

1.203 Middlesbrough is seen as a Strategic Public

Box 8.1: Key Green Corridors in Middlesbrough

Green corridors in Middlesbrough and elsewhere can provide links within the wider ‘active travel’ network as off-road routes. However they cannot act as a replacement for high-quality on-road routes which can be safely used year-round, including in the dark. These routes do, however, provide important recreational resources which serve the wellbeing of communities, as ‘softer’ and slower corridors for movement that allow for connection with nature.

Marton West Beck Corridor

Middlesbrough’s Landscape and Heritage Assessment (LHA) highlights that this continuous ribbon of green space, woodland and NCN route presents a valued resource in the built-up area and a key GBI linkage between the inner urban area to the ‘green heart’ centred on the golf course. However, there are some sections where the poor condition means the route is only accessible to able walkers.

Middle Beck Corridor

The LHA describes this route as well used and having the advantage of being highly permeable with adjacent housing, with fingers of green space reaching into neighbouring estates. However, the corridor’s biodiversity value is limited, made up of largely amenity grassland areas and occasional trees, with limited tranquillity or sense of place.

Spencer Beck Corridor

This is the easternmost beck and forms the Borough boundary and part of a Green Wedge. The LHA notes that there is a continuous footpath and cycleway along the Beck, which carries the Tees Link long distance route, but notes some signs of anti-social use.

Other becks

Ormesby & Blue Bell Becks also provide key ‘green links’ through the Borough.



▲ An existing off-road walking and cycling route in Middlesbrough.



▲ Entrances to walking and cycling routes can act as barriers to wheelchair users than others when not thoughtfully designed.



▲ An example of some limited pedestrian-friendly enhancements to the town centre public realm.

Transport Interchange, with a focus on its railway station.

Theme 1 gives further information about existing plans to regenerate the quarter surrounding Middlesbrough train station, and the opportunities for ‘urban greening’ which it represents.

1.204 However, the redevelopment of the station represents an important opportunity not only to ‘create a sense of arrival’ but also to mend links between the station and key destinations to both the north and south.

1.205 The planned introduction of a direct rail service to London in 2021 will be a ‘step change’ for the station and has potential to be a catalyst for the regeneration of the station and surrounding area. The existing site is a key interchange and public realm focus, however there is currently significant severance created by road infrastructure and a poor pedestrian environment. The station lies at the intersection of a number of key movement corridors connecting key destinations and GBI assets, as shown in **Figure 8.1**. In particular, the station is the key ‘node’ where the Middlehaven regeneration area and the town centre meet. Master planning for the station area found that the visitor arrival experience by rail is poor and that there is limited wayfinding to other key destinations.

1.206 It is important that high quality green ‘links’ are developed between the regenerated station area and the key strategic routes outlined above – notably with the Teesdale Way to the north, toward highly valued Albert Park to the south and linking to the various Beck Valley corridors.

Popular destinations beyond Middlesbrough’s boundaries

1.207 Given the highly urbanised nature of Middlesbrough, and how tightly the Borough’s boundary is drawn around the urban edge, there is a particular need to establish ‘green connections’ to assets lying outside the Boundary. Links to the following should be taken into account:

- The Eston Hills and North Yorkshire Moors to the south.

- To the Saltholme Nature Reserve to the north (across the Tees Transporter Bridge).
- To the heritage coastline and coastal nature reserves to the east.

1.208 The ‘Strategic Routes’ taken from the Tees Valley Green Infrastructure Strategy and illustrated in **Figure 8.1** highlight these important cross-boundary connections.

“We need to improve connections along the river to Redcar.”

- Stakeholder comment.

Transforming the ‘school run’

1.209 The Tees Valley Climate Change Action Plan (2010) notes that it is vital that the region supports people in making healthier and more sustainable travel choices, ‘locking in’ low carbon healthy lifestyles by providing suitable incentives such as safe cycle routes to school.

1.210 As elsewhere, in Middlesbrough the school run is a key source of private car use, with the associated carbon emissions and air pollution which comes with it. The Borough’s *One Planet Living* Framework sets a target of reducing the number of children travelling to school by car from 25% (2010) to 20%. Middlesbrough’s Sustainable Travel Strategy also highlights the importance of promoting walking and cycling on the school run – both through ‘Safer Routes to School’ schemes and infrastructural measures which compliment ‘softer’ measures such as promotion and training.

1.211 Some regeneration schemes within Middlesbrough also include pedestrian-priority zones around the local schools that will serve the new neighbourhood, notably plans for the new neighbourhood at Grove Hill.

“The strategy should also be underpinned by links to education with schools and colleges in the area. We need to get children excited about it.”



▲ Existing wayfinding in Middlesbrough is inconsistent and could be improved by a high quality Wayfinding Strategy.



▲ The Teesdale Way is an important strategic route linking Middlesbrough with surrounding regions and key destinations such as the Tees Transporter Bridge.

- Stakeholder comment.

Access for all

1.212 One concern which was voiced strongly during consultation with stakeholders was the need for the walking and cycling network to be truly accessible to all - including wheelchair users and those with lower mobility. Sometimes where barriers are used to block motorbike users from using off-road routes, it can lead to those routes becoming inaccessible to parts of the community.

1.213 It is important that the Borough has an ambition when planning the future GBI network of making all routes 'accessible to all' through thoughtful use of barriers and adequate surfacing along all key routes.

▼ The existing entrance to a school in a residential area of Middlesbrough, which could be improved by giving over more space to walking and cycling to school.



Summary of Key Issues

- Middlesbrough is currently car-dominant and there is a need to support objectives for a modal shift toward walking and cycling.
- There is a need for better east-west links and further connections to Ormesby Hall, Stainsby Beck and the North York Moors National Park.
- While there are valuable strategic walking routes connecting Middlesbrough with surrounding areas – including parts of the national Coastal Path - walking and cycling connections within the Borough, between key public transport 'nodes' and important destinations, are currently often weak.
- Wayfinding provision is currently poor and requires work to better navigate between key 'gateways', destinations and GBI assets, as well as better signposting to strategic walking routes from 'points of arrival'.
- 25% of children currently travel to school by car, which is a significant source of traffic and air pollution and this discourages walking and cycling at a young age.
- Routes are not always accessible to all users, with some barriers in place blocking access to wheel chair users.

Emerging Opportunities

- **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.

Appendix A
Policy Review

| Plan/Strategy | Purpose | Key issues for GBI Strategy |
|---|--|--|
| National | | |
| 25 Year Environment Plan (25YEP) | Sets out the Government's support for habitat creation, multi-functional sustainable urban drainage systems (SuDs), and natural spaces close to where people live and work. It represents an important shift in thinking towards long term positive action to improve people's lives and the environment. It views the planning system as a key mechanism for delivering upon its ambitions. | <ul style="list-style-type: none"> ■ Sets the foundation for Biodiversity Net Gain (BNG), to be implemented through the Environment Bill. |
| National Planning Policy Framework (NPPF) | Sets the government's economic, environmental and social planning policies for England, which apply to the preparation for local and neighbourhood plans. | <ul style="list-style-type: none"> ■ Explicitly addresses the need for GBI networks, stating that strategic policies in plans should set out an overall strategy that makes sufficient provision for the conservation and enhancement of green infrastructure (Paragraph 20). See Introduction for more detail. |
| Regional | | |
| Tees Valley Green Infrastructure Strategy (2008 – 2021) | <p>Provides the GI context for the sub-region and sets out a regional vision for multifunctional open spaces that will enhance the quality of the area.</p> <p>Outlines a vision, six aims, a number of benefits and key principles, all of which provide context for other plans, strategies and programmes within the Tees Valley.</p> | <ul style="list-style-type: none"> ■ Proposes a network of GI corridors that link GI resources with strategic priorities (major development schemes such as Middlehaven, housing market renewal areas and areas of new housing and business development). The concept revolves around achieving closer links between environment improvement and the major development projects proposed in the Tees Valley. ■ Key challenge is centred on 'liveability' - creating attractive places and environment and offer a quality of life that encourages people to stay. ■ Emphasises the importance of partnership working. |
| Green Blue Heart Plan (2007) | <p>Produced by the Stockton-Middlesbrough Initiatives (SMI) and sets the goal of creating a new city-region within the Tees Valley by enabling a transformation in the urban structure. Designed to turn around current perceptions of the region.</p> <p>Many of the proposals set out in this Plan were hampered by the ensuring global financial crisis from 2008 onwards.</p> | <ul style="list-style-type: none"> ■ The Plan sees the River Tees Corridor as part of the solution rather than the problem. ■ Defines a portfolio of mutually beneficial projects which include several which form part of a potential GBI network in Middlesbrough, including Maze Park (on the banks of the River Tees in the west of the Borough). ■ Plan seeks to turn derelict sites from a problem into an opportunity. |
| North York Moors National Park Pre-Submission Draft Local Plan (2019) | Sets out planning policies in the nearby North York Moors National Park, to be used to help decide planning applications in the future. | <ul style="list-style-type: none"> ■ Its proximity means that the National Park is a major attraction for residents in Middlesbrough. Improving links with the Park, whether this is through better footpath and cycle networks or enhanced wildlife corridors will be beneficial and will help to strengthen the green infrastructure network. |

| Plan/Strategy | Purpose | Key issues for GBI Strategy |
|--|---|---|
| Local Plan and borough-wide policy documents | | |
| Existing Middlesbrough Core Strategy (2008) | The policies in this Core Strategy will be superseded by those in the emerging Local Plan, for which this GBI Strategy serves as an evidence base. | <ul style="list-style-type: none"> ■ Spatial objectives sought to increase biodiversity and expand the green network. ■ Policy CS20 was a dedicated GI policy, which stated that the council will work with partners to ensure the successful creation of an integrated network of GI. |
| Middlesbrough Housing Local Plan (2014) | Replaced the housing elements of the existing Local Development Framework, outlining the context and vision for future development within the town up to 2029. | <ul style="list-style-type: none"> ■ Policy CS20 relates the green space network at a strategic level in Middlesbrough outlining the key open spaces, including 'beck valleys', the 'River Tees frontage', the 'green blue heart' and the Borough's Green Wedges. |
| Middlesbrough Council's One Planet Action Plan (2017 – 2025) | The One Planet Living approach was adopted by Middlesbrough Council in 2009 and provides a model to deliver a programme of environmental sustainability across the town. | <ul style="list-style-type: none"> ■ Middlesbrough Council recognises that without a sustained change, Earth will be unable to support the existing population and satisfy resource demands. ■ Middlesbrough Council aims to tackle each of the 10 principles of One Planet Living to ensure that sustainability is embedded into the delivery of the wider vision for Middlesbrough. Several of the principles are relevant to the GBI network and the services it provides, including ' <ul style="list-style-type: none"> ■ Two priority actions are: 1) putting allotments into self-management; and 2) supporting Volunteers and Friends Groups in the management and development of green spaces. |
| 'Green Strategy' (emerging) | Currently a work in progress, the Strategy looks at broad range of issues, including transport, biodiversity, waste, energy etc. Will set out an ambitious 10 year vision to develop a Green agenda to rise to the challenge of climate change and support and improve biodiversity within Middlesbrough. | <p>The three broad aims of the Strategy are to:</p> <ol style="list-style-type: none"> 1. Make Middlesbrough Council net carbon neutral by 2030 2. To ensure Middlesbrough as a town net carbon neutral by 2040. 3. Middlesbrough to be a lead authority on Environmental Issues. |
| Grove Hill Supplementary Planning Document (March 2010) | Represents an Area Regeneration Framework (ARF) for the neighbourhood of Grove Hill, setting out a strong vision and spatial planning framework to kick start the regeneration activities. Can also serve as supporting evidence for the Compulsory Purchase Order (CPO) of property if required. | <ul style="list-style-type: none"> ■ Grove Hill is a neighbourhood in decline and the stigma around the area needs to be reversed. ■ The Eastbourne Road shops are under performing and their redevelopment/environmental improvements represents an opportunity as a key gateway to the neighbourhood and nodal point. |

| Plan/Strategy | Purpose | Key issues for GBI Strategy |
|--|---|---|
| Cross-cutting theme: Climate Change | | |
| Tees Valley Climate Change Strategy (2010) | The strategy represents the 'coming together' of the five Tees Valley local authorities and their partners with a single aim and vision to tackle climate change. Seeks to provide a sound base to embed the Low Carbon transition within the economic regeneration of the Tees Valley. | <ul style="list-style-type: none"> ■ Promotes the implementation of the Tees Valley Green Infrastructure Strategy to help us deal with the impacts of climate change, for example by increasing trees in urban areas, to provide shade and absorb carbon emissions. ■ Investing in resilient infrastructure, including GI, will reduce the socio-economic and environmental costs of dealing with climate change related events such as floods and heat waves in the future. This could be through new water bodies to cope with increased storm water run-off and the principles of sustainable drainage system etc. |
| Middlesbrough's Climate Change Community Action Plan (2010-2020) | The Action Plan builds on the success of Middlesbrough's Climate Change Partnership, a group of local organisations and individuals from the public, private, voluntary and community sectors that have come together since 2004 to identify how Middlesbrough can reduce GHG emissions whilst preparing for the impacts of a changing climate. | <ul style="list-style-type: none"> ■ Acknowledges that there needs to be greater emphasis on adapting Middlesbrough to climate change. ■ Tackling climate change and making Middlesbrough a healthy town are intrinsically linked goals. ■ Highlights the importance of education and communication in order to gain the support of the people of Middlesbrough. This includes educational projects including the Eco Schools Award scheme, supported since 2004. ■ The regional GI Strategy is seen as key to climate change adaptation. |
| Theme 1: Economic regeneration, heritage and 'sense of place' | | |
| Strategic Plan for Middlesbrough (2020 – 2023) | Sets out how the Mayor's agenda will be supported and delivered, following the election of a new Mayor in 2019. | <ul style="list-style-type: none"> ■ Priorities regarding 'place' have been included, one of which is regarding building more town centre homes – and protecting our green spaces. |
| Middlesbrough City Centre Strategy (2019 – 2023) | Set out a vision and set of Priorities for a city centre that lies at the heart of the area's economic ambition, creating confidence for investment and growth. | <ul style="list-style-type: none"> ■ Highlights the importance of a vibrant city centre and visitor destination which presents Middlesbrough as an attractive place to work, live and invest. ■ Promotes the 'urban living' agenda and emphasises high quality public realm in various target areas, and investment in key gateways. ■ Supports the delivery of the Rail Station master plan and Historic Quarter, emphasising the need for new signage to aid navigation in the city centre. |

| Plan/Strategy | Purpose | Key issues for GBI Strategy |
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| Middlesbrough LDF – Regeneration Development Plan Document (2009) | <p>Identifies specific sites proposed for development and principal regeneration sites, including Greater Middlehaven.</p> <p>This document was produced prior to the 2008-9 financial crisis, and as a result much of what was proposed in the Greater Middlehaven regeneration area was not built out (other than the Community in a Cube building). The framework was followed by a 2012 Development Framework, which sought to set out a more flexible framework for regeneration in the Greater Middlehaven zone.</p> | <ul style="list-style-type: none"> Recognises the importance of integrating green spaces that arise from development with the existing network of GI and utilising features such as the River Tees as a focal point within development proposals. |
| Middlesbrough's Urban Design SPD | Provides guidance for all development across Middlesbrough on urban design which includes green and open space, SuDS etc | <ul style="list-style-type: none"> Highlights that Urban Design is 'not solely a visual concern' but also has important economic, social and environmental consequences. Green roofs, ponds and wetlands are recognised as a part of SuDS which should be implemented throughout the region. Highlights that all development must help to create 'sustainable communities' and encourage the formation of inclusive places. Trees play an important part in 'softening' the streetscape, creating visual focus and adding wildlife and colour to urban areas, but must create long term sustainable planting |
| Middlesbrough Station Action Plan (2017) | Commissioned by Middlesbrough Council to outline the future development of the station and surrounding area, given a renewal and a refresh | <ul style="list-style-type: none"> A new concourse and entrance on Bridge Street will help to provide a greater 'sense of arrival' and greater connectivity for pedestrians to both the Middlehaven area and to the town centre. Need for improved wayfinding for those arriving at the station. |
| Theme 2: Biodiversity and Geodiversity | | |
| Local Wildlife Sites and Local Nature Reserves in Middlesbrough (2018) | Prepared for Middlesbrough Council by the Tees Valley Wildlife Trust as a review of natural conservation sites in the Borough (with a focus on Local Sites, which are designated by the Council) and to support the emerging Local Plan. | N/A. |
| North East Wetland Feasibility Study (2007) | The North East Wetland Feasibility Study identifies areas in North East England that have the potential for wetland restoration or creation. The study identifies a number of priority areas for wetland restoration. | <ul style="list-style-type: none"> Wetlands are a form of GI that should be capitalised upon and should form part of the GI and BI networks across the region, which would be supported by this study. Constraints on wetland potential include urban areas, railways, and landfill and waste sites. The majority of identified potential areas lie to the north of Middlesbrough's boundary, across the River Tees, however some less extensive north-south blue corridors along the Borough's beckes were highlighted. |

| Plan/Strategy | Purpose | Key issues for GBI Strategy |
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| Theme 2: Reconnecting communities with nature | | |
| Open Space Needs Assessment (2017) | <p>Provides an overview of the Borough's open space inventory, as well as an assessment of quality and value of each typology of space.</p> <p>Open space assessments take stock of the existing situation which can be used to outline considerable opportunities for expanding and enhancing the GI network.</p> | <ul style="list-style-type: none"> ■ Of around 998 ha of open space in Middlesbrough, 77% is publicly accessible and the dominant typologies are: parks and public gardens; schools; and the Beck Valleys. Golf courses also make up a significant proportion (2 courses). ■ Assessments of quality showed declines in quality at a large number of sites across the Borough. |
| Middlesbrough Council Playing Pitch Strategy (2019) | Provides a clear evidence base and set of recommendation for future outdoor sports facility development across the Borough, including an analysis of supply and demand. | <ul style="list-style-type: none"> ■ Notes that areas with high levels of deprivation will typically have lower levels of health, standard of living or car ownership, which all contribute to a lower overall level of participation. ■ Identifies relatively low levels of physical activity among Middlesbrough residents, with spatial 'hotspots' of inactivity in the northern half of the Borough. ■ Planning obligations under Section 106 should be used to ensure local playing pitch infrastructure is invested in, to meet the growing need. ■ Proposes to mitigate any losses through the development of multi-sport hub sites. |
| Stainsby Draft Masterplan (2018) | Set out the vision and illustrative masterplan for the Stainsby development, a significant development allocated on the western extent of the Borough. | <ul style="list-style-type: none"> ■ The vision for Stainsby includes a network of footpaths and cycleways cross the site linking the new green spaces and connecting into existing paths and spaces. ■ A Country Park will be linked to and throughout the housing areas by green corridors. |
| Air Quality Annual Status Report (2019) | Produced under the requirements of the Environment Act 1995, since 2000, to provide an update on the status of air quality across Middlesbrough. | <ul style="list-style-type: none"> ■ There is no need to declare any Air Quality Management Areas (AQMAs) in Middlesbrough and the Council strives to improve air quality despite economic limitations. ■ Traffic pollution is an issue along busy commuter roads (the A66, A174 and A19 trunk roads), however fortunately housing along these routes are low rise and set back, allowing dispersal. ■ Tackling poor air quality from traffic sources is one of the Council's highest priorities. ■ Two locations were highlighted as being in need of extra measures to reduce nitrogen dioxide levels: 1) along the A66 from the Marton Road junction to the Hartington junction; and 2) from the Cannon Park interchange to the junction of the A66 with the A19. ■ The main challenge of introducing measures to reduce pollution on the road network, including the A66, is the economic cost, not only to Middlesbrough but the wider Tees Valley. |

| Plan/Strategy | Purpose | Key issues for GBI Strategy |
|---|--|--|
| Theme 4: A Resilient Landscape | | |
| Landscape and Heritage Assessment (2016) | <p>Assessment of the landscape and historic environment value of selected areas of the Borough, to inform development planning and management decisions. Includes a site-specific review of land to the south of Newnham Hall.</p> <p>Four themes are discussed throughout the assessment: landscape, visual amenity, historic environment and green infrastructure. Each of these themes were used to assess 33 individual parcels of land.</p> | <ul style="list-style-type: none"> ■ The provision of open space within the boundary of Middlesbrough Council is limited to a southern fringe of agricultural land, and a series of green wedges, parks and open spaces within the urban area. ■ The 33 parcels assessed form important assets within the GBI network, and opportunities are identified for each one, including potential to boost biodiversity value or better link to the rest of the network. |
| Green Wedges Assessment 2017-2018 | <p>An assessment was conducted looking at: boundary information; separation and openness; amenity value; natural environment value; historic environment value and flood risk. Conclusions were then made on whether the green wedge could be improved or whether it should remain the same.</p> | <ul style="list-style-type: none"> ■ Green wedges comprise the open areas around and between parts of settlements, which maintain the distinction between the countryside and built up areas, prevent the coalescence (merging) of adjacent places and can also provide recreational opportunities, a great asset to the GI network. ■ 23 Green Wedges were recommended for amendment, and 14 identified as making a valuable contribution to the area. ■ Some areas of Green Wedge we recommended by the Review for removal as they no longer meet the definition in the policy, however in many cases it was recommended that the Open Space designation remain. ■ The 'Green Heart' Wedge is an interconnected network of open space in the centre of the built-up area. It forms a key part of the 'greenlink network' running along Blue Bell Beck. |
| Theme 5: The Blue Network and Waterfronts | | |
| Tees Catchment Flood Management Plan (2009) | <p>CFMPs help to understand the scale and extent of flooding now and in the future, and set policies for managing flood risk within the catchment. They inform planning and decision making by key stakeholders.</p> | <ul style="list-style-type: none"> ■ GI could be a method of building resilience which could be through new water bodies to cope with increased storm water run-off and the principles of sustainable drainage system etc. ■ Policy Option 5 addresses the high risk of flooding within the Eastern sub-area by factoring in the increasing flood risk over time due to climate change and future development. |
| Tees Valley Authorities Local Standards for Sustainable Drainage (2017) | <p>Produced by a working group from the Tees Valley local authorities and forms local standards which strongly promote the use of SuDS, helping to reduce surface water runoff and mitigate flood risk. Intended for use by architects, engineers, planners and developers in the preparation of new schemes.</p> | <ul style="list-style-type: none"> ■ Includes design standards and examples of how urban design can be implemented. ■ GI is recognised as an essential element to ensuring SuDS is successful. SuDS should be a part of the 'multi-functional' GI network, delivering multiple amenity, landscape and biodiversity benefits, alongside their primary function to deliver sustainable water management. |

| Plan/Strategy | Purpose | Key issues for GBI Strategy |
|--|--|--|
| Middlesbrough Level 1 Strategic Flood Risk Assessment (2018) | Prepared as an update to the 2013 assessment and required by MBC to initiate the sequential risk-based approach to the allocation of land for development and to identify whether the Exception Test is likely to be necessary. | <ul style="list-style-type: none"> ■ Notes that GI assessments as part of the Council's policy baseline. Also, it states that alongside GI should be the implementation of SuDS, specifically within potential development sites. ■ GI should be designed and managed as a multifunctional resource capable of delivering a wide range of environmental and quality of life benefits for local communities and should be provided as an integral part of all new development, alongside other infrastructure such as utilities and transport networks. ■ Developers should be required to set part of their site aside for surface water management, to contribute to flood risk management in the wider area and supplement green infrastructure networks. |
| Middlesbrough Local Flood Risk Management Strategy | Sets out primary objectives and actions which will reduce the risk of flooding, one of which is to take a sustainable and holistic approach to flood management, seeking to deliver wider environmental and social benefits, climate change mitigation and improvements under the Water Framework Directive. This aim promotes the concept of water cycle management and blue corridors/green infrastructure in master planning. | <ul style="list-style-type: none"> ■ With regard to new developments in vulnerable areas, care should be taken to ensure risks can be suitability managed through adaptation and green infrastructure. |
| Theme 6: Walking and Cycling | | |
| Middlesbrough Integrated Transport Strategy (2018-28) | Seeks to balance the competing demands placed upon the transport network and create a network which is an integral part of the 'package' that attracts prospective investors. This is designed not only to provide ease of access within the authority boundary but a gateway to the rest of the Tees Valley, bringing the centres closer together. | <ul style="list-style-type: none"> ■ A hierarchy of highway users (with pedestrians and cyclists at the top) will be at the heart of everything the Highways Authority does. ■ Promoting and incentivising sustainable travel will reduce dependence on the private car and will include measures to achieve modal shift. ■ Sets targets for modal share by each mode. |
| Middlesbrough Sustainable Travel Strategy | Produced in response to changing legislation in the field of school transport, this Strategy sets out how the Council will encourage travel planning across the Borough to meet the travel needs of those travelling to and from educational institutions. | <ul style="list-style-type: none"> ■ Promotes sustainable travel and transport modes on the journey to, from, and between schools and other institutions. ■ Requires that all schools have an authorised Travel Plan within the lifetime of the Strategy and seeks to reduce the level of car use on the school run. ■ Promotes suite of 'soft' measures, including promotion and training, and the need to boost sustainable trips through a campaign of awareness and education. ■ Highlights links with the 'Healthy Schools' agenda. ■ Requires at least three 'Safer Routes to School' schemes throughout the life of the Strategy. ■ Middlesbrough will work to reduce by 20% the volume of traffic arriving at the school gate. |

Appendix B

Record of Stakeholder Consultation

Organisations participating in virtual workshops

Middlesbrough Council
Tees Valley Combined Authority
Historic England
Groundwork
Tees Valley Nature Partnership
Nunthorpe Parish Council
MAPP/Our Greenways
Tees Valley Wildlife Trust
Natural England
Thirteen Housing Group
Green Stuff Middlesbrough
Marton West Neighbourhood Forum
Middlesbrough Environment City
Sport England

Organisations responding to online survey

The Woodland Trust
The Forestry Commission (Yorkshire and North East Area Team)
NHS Tees Valley Clinical Commissioning Group
Historic England
Stand With Orme: Protecting Ormesby Beck Valley
Stainton and Thornton Neighbourhood Plan Group
OurGreenways and MAPP
Friends of Nature's World
Friends of Fairy Dell
Friends of Linthorpe Cemetery and Nature Reserve
Youth Focus North East
The Friends of Stainton and Thornton Green Spaces
HoggyStockton Rescue
Greenstuff Middlesbrough
Marton West Neighbourhood Forum
Middlesbrough Environment City
Middlesbrough Council (Transport and Infrastructure)
4 x local Councillors

Organisations responding by e-mail

Hartlepool Council
Stockton Council
Friends of Nature's World
Forestry Commission
Groundwork
Historic England
Environment Agency

Appendix C

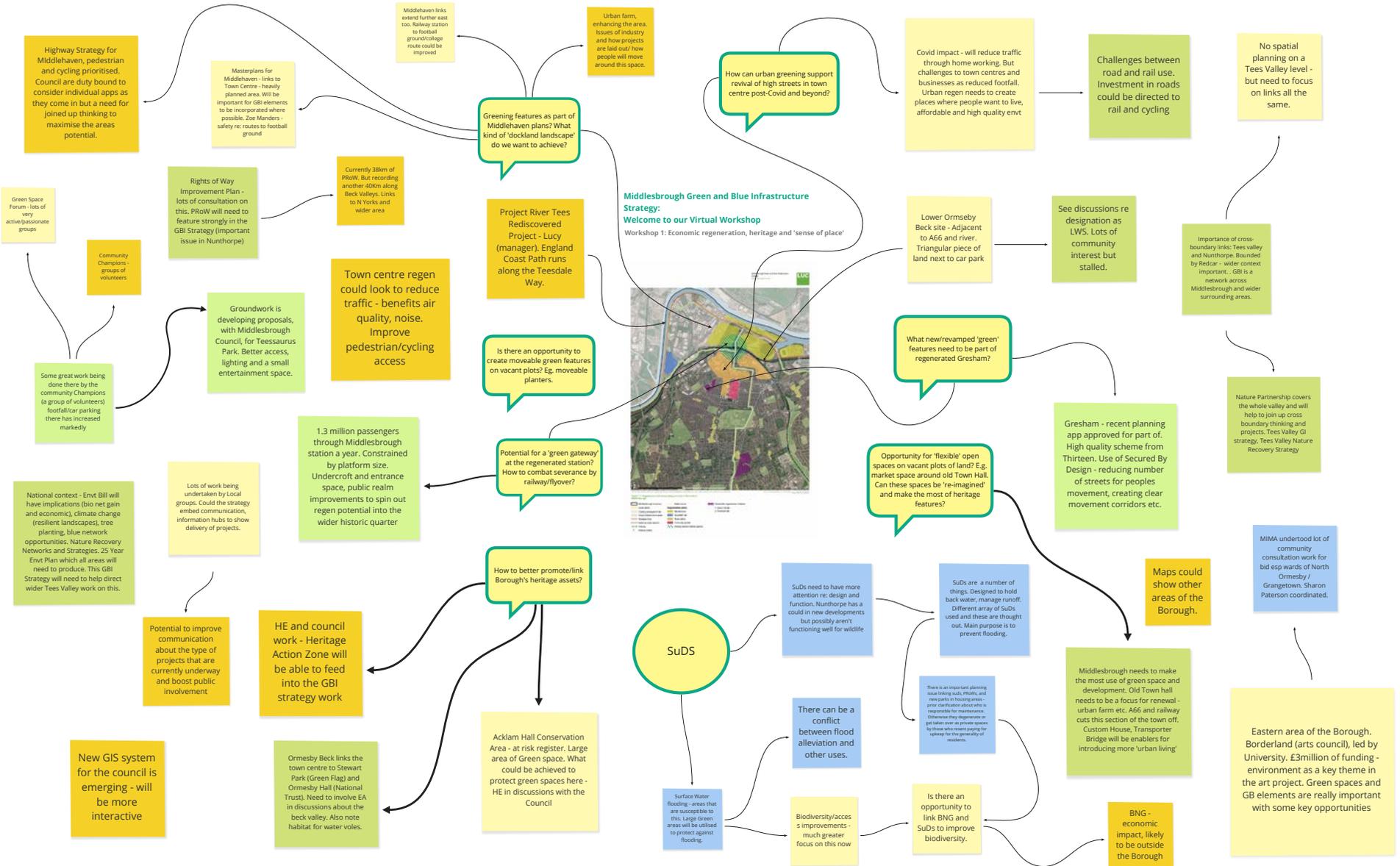
Output of Stakeholder Workshops

1.214 As part of the consultation process carried out for this Strategy, a series of six virtual workshops were held online, using video conferencing software. A selected group of stakeholder were invited based on their role in Middlesbrough's GBI Network, and each workshop focussed on a separate GBI 'theme'.

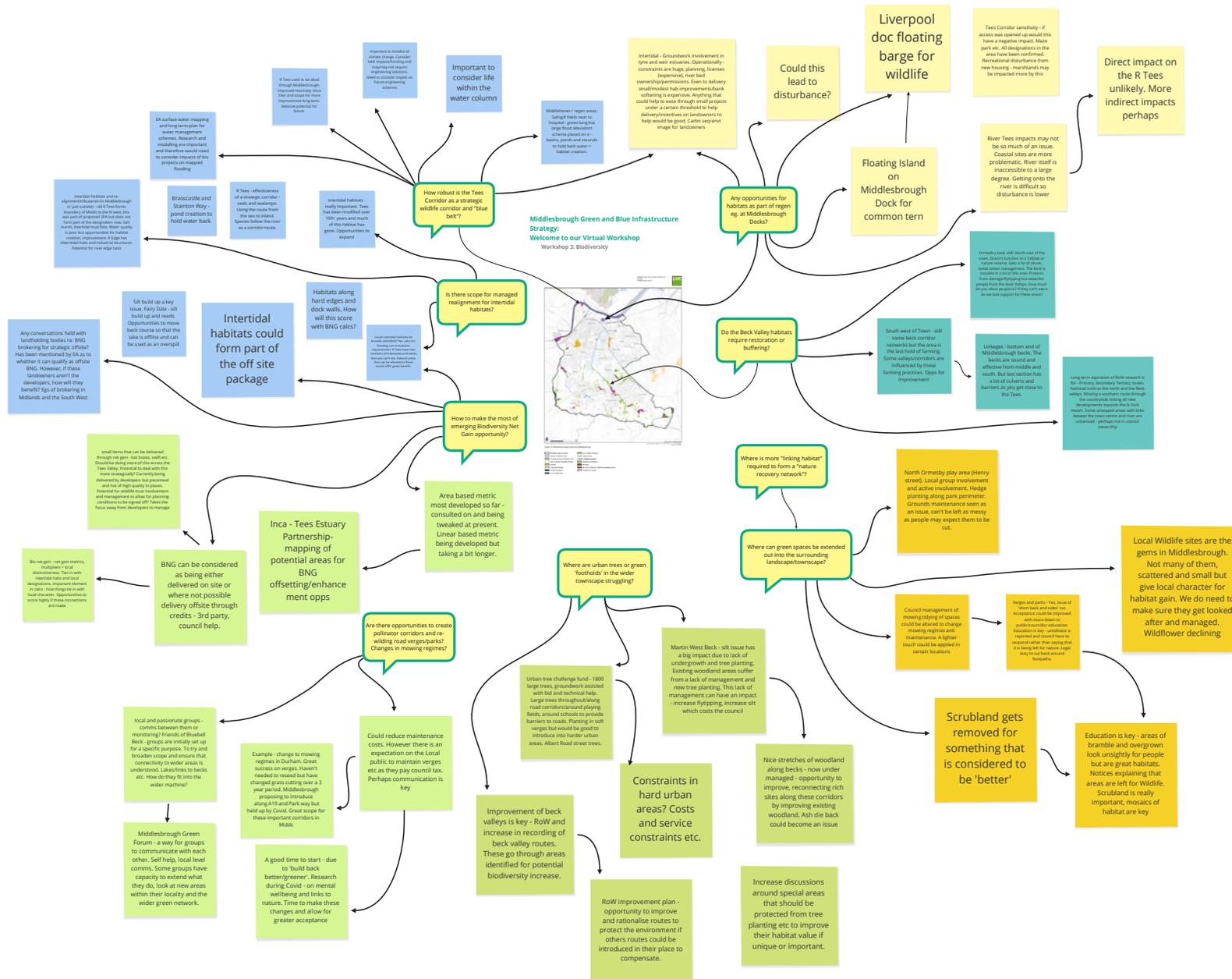
1.215 During the workshop, discussion points were captured by one of the facilitators on an online 'whiteboard', alongside a baseline map to guide the discussion.

1.216 This Appendix contains 'snapshots' of those whiteboards with discussion points raised by stakeholders during the workshops. Following the workshops, these comments were combined with the policy review and mapping data as a basis for the Priority Opportunities identified in Part 2 of the GBI Strategy.

Workshop 1: Regeneration, Heritage and 'Sense of Place'



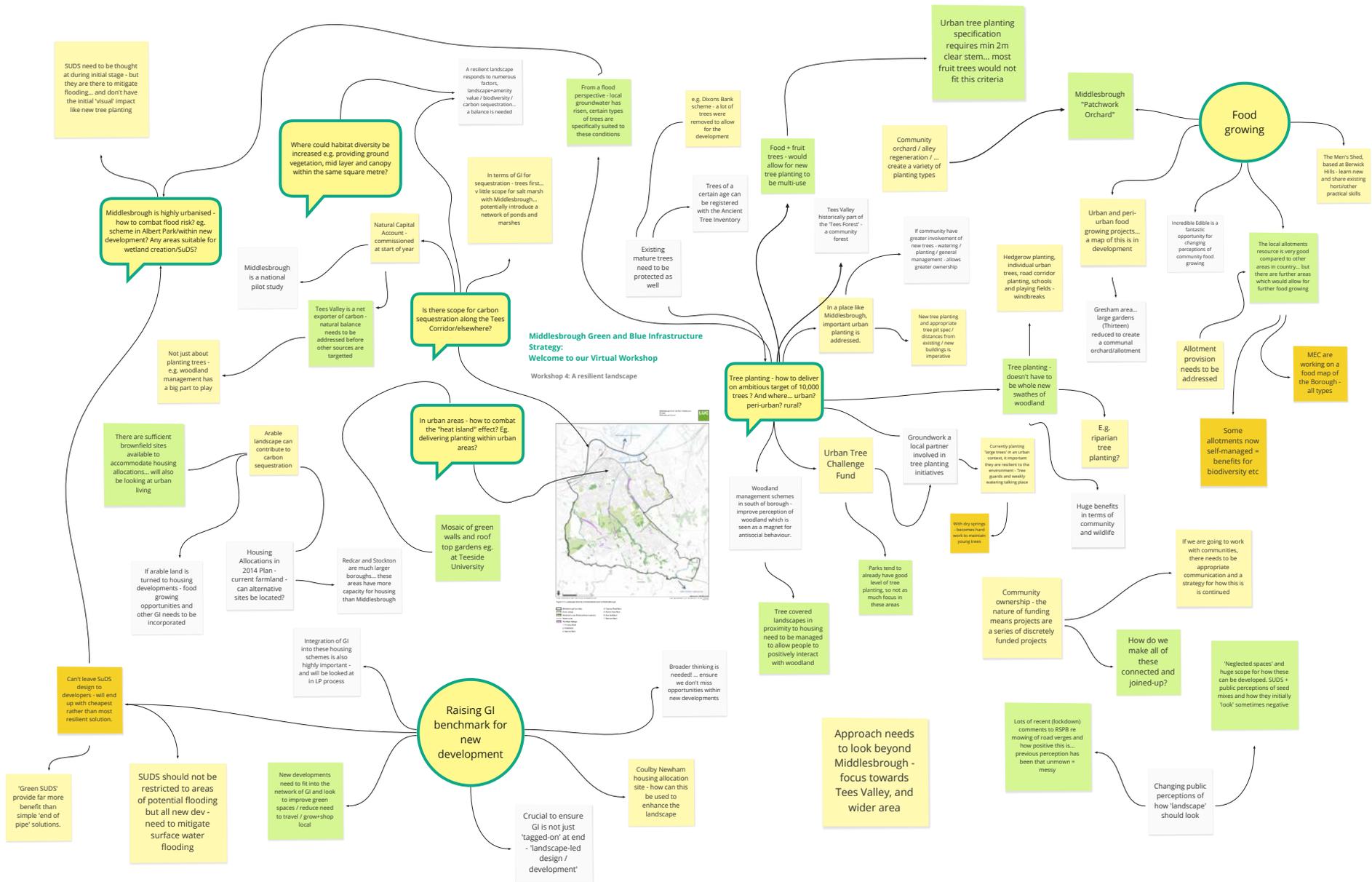
Workshop 2: Biodiversity and Geodiversity



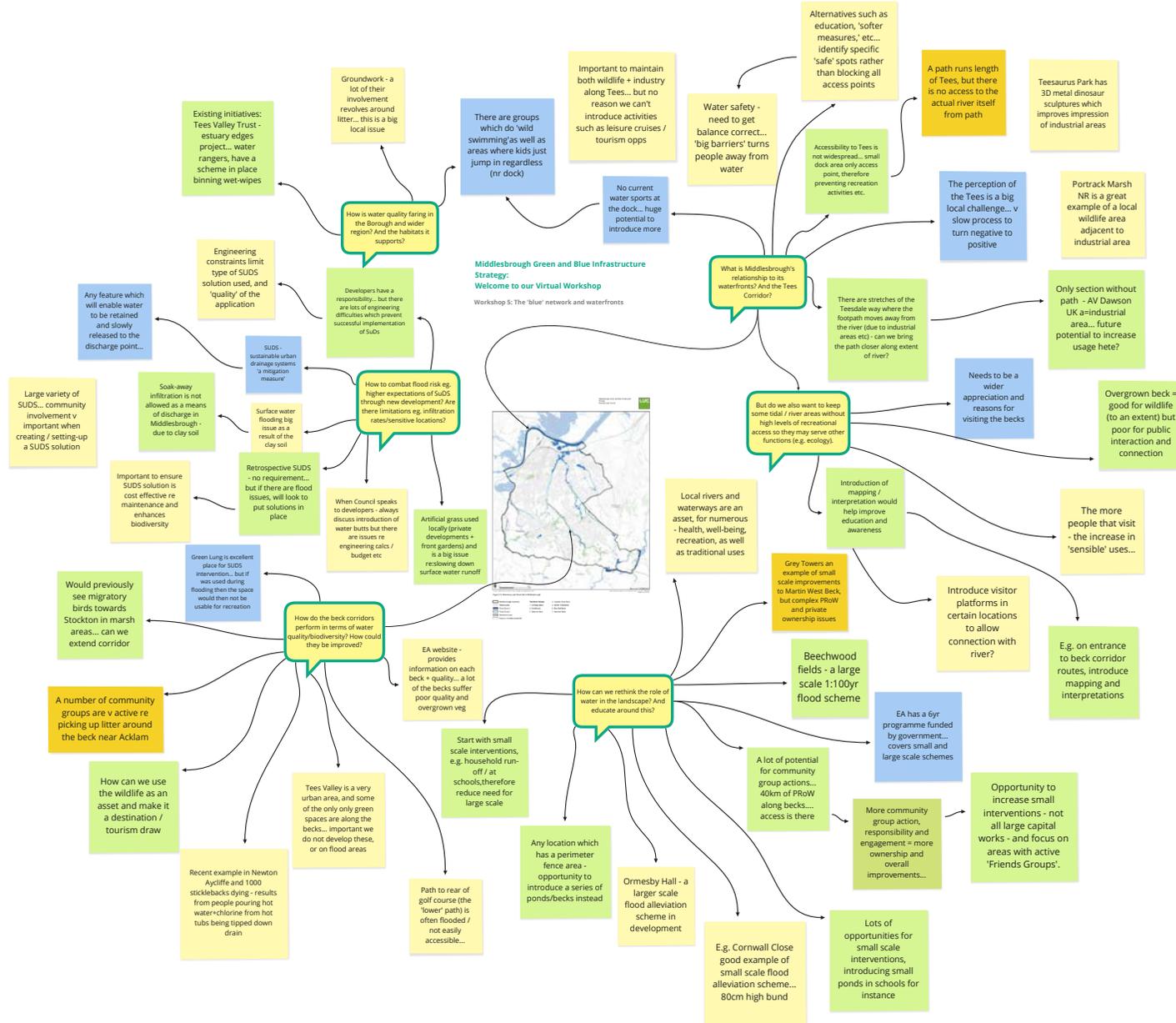
Workshop 3: Reconnecting Communities with Nature



Workshop 4: A Resilient Landscape



Workshop 5: The Blue Network and Waterfronts



Workshop 6: Walking and Cycling

