North Tyneside Council

North Tyneside Council

Green Infrastructure Strategy

November 2015

Contents

1. Introduction

1.1 Green Infrastructure (GI) is vital to the quality of life and business in the Borough of North Tyneside. Recognising its importance, the Council has prepared this strategy to sustain and enhance GI. The strategy identifies the opportunities for planning and implementing GI in the Borough, where investment in GI will support the growth of North Tyneside and deliver the widest public benefits, environmental improvements and the enhancement of the Borough's economy. It supports and informs North Tyneside's Local Plan, the Borough's 15 year planning framework and it's Infrastructure Delivery Plan.

Vision

1.2 Over the next 15 years the Council and its partners will have worked with the community to achieve a well-used, managed, connected and expanding network of green infrastructure which provides a wealth of benefits for people, place and nature thereby contributing to making North Tyneside a place where:

- Our Local communities are connected through high quality networks of green spaces and corridors providing attractive spaces for play, recreation, relaxation, reflection and education.
- Wildlife is thriving within urban areas, along the natural wildlife corridors and throughout the open Green Belt and biodiversity is increasing
- More people are involved in community food groups, individual growing plots and allotments, successfully contributing to their own food needs with innovative production methods and models.
- Local people are involved in monitoring wildlife, appreciate the importance of gardens in supporting urban ecology and are active custodians of a healthy and vibrant natural environment.
- Local people are proud of North Tyneside's green network and people of all ages use it regularly for healthy exercise and are benefitting from improved physical and mental health.
- A well connected, signed and promoted network of green travel routes is well used by the community and visitors.
- The local economy and the work force continue to benefit from the high quality natural and built environment.
- The stock of designated Green Belt land is utilised to fill gaps and deficiencies in the provision of accessible green space and to address habitat connectivity and a growing number of communities are involved in managing their local Green space.
- Green infrastructure plays an important role in making the area resilient to climate change. Street trees and urban greening schemes assist in cooling urban areas and sustainable urban drainage schemes which can reduce flood risk.

The Local Context

1.3 North Tyneside is one of five metropolitan districts within the conurbation of Tyne & Wear. The Borough covers an area of 8,367ha with a total population of 201,000 (2011) and is an area of considerable contrast North Tyneside is located next to the North Sea to the east with the River Tyne identified at its southern boundary. Newcastle City is located to the west with Northumberland to the north. Despite North Tyneside being largely urban in nature 45% of the Borough is 'green' which includes 1,650 hectares designated as Green Belt to the North. The main urban areas include the towns of Wallsend, North Shields, Killingworth and Whitley Bay, which are located along the River Tyne and coastline stretches. The Borough has an attractive coastline with cliffs and beaches providing recreational facilities for the wider conurbation and beyond. The importance of wildlife along this coastal area is recognised internationally.

Policy Context

1.4 The strategy brings together a variety of national agendas, (planning, natural environment and health), with the Council Vision and the emerging Local Plan. It provides a framework for integrated delivery across these sectors and also proposes specific tools to deliver green infrastructure through the planning and development sector.

1.5 The importance of green infrastructure is also firmly embedded in the new National Planning Policy Framework (NPPF) March 2012 which states;

 "Local Planning Authorities should: set out a strategic approach in their Local Plans, planning positively for the creation, protection and enhancement and management of networks of biodiversity and green infrastructure"

1.6 There is a wide range of strategy documents and policies from the national level that provide a framework for the development of green infrastructure strategy. These are listed and described in Appendix A.

Structure of this Document

Section 1 provides a brief introduction and context to the strategy.

Section 2 Details what green infrastructure is, outlines the various types of green infrastructure along with some of the benefits it can provide.

Section 3 Specifies the existing green infrastructure assets within North Tyneside as well as the cross boundary assets.

Section 4 Explains North Tyneside's Wildlife Corridor network, how it was produced, along with how they will be protected and enhanced.

Section 5 Concludes the strategy by detailing who is responsible for delivering the vision as well as key tools and strategy principles. The section also explains funding mechanisms, provides examples of current best practice guidance and outlines specific objectives and priority actions.

2. Why Plan for Green Infrastructure?

What is green Infrastructure?

2.1 Green Infrastructure is the network of green and blue spaces that surround, pass through and create the structure and form of our settlements and landscapes, connecting our towns and villages. The GI approach can be employed at a number of levels, from neighbourhoods through to regions, as its multiple benefits and vital functions are applicable at all geographic levels.

2.2 GI planning recognises that networks of green and blue spaces are vital to our economic, environmental and community well-being through providing the setting for healthy and sustainable communities, enhancing and creating a sense of place, providing ecosystem services and helping to adapt to a changing climate. Biodiversity will be better able to adapt to potential impacts of climate change if the habitats in the landscape are well connected.

2.3 Transcending administrative and geographical boundaries, GI incorporates un-built land and other features such as recreational networks, public rights of way and cycleway. GI planning can offer low impact and often low cost solutions to many of the issues that affect our environment, society and economy.

2.4 The value of GI is recognised in the Government's 2011 Environment White Paper and in several independent economic appraisals and is part of English planning documents, concerned with biodiversity, climate change and sustainable development. The National Planning Policy Framework5 recognises the value of GI and the multiple benefits it delivers, and requires that local authorities take a strategic approach to its delivery.

Types of Green Infrastructure

2.5 GI refers to many different types of green space, in public and private ownership, with and without public access, in urban and rural locations:

- Parks and gardens – urban parks, pocket parks, country parks and formal gardens
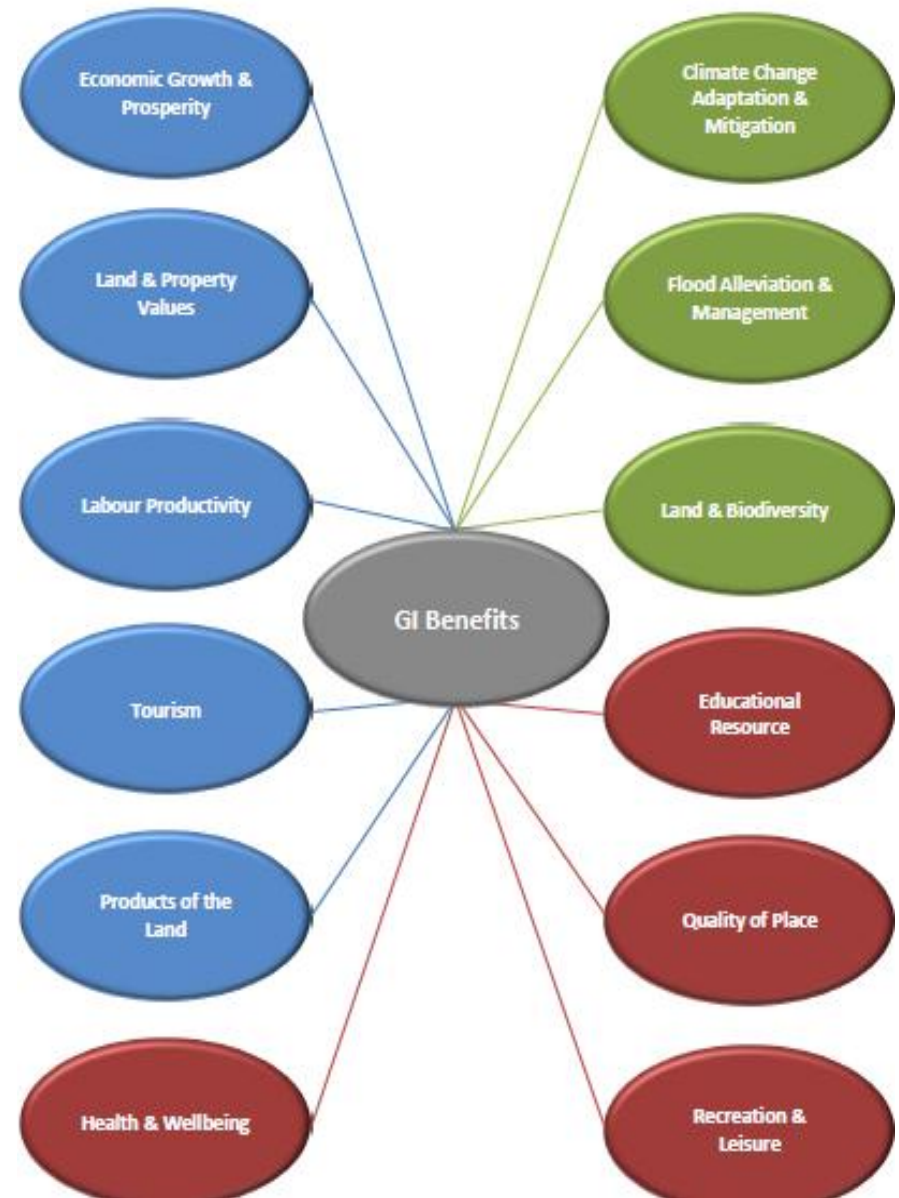

Figure 1- GI's benefits

- Amenity space- play areas, communal gardens, playing fields and civic plazas
- Natural and Semi-natural Green Space – Woodland, wetlands, water bodies, nature reserves, wildlife sites and other wildlife habitats
- Wildlife Corridors and wildlife links – Rivers, roadside verges, canals, footpaths, waggonways and cycle ways .Others – churchyards, allotments, moorland, agricultural land and hedgerows.

Benefits of Green Infrastructure

2.6 Green infrastructure takes many different forms. It can be delivered at many different scales and can have many functions. It offers ways to protect and enhance ecological networks, prepare for climate change, build economic success, manage flood risk and improve health and well-being. It provides alternative active access options and quality green spaces for exercise and socialising. It should help to enhance landscape character and local distinctiveness and also provide attractive and appealing places to live and work. In effect, green infrastructure can deliver a range of natural services that provide significant environmental, social and economic benefits. These are well documented and include opportunities to:

- encourage and support healthy lifestyles and thriving communities
- provide active access to the outdoors including, walking and cycling routes, accessible river and canal corridors and green streets
- protect and enhance landscape character and built heritage features
- protect and enhance biodiversity and create new habitats and wildlife linkages between them, reducing their isolation
- support healthy ecosystems that provide many essential natural services including clean water and air
- mitigate and adapt to existing and future effects of climate change through providing urban shade, sustainable drainage, flood alleviation, green energy and space for local food production
- invigorate the local economy and increase natural tourism
- enhance local sense of place

2.7 All GI benefits have a direct relationship with many other policies, programmes, strategies and initiatives across sectors such as health, education and regeneration, as illustrated in the diagram below.

3. Existing Green Infrastructure Assets

3.1 The district already benefits from a wide range of green infrastructure resources, made up of many different types of green assets. During strategy development, assessments have been carried out of these assets including a review of the current character and distribution of each asset, followed by an appraisal of key issues, opportunities and priorities for delivering more benefits. It is important to note that a number of GI assets are often multi-functional and therefore offer a wide range of benefits, constraints and opportunities.

3.2 A prime example of this is Sustainable Urban Drainage (SuDs) which present environmental, social and economic opportunities for the Borough. SuD) mimic natural drainage processes to reduce the effect on the quality and quantity of runoff from developments and provide amenity and biodiversity benefits.

Table 1 provides a summary of the main green infrastructure assets and data sets available.

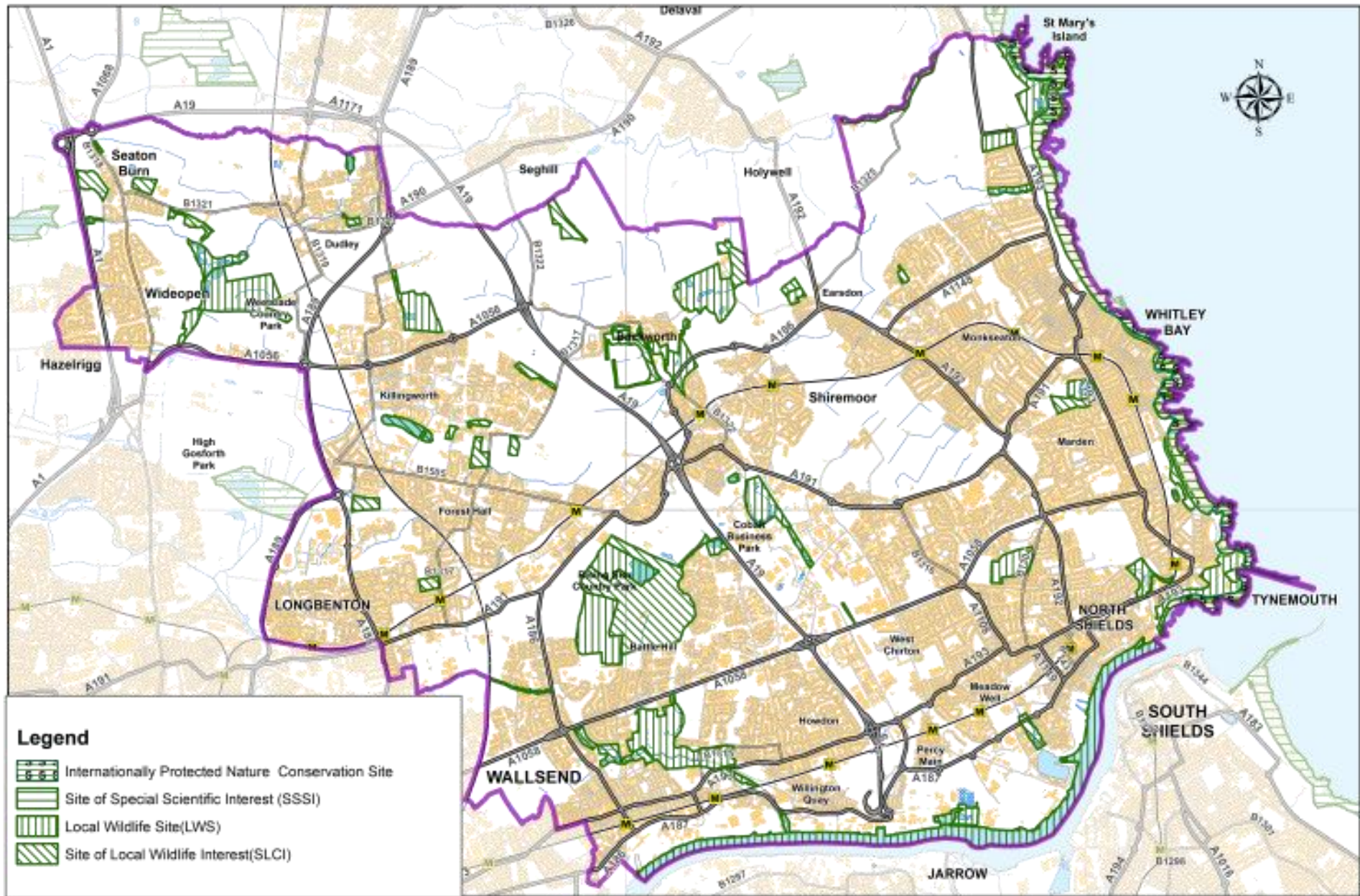| Assets	Description	Key Issues/Opportunities
Biodiversity Assets See Figure 2	Includes: 2 sites of Special Scientific Interest (SSSIs), 28 Local Wildlife Sites, 7 Local Nature Reserves and 30 Sites of Local Conservation Interest, RAMSAR and SPA site. North Tyneside Coquet to St Mary's recommended Marine Conservation Area (rMCA) *(A list of all Locally designated sites can be found in appendix B)*	**Issues:** North Tyneside is a growing Borough and the emerging Local Plan is seeking to deliver a sustainable strategy that will meet its growing development needs over the next 15 years. To meet these needs the Council and its partners must work to reverse habitat fragmentation and create a network of quality sites connected by wildlife corridors, stepping stones and buffer zones. **Opportunities:** Well connected green assets can benefit biodiversity by facilitating the migration of species and providing and using land improvements to deliver biodiversity gain. The creation, protection and enhancement of networks of biodiversity, including local sites and semi-natural habitats are particularly important.
Local Nature Reserves, Parks and Woodlands	Includes: Rising Sun Country Park, Preston Cemetery, Wallsend Dene, Marden Quarry, Annitsford Pond, St. Mary's	**Issues:** Relevant deficiencies highlighted within the Greenspace Strategy include the wards of: Collingwood, Preston,

See Figure 3	Island Wetland, Silverlink Biodiversity Park, Holywell Dene, Brierdene, Brenkley Colliery Plantation, Backworth Woods, Northumberland Park, and Weetslade Country Park.	Chirton, Monkseaton South, Howdon and Longbenton. **Opportunities:** GI assets such as this have the potential to offer GI multi-functional benefits such as flood risk reduction and sustainable surface water management.
Blue Infrastructure See Figure 4	Includes: Waterways, Fluvial, Flood zones, Critical drainage areas, Rivers, Major wetland areas and Streams.	**Issues:** It is critical that future development across North Tyneside does not increase surface water run off post development. Where new development is situated on a flow path at a higher elevation to a known flooding hotspot, then where practical, measures are put in places as part of the development to provide betterment to existing areas known to suffer from flooding. **Opportunities:** Well-planned green infrastructure can help us mitigate and adapt to climate change by encouraging the migration of habitats and species and helping urban cooling. Tree planting can help with natural air cooling, collecting nitrogen oxides and absorption of carbon dioxide. Permeable surfaces and open spaces can be used to reduce the risk of flooding from rivers and surface water runoff and to incorporate sustainable drainage e.g. through flood water storage, tree planting, and protection of river corridors. In addition to this from 6th April 2015 all new developments of 10 units or more must seek to include SuDs within site design, this presents a key opportunity for GI. Large housing sites identified within the Local Plan, particularly Murton and Killingworth provide an excellent opportunity for the incorporation of strategic sustainable surface water management schemes. The council is working with Northumbria Water and the Environment Agency to implement a range of flood prevention measures to our inland water ways, coast and also to areas already at risk of

		surface water flooding.
Public Rights of Way See Figure 5	Includes: Transport Routes, Waggonways, PROW and Recreational Routes	**Issues:** At present their remains poor connectivity between the east and west of the Borough. The quality of path maintenance is considered to be poor in certain areas and previously new routes have not been considered by local cycling groups to meet national standards. Signs for cyclists are considered to be inadequate to the north of Whitley Bay. Previous consultation has demonstrated that conflicts exist in some areas between cyclists and other route users on multi-user routes. **Opportunities:** Landscaping is required along PROWs, which is both aesthetically pleasing and supports wildlife migration. Benefits would also be gained from greater links between the PROW network and the public transport system.
Productive Green Infrastructure See Figure 6	Includes: Allotments and Agricultural Land *(Please see Appendix C for more information on North Tyneside's Agricultural land)*	**Issues:** There are a number of unlettable plots within some of the existing Allotment sites. In addition there are sites that are listed as allotments sites, which are not being used and with such long waiting lists for allotments this is a key issues highlighted in the Allotment Strategy. **Opportunities:** The strategy supports the creation of smaller plots through the division of current vacant allotments into two smaller plots. There are currently 76 allotments deemed unworkable, which could be used to cater for an element of the demand identified. Planned growth as outlined within the Local Plan present new opportunities to incorporate allotment provision within new housing schemes.
Green Space	Includes:	**Issues:**

See Figure 7	Formal Parks, Cemeteries and Amenity Green Space	Gaps in provision have been identified through the north Tyneside Greenspace strategy, they include the following wards: Collingwood, Howdon, Camperdown, Valley and Longbenton. **Opportunities:** The Heritage Lottery Fund application is currently helping to regenerate Wallsend Parks. Northumberland Park is now on to its second stage of Heritage Lottery funding. Churchill playing fields/Souter Park and Killingworth Lake have been earmarked within the Parks Strategy for future refurbishment.
Outdoor sports provision and play areas See Figure 8	Includes: Local Area for Play (LAPs), Local Equipped Areas for Play (LEAPs), Multi- Use Games Area MUGA, Neighbourhood Area Equipped for Play (NEAP), Strategic Equipped Areas for Play (SEAP), and sports fields.	**Issues:** The Green Space Strategy, which includes an assessment of playing pitches (apart from football) indicates that there is a deficiency in the number of rugby union pitches across the Borough and a Play and Urban Games Strategy has been created for North Tyneside, which identifies specific sites for development. A Supplementary Planning document (SPD) has also been created which indicates how Section 106 contributions towards open space development should be collected with regard to residential development. **Opportunities:** GI assets such as this have the potential to offer GI multi-functional benefits such as flood risk reduction and sustainable surface water management.
Green Belt See Figure 9	1,6750 hectares of Green Belt to the North of the Borough connecting with North Tyneside and Newcastle.	**Issues:** The Green Belt is a significant part of the GI network and is protected by national planning policy. Land ownership and management present issues, creating varying quality throughout Green Belt land. **Opportunities:** Local Authorities should aim to protect the green belt but

		not to the extent that appropriate activity and recreation is discouraged. For instance outline permission was granted in 2011 for a golf driving range, nine hole pitch and putt course within the green belt of Seaton Burn. Developments such as this help to enhance the quality of Green Belts and create active places open to all. The Green Belt provides an opportunity for targeted off-site mitigation and enhancement measures.

Figure 2- North Tyneside's Biodiversity Assets

BIODIVERSITY ASSETS

Legend

- Internationally Protected Nature Conservation Site
- Site of Special Scientific Interest (SSSI)
- Local Wildlife Site(LWS)
- Site of Local Wildlife Interest(SLCI)

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0 0.35 0.7   1.4   2.1   2.8
Kilometers

CAPITA

Figure 3- North Tyneside's Local Nature Reserves, Parks and Woodland
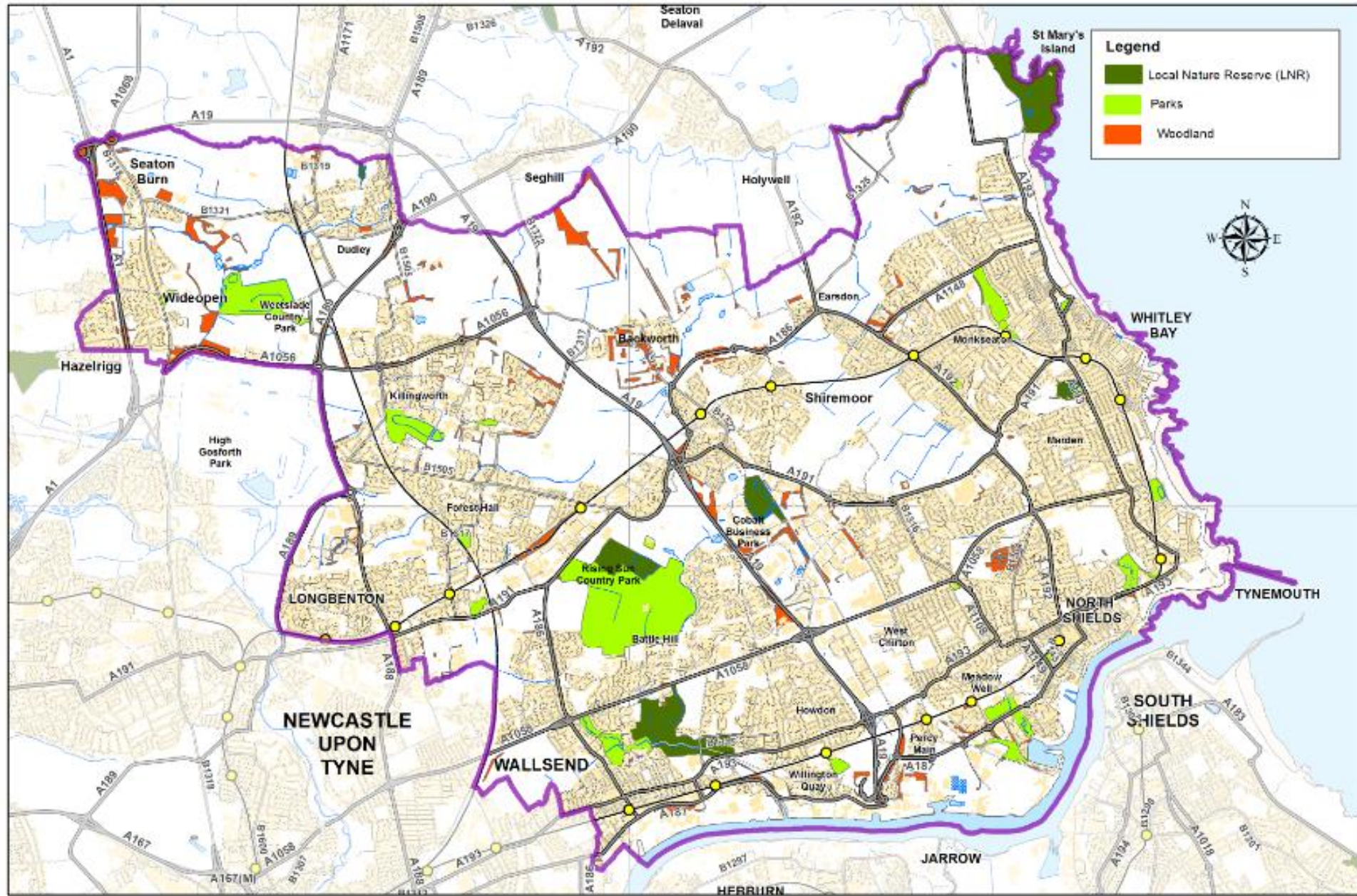
NORTH TYNESIDE - LOCAL NATURE RESERVES, PARKS AND WOODLAND

Figure 4- North Tyneside's Blue Infrastructure

Legend

- Critical Drainage Areas
- Surface Water
- Surface Water Flooding
- Floodzones 2, 3, 3b
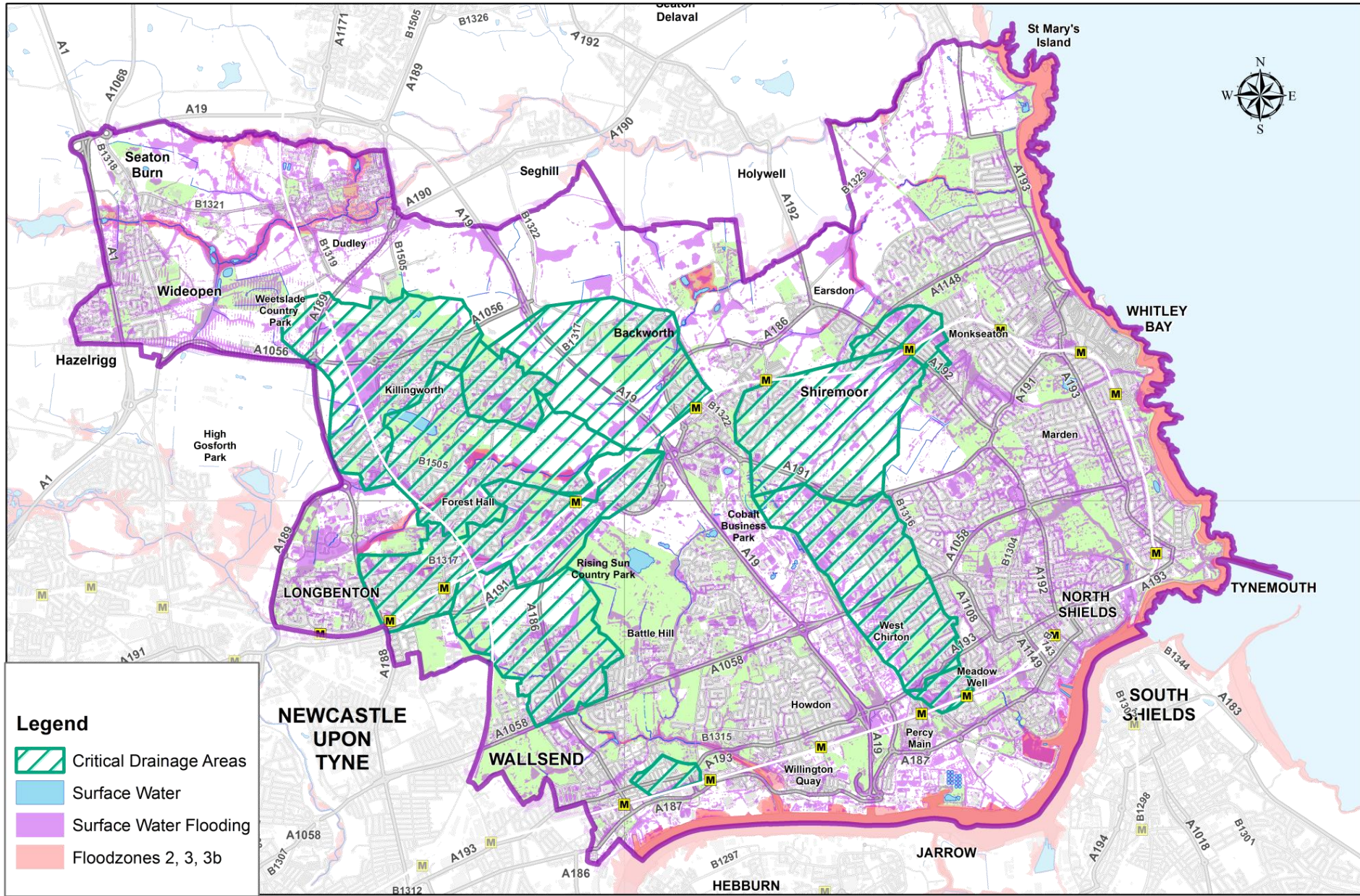
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BLUE INFRASTRUCTURE

0 0.375 0.75   1.5   2.25   3
Kilometers
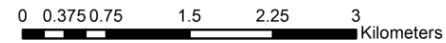
Figure 5- North Tyneside's Cycleway's and PROW
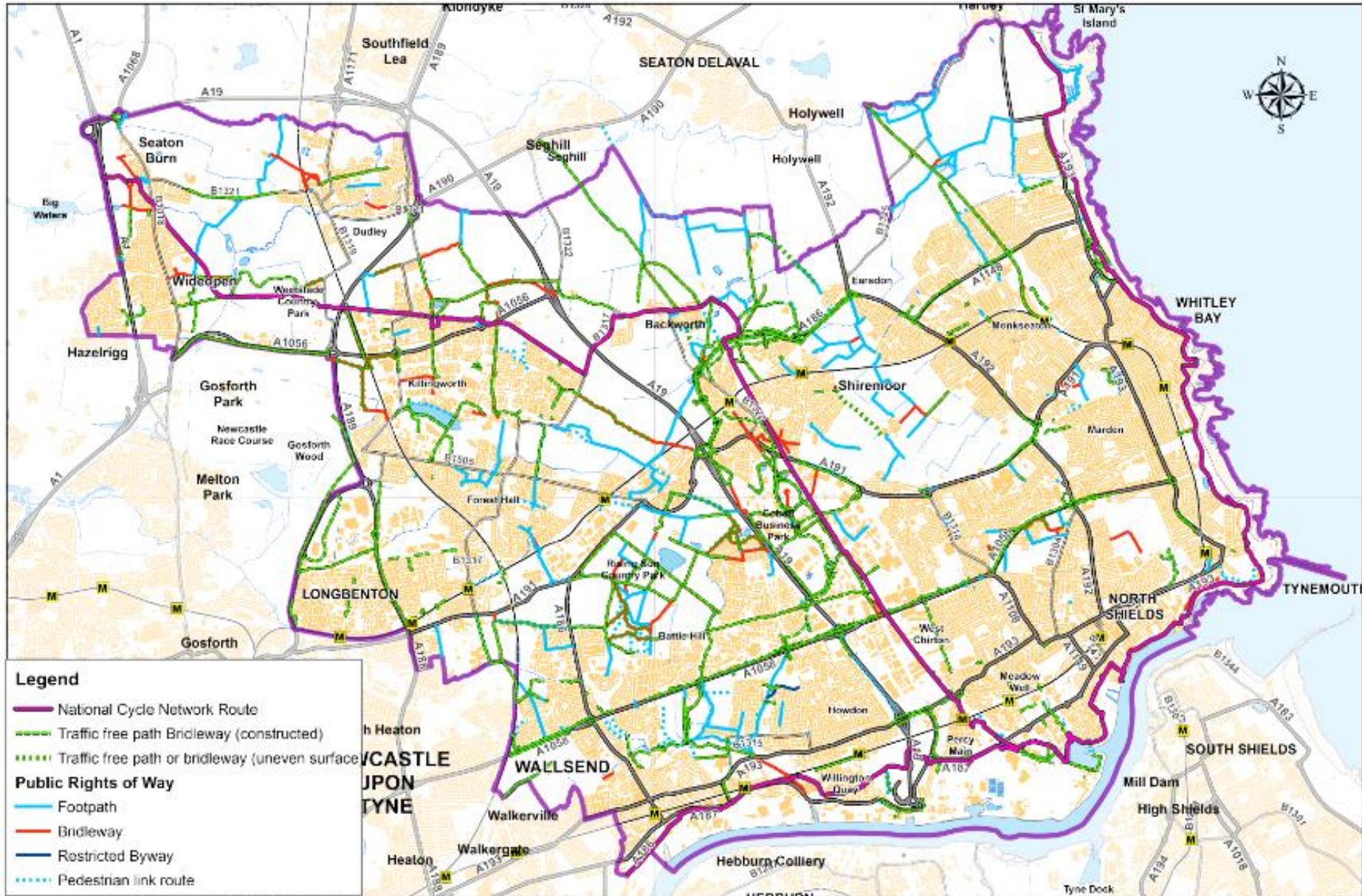
Legend

— National Cycle Network Route

- - - Traffic free path Bridleway (constructed)

..... Traffic free path or bridleway (uneven surface)

Public Rights of Way

— Footpath

— Bridleway

— Restricted Byway

..... Pedestrian link route

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CYCLE LANES AND
PUBLIC RIGHTS OF WAY

0 0.35 0.7   1.4   2.1   2.8
Kilometers

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Figure 6- North Tyneside's Agricultural Land
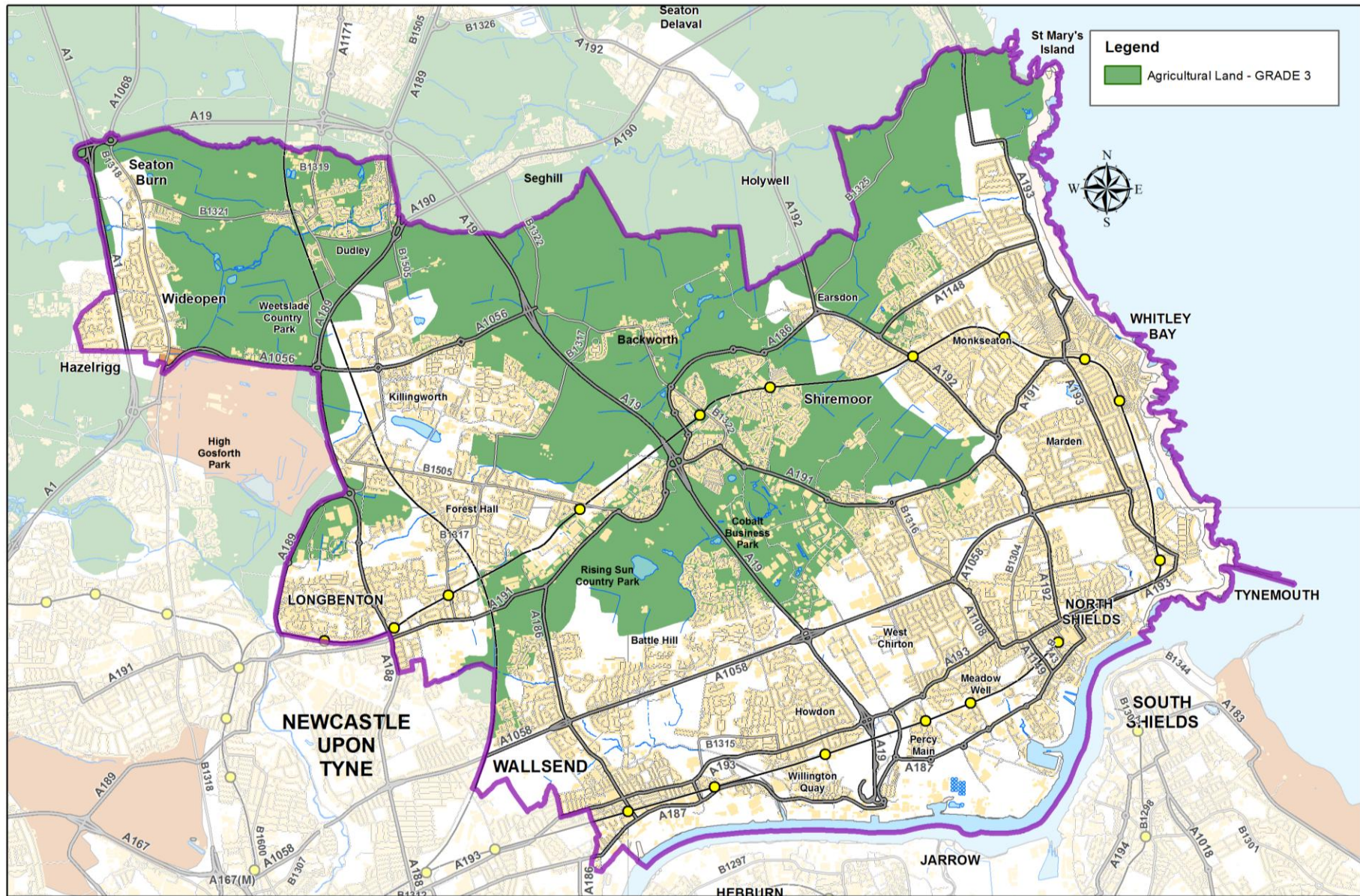
NORTH TYNESIDE AGRICULTURAL LAND

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0 0.375 0.75 1.5 2.25 3 Kilometers

Figure 7- North Tyneside's Designated Green Space

Legend
- High Quality
- Medium Quality
- Low Quality

NORTH TYNESIDE GREEN SPACES

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0 0.375 0.75 1.5 2.25 3
Kilometers

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Figure 8- North Tyneside's Playgrounds and Sports Fields

PLAYGROUNDS AND SPORTS FIELDS

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Legend

Playgrounds

▼ LAP
● LEAP
■ MUGA
▲ NEAP
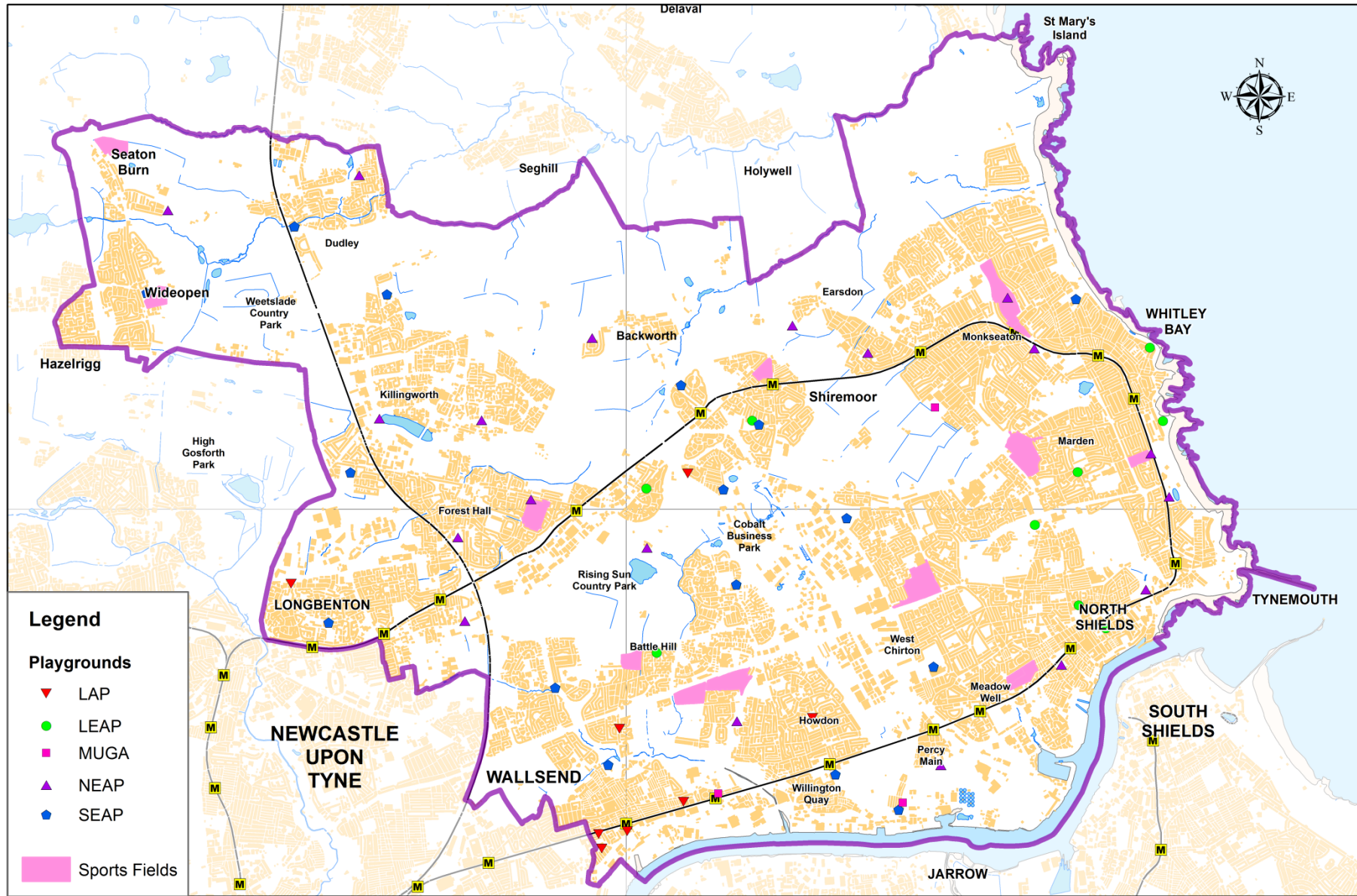⬟ SEAP

▰ Sports Fields

Existing Cross-Boundary Assets

3.3 In order to gain an understanding of North Tyneside GI network and its links with neighbouring authorities, a number of key sites located in surrounding administrative areas have been identified. These include significant sites/areas that regularly attract visits from North Tyneside residents and sites which frequently host large events or support a particular area of interest, again attracting external visitors.

Newcastle

3.4 **Jesmond Dene:** The former gardens of Lord Armstrong's Jesmond Dene property which he donated to the city for public use. The Dene now stretches north to south from South Gosforth to Cradlewell, Jesmond - close to the boundaries of North Tyneside. The Dene is popular with dog walkers, joggers and for general leisure use including families for its Pets Corner and the Craft Market held each Sunday on the Armstrong Bridge. The Dene links to Paddy Freemans Park (boating lake, playground and sports pitches), Armstrong Park and Heaton Park (park gardens, play areas and bowling greens).

3.5 **High Gosforth Park:** This area of land consists of Gosforth Park Racecourse, Northumberland Golf Course and the nature reserve around

3.6 **Gosforth Wood and Lake.** The land is located immediately adjacent to the boundary with North Tyneside at the A 1056 with the Weetslade Country Park being located on the other side of this road.

3.7 **Big Waters Nature Reserve:** This nature reserve is located north of Brunswick Village, adjacent to the boundary with North Tyneside formed by the A 1 near Seaton Burn. National Cycle Route 10 and public rights of way run from North Tyneside past the reserve. These provide an existing link between the reserve and Weetslade Country Park.

3.8 **River Tyne**: The north bank of the River Tyne includes Public Rights of Way (including National Cycle Routes 7 and 72), which provide existing links into North Tyneside along the river side. There are also a number of leisure uses and greenspaces linked to the river side including Walker Riverside; a 27ha site which has been reclaimed from former industrial uses and now contains wildflower meadows, woodlands and grasslands with views over the Tyne.

3.9 Key stakeholders have been meeting to develop an 'Ouseburn Vision' which seeks to restore 8km of the upper Ouseburn and lower Ouseburn to make it a cleaner naturally functioning ecosystem. This work is in partnerships with EA, NWL, Tyne and Wear Rivers Trust, Local Authorities and land managers. A key driver for this work is the EU Water Framework Directive and the need to restore the river and floodplain to Good Ecological Potential (GEP) by 2027.

South Tyneside

3.10 **River Tyne:** The River forms an obvious GI link between North and South Tyneside. There are also opportunities to increase GI and to 'mirror' features on both sides of the Tyne and 'continue' links which would otherwise be fragmented by the Tyne. The Shields Ferry and pedestrian/cycle tunnel also support the crossing of the river by the public by sustainable transport methods, providing few opportunities for wildlife migration. Visual

3.11 GI links currently exist between Northumberland Dock Road/East Howden, North Tyneside and Bede's World, River Don, South Tyneside. To a lesser extent GI improvements around the Royal Quays area of North Tyneside could potentially be linked through to green areas around Mill Dam/ferry landing/Stephenson Gardens in South Tyneside. (However, this opportunity may be most relevant to South Tyneside).

3.12 **South Shields**: The town of South Shields has six miles of coastline and three miles of river frontage and benefits from tourism being one of the most popular seaside resorts in the north-east. The Shields Ferry, A 19 (via the Tyne Tunnel) and the pedestrian/cycle tunnel means that it is well connected to North Tyneside.

3.13 **Opportunities opposite Fish Quay:** Regeneration work is currently being completed in Fish Quay to provide residential, commercial and leisure units. Potential opportunities for this development to be used to mirror activities on the opposite side of the Tyne, providing aesthetic linkages across the area.

3.14 **NCNl:** National Cycle Route 1 connects North and South Tyneside.

Northumberland

3.15**Holywell Dene and the Coast:** The GI links from North Tyneside into Northumberland are most popular along the coast and through Holywell Dene. The Dene runs east from Seghill, past Holywell and down to the coast at Seaton Sluice and is connected to North Tyneside by a series of footpaths and the waggonways network (a series of recreational routes following the paths of former coal transport links and which is now incorporated into the wider PROW network). The Dene has a number of footpaths running along its length and is popular with walkers and families. Holywell Dene meets the coast at Seaton Sluice, where it also meets up with coastal footpaths and open space, which lead up past St. Mary's Lighthouse, through Seaton Sluice and on to the 'Links' to South Beach, Blyth. National Cycle Route 1 also runs along this stretch of coast.

3.16 **Seaton Delaval Hall:** Seaton Delaval Hall is an old English Baroque House that has recently been the subject of a campaign to save and open the Hall to the public. Now owned by the National Trust as a result of this campaign, the Hall has the potential to become a significant benefit to the local tourist industry in the South East Northumberland and North Tyneside area. There is potential for good links to the Hall from North Tyneside by the Waggonway network, public footpaths and from the coast.

Cross Boundary Workings

3.17Whilst there is no longer a regional planning system in England, Section 33A of the Planning and Compulsory Purchase Act 2004 (as amended by the Localism Act 2011) introduces a new "duty to co-operate" in preparing Local Plans, that ensures that Local Authorities have regard to strategic cross boundary issues in co-operation with their neighbouring authorities and other key organisations such as Historic England and Natural England. Several discussions have occurred with the relevant neighbouring authorities with regards to GI. Draft Local Plan policies have been shared along with relevant GIS shape files detailing GI assets with Northumberland, Northumberland National Park and Newcastle. The 7 regional Local Authorities are also working on a regional SuDs guidance which also includes elements of GI.

Figure 9- Key Links to Neighbouring Authorities

4. North Tyneside's Wildlife Corridors

4.1 Wildlife Corridors are habitats which allow species to move along and expand their range. North Tyneside's Wildlife Corridors are intended to erase the perception of biodiversity as a constraint to economic and social growth. It will be built around existing features with statutory or policy protection providing a more defined network of habitat and/or species specific wildlife corridors which link recognised wildlife sites. It will be underpinned by the aims and objectives of the NPPF, The Natural Environment White Paper 2011 and the Newcastle and North Tyneside Biodiversity Action Plan (2011).

4.2 Wildlife Corridors are intended to help conserve biodiversity where patches of semi-natural habitat have become fragmented and isolated within intensively used landscapes. There is evidence that habitat patches that are connected within a fragmented landscape have higher levels of biodiversity than those that are not.[1]

4.3 The establishment of these Wildlife Corridors is fully supported by the National Planning Policy Framework (NPPF). It states that the Local Planning Authority should set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.

> Strategically, North Tyneside aims to:
> 1. Protect Wildlife Corridors
> 2. Provide high quality GI in order to off-set and mitigate against planned growth
> 3. Identify and enhance high quality areas of Wildlife Corridors
> 4. Maintain and enhance connectivity of Wildlife Corridors
> 5. Create new Wildlife Corridors and wildlife links.

Methodology

4.4 There is no definitive methodology for producing a Wildlife Corridor Map. However we have drawn heavily on external resources, including National Planning Policy, 'The Natural Choice White Paper'[2] (specifically page 8) and working in partnership with neighbouring Local Authorities, in-house biodiversity officers, The Northumberland Wildlife Trust and Natural History Society of Northumbria. Decisions have been taken in the preparation of the map based on the current availability and quality of the Borough's ecological data and has been assembled from a wide range of sources.

4.5 The mapping of the Wildlife Corridors fell into 4 main stages (see figure 11):

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[1] Gonzalez. A et al 1998. Science 281, 2045-2047
[2] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228842/8082.pdf

1. The first step was to map all nationally and locally designated wildlife sites. All designated sites were given a specific buffer depending on their importance buffer.
   -SSSI's and Ramsar sites: 150m buffer
   -LWS over 20 hectares: 150m buffer
   -All other LWS: 100m buffer
   -All SLCI's:100m buffer

Any proposed development which falls within a buffer zone must consider the impact upon the designated wildlife site. This method is in line with Natural England's recommendations for opportunity mapping and habitat networks (Catchpole. 2006 & 2007); this provides a robust footing on which to build North Tyneside's new wildlife corridors.[3]

2. Working in partnership with North Tyneside's ecologist, conservation experts from the Northumberland Wildlife Trust and Natural History Society of Northumberland key Strategic routes in North Tyneside were identified which linked to Newcastle and Northumberland. Strategic and Local Wildlife Corridors were then mapped based on aerial data and specific local knowledge.
3. Un-designated but key green spaces that lay outside of these specific corridors were mapped as 'stepping stones' as they were vital in linking up existing corridors.

Achieving net gains for biodiversity

4.6 Green infrastructure planning not only aims to enhance the connectivity of open spaces across the Borough, but also provides opportunities to alleviate current deficiencies.

4.7 A map has been produced (figure 11) which identifies the emerging Local Plans proposed housing and employment sites in relation to existing GI. It is recognised that the additional development proposed in the Draft Local Plan could have indirect impacts on biodiversity and the use of open space for recreation. In preparing site allocations, North Tyneside Council has considered the potential impact of each site allocation on biodiversity and green space assets. Where new development occurs North Tyneside Council will seek on or off-site provision resulting from recreational pressure on existing GI sites, when practical.

4.8 The strategic proposals at Murton gap and Killingworth Moor make up the largest site allocations for housing within the Draft Local Plan. Providing green infrastructure is an integral part of new development. Carefully designed green infrastructure in new developments can also provide links to existing green infrastructure assets. For larger sites, green infrastructure networks should be considered as a key element of the vision, design and layout and should

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[3] Catchpole, R. English Nature, (2006), **Planning for biodiversity - Opportunity Mapping and Habitat Networks in Practice**: a technical guide Catchpole, R. English Nature Research Report Number 687: Planning for biodiversity – opportunity mapping and habitat networks in practice: a technical guide.

include a multi-functional element. To be successful it is important that the long term management of GI provision and improvements that arise from developments must be secured and properly financed through appropriate conditions and legal agreements. Landscape character should be used to inform appropriate GI; for example; location and pattern, species and management regime. In the same way Wildlife Corridors should not be seen as an impediment to development to development but also an opportunity to create new or enhance existing networks.

4.9 North Tyneside Council is committed to continue to working with Northumberland Council and Newcastle Council on any cross-boundary protection, enhancement and creation schemes. It is anticipated that the provision of Green Infrastructure within new developments, new areas of natural and semi-natural green space and enhance linkages across the Borough and in general can provide opportunities for biodiversity enhancement.

4.10 The North Tyneside Local Plan pre-submission draft includes a specific policy which relate to the protection of Wildlife Corridors.

Figure 10- North Tyneside's Strategic Wildlife Corridors

These corridors are important for their linkage value to the wider environment and not necessarily for their intrinsic ecological value but own particular significance on a regional basis. They can be the longest of wildlife corridors and sweep across important ecological assets contained within the borough. They indicate the major open passageways between and into the urban areas.

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Biodiversity Assets

- ■ SSSI and SPA (Ramsar)
- ■ Local Wildlife Site (LWS)
- ■ Site of Local Conservation Importance
- ■ Wildlife Corridor
- ▨ Biodiversity Assets Buffer
- ■ Stepping Stones

NORTH TYNESIDE WILDLIFE CORRIDORS,
STEPPING STONES AND BUFFER ZONES

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0   0.4   0.8   1.6   2.4   3.2
Kilometers

Working in partnership with
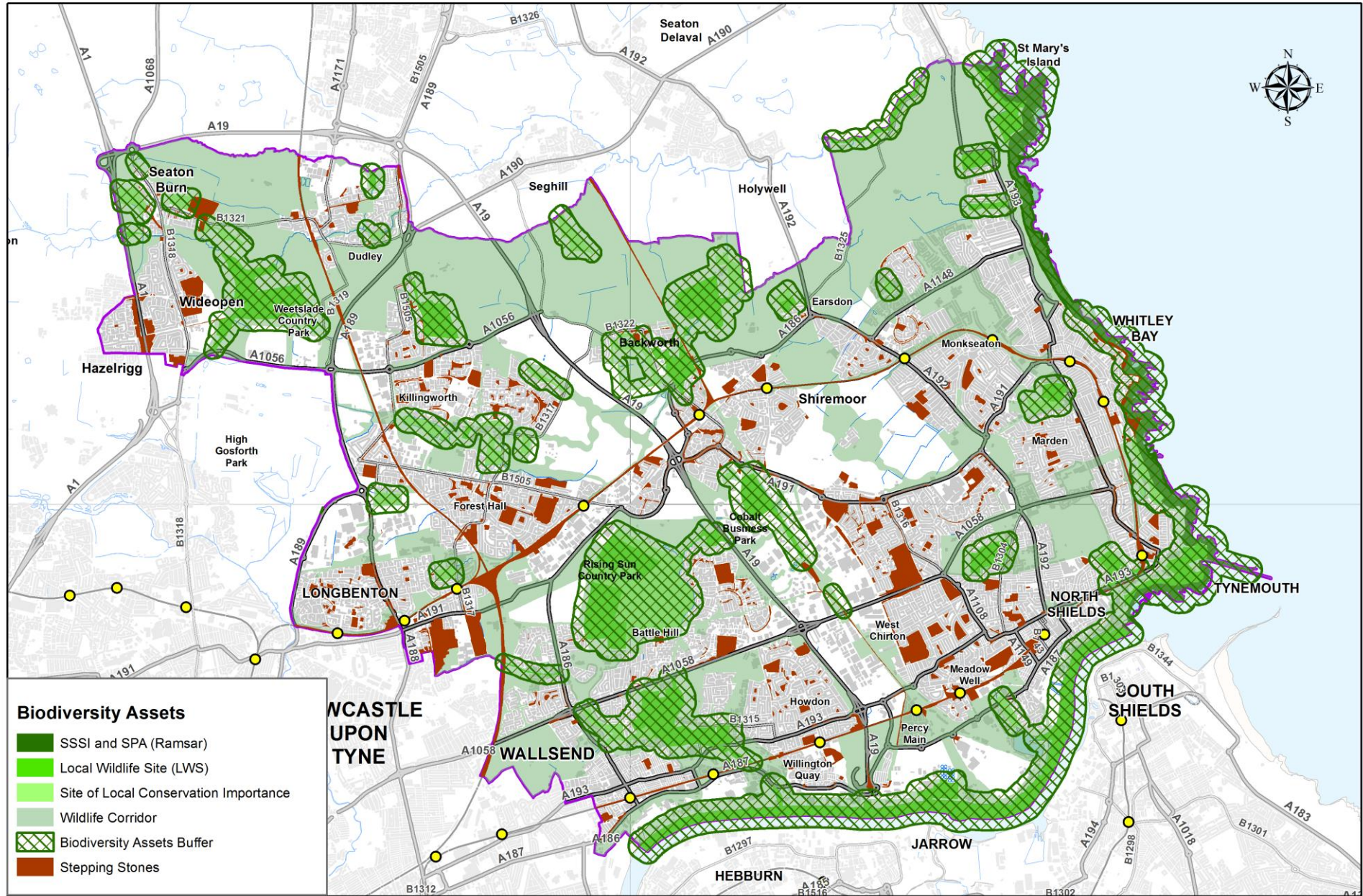CAPITA

North Tyneside Council

Figure 11- North Tyneside's Wildlife Corridors

4. Delivering the Vision

Who is responsible?

5.1 The successful delivery of the strategy vision will be dependent on coordinated, targeted activity and strong working relationships with many partners including the local community. It requires cross boundary working and multi-agency cooperation. Delivery can be achieved in a wide variety of ways and by different bodies taking the lead. In principle, any individual, group or organisation that is responsible for green infrastructure, or benefits from it, has a possible role to play in its creation, protection, management or enhancement. This includes the Council, neighbouring local authorities, charitable trusts and the voluntary sector, local community groups, organisations and agencies responsible for green assets and individuals, businesses or organisations that own, manage or develop land.

Tools for Delivery

5.2 The strategy provides a variety of tools and mechanisms to support delivery:

- Strategy principles- providing fundamental guidance on how green infrastructure should be delivered
- Delivery aims and objectives- setting out what needs to be done to deliver the green infrastructure benefits and providing a framework for the action plan
- Mapping- district wide issues and maps to show current state of play and what data we need to make readily available.
- Current best practice examples- to act as catalysts to inspire and guide development of green infrastructure.

Strategy Principles

5.3 A number of high level principles underpin how we need to approach the delivery of green infrastructure to be successful:

Green infrastructure and cultural shift

5.4 Put the value of nature at the heart of decision making, by working with decision makers, infrastructure delivery agents and the development sector, to increase awareness of the wider benefits that a healthy natural environment can provide.

Green infrastructure and partnership working

5.5 Work in partnership to achieve a coordinated, cross boundary and inter agency approach to delivery of green infrastructure across the district and beyond.

Green infrastructure and development

5.6 Green infrastructure should be central to the design of new developments. Proposals should respect and enhance green infrastructure within the site and demonstrate strong links to the wider network. Encouraging SuDs on site offers an ideal opportunity to combine delivery of both.

5.7 Increase the benefits that green infrastructure assets deliver for people and wildlife by increasing function and connectivity wherever possible and appropriate.

Green infrastructure and biodiversity

5.8 Green infrastructure should deliver habitat restoration, re-creation and biodiversity enhancements, and provide more opportunities for people to connect with nature wherever appropriate.

Funding

5.9 It is unlikely that significant new funding will be made available from either central or local government to specifically fund green infrastructure projects. However, the proposals fall within or overlap with a number of current and emerging funded initiatives for environmental protection and enhancement, as well as other initiatives to support land-based tourism, and so there is every prospect that these initiatives can and will help deliver the identified green infrastructure objectives.

5.10 Much of the work needed to implement green infrastructure initiatives is also consistent with existing ongoing work by the Council and its partners, to protect and enhance our local environment and improve the quality, quantity and access to our public open spaces and countryside. Green infrastructure projects can therefore help provide a focus for this existing work and, through working with new and existing partnerships, utilise existing resources to achieve significant progress and enable bids for new external funding.

5.11 New development, whether on Greenfield or previously developed sites, brings opportunities to support green infrastructure work and to provide new green infrastructure. Policies for achieving this are set out in the Local Plan. Funding or works to provide green infrastructure may come about through planning conditions, S106 planning obligations or if necessary, the Community Infrastructure Levy. Development viability is considered both in the Local Plan and the planning application process. The benefits of green infrastructure can be maximised by taking a strategic approach to new development through Development Plan Documents and by adopting a collaborative approach with developers at an early stage in order to identify the opportunities that a site(s) may offer. It is also necessary to have a flexible approach to projects, timetables and priorities to be able to take advantage of as yet unknown projects and initiatives or other opportunities as they arise. To be successfully taken forward, projects will need to identify key personnel for delivery and the plan overall. In addition, the individual projects will require regular monitoring.

Current Best Practice Advice

5.12 Planners, practitioners and developers should follow the latest best practice advice and guidelines.

5.13 Most recent guidance and advice (August 2015):

The Woodland Trust: "Residential developments and trees - the importance of trees and green spaces"-
https://www.woodlandtrust.org.uk/mediafile/100631140/pg-wt-300615-residential-developments.pdf?cb=b44e513681b948a6a19b9d8a44b39ead

TCPA and Wildlife Trusts: "Green Infrastructure Guide"-
 http://www.wildlifetrusts.org/sites/default/files/Green-Infrastructure-Guide-TCPA-TheWildlifeTrusts.pdf

TCPA: "Planning for a healthy environment: good practice for green infrastructure and biodiversity"-
 http://www.tcpa.org.uk/pages/planning-for-a-healthy-environment-good-practice-for-green-infrastructure-and-biodiversity.html

Landscape Institute: "Green Infrastructure:
An integrated approach to land use" - http://www.landscapeinstitute.org/policy/GreenInfrastructure.php

Susdrain: "The SUDS manual"- **http://www.susdrain.org/delivering-suds/using-suds/design-guidance/detailed-suds-design-guidance.html**

The North East: *Draft* Regional SuDs Strategy.

Delivery Aims and Objectives

5.14 It is vital to emphasise that the protection and enhancement of Green Infrastructure must account for the following components:

i. Quantity
ii. Quality
iii. Connectivity

	Objective	Action	Priority Actions
1	**Create a quality, distinctive landscape and townscape**	1	Protect and improve natural and built green heritage assets.
		2	Encourage tree planting along major transport corridors.
		3	Explore ways to retrofit Green Infrastructure into existing developments.
		4	Strengthen the character and landscape quality of the Green Belt.
		5	Create a quality environment to attract new development and promote regeneration.
		6	Explore ways to improve urban ecology
2.	**Provide a connected network of healthy, wildlife rich, natural ecosystems**	1	Improve the amount and mix of protected and priority habitats and species in the urban area.
		2	Improve the biodiversity value of the wildlife corridors
		3	Deliver net biodiversity gains through well planned green infrastructure and beneficial design features in either new or restored buildings.
		4	Provide more stepping stones and buffer zones for wildlife to move more easily.
		5	Maintain and improve the Borough's air and water quality.
		6	Enhance GI's multifunctionality through the incorporation of techniques such as SuDs, artificial habitats and increasing sustainable access, community facilities and encouraging productive green space
3.	**Continue to identify initiatives to**	1	Provide connections so that people can move easily between urban green spaces

	maintain, expand and	2	Design green infrastructure for safe, positive use by people of all age groups and abilities.
	enhance an accessible green network for people	3	Focus on providing major greenspace to serve existing and new populations arising from growth in the sub-region
4.	**Promote outdoor sport, recreation, play and education**	1	Protect and enhance facilities for sport, recreation and play in the urban area.
		2	Enhance existing and create new PROW
		3	Provide opportunities for people to learn about nature and the environment.
		4	Engage more local people in the design or re-design of locally important open spaces.
		5	Increase legibility through the implementation of signage and interpretation panels.
5.	**Create a diverse and economically productive landscape**	1	Support initiatives for maintaining and expanding local food production
		2	Continue to utilise opportunities, particularly within new housing developments sites to increase the allotment provision to meet the North Tyneside's needs.
		3	Support initiatives for expanding the renewable energy sector.
6.	**Minimise the impact of, and adapt to the effects of climate change**	1	Reduce greenhouse gas emissions and minimise the use of resources.
		2	Provide for species adaptation.
		3	Encourage early engagement with land owners and developers to ensure GI features such as SuDs, Wildlife Corridors and open green space are incorporated at the concept stage of new developments.
		4	Design strategic flood solutions for North Tyneside that delivers multi functional green infrastructure benefits.
		5	Flood zones and sites highlighted within the SFRA should be considered for GI development/ enhancement, particularly in relation to their potential to support recreation and biodiversity.
		6	Encourage the use of greenspace with new development as a means of managing flood risk, both through slowing surface runoff and in providing flood attenuation zones. Incorporate SuDs, including reedbeds and other natural filtration systems, as a mechanism for managing floods while creating new habitats and green corridors.
7.	**Engage the local**	1	Encourage more community groups to provide the long term management and

			maintenance of local green spaces.
	community and partners to promote initiatives to manage and maintain parks and green spaces in the long term	2	Promote initiatives to make better use of lower quality amenity green space.
		3	Support initiatives to generate income from green space.

Appendix A- Policy Background

This Green Infrastructure Strategy will fit into the local strategic context and provide up to date evidence for the emerging North Tyneside Local Plan and other Council departments. Understanding what and where our potential GI assets are then allows us to assess potential wildlife corridors. It is also important that GI is referenced within future site development briefs and concept plans, which may be created within the emerging Local Plan and/or Planning Applications.

National Planning Policy Framework

Central government published the NPPF in March 2012. At the heart of the NPPF is a presumption in favour of sustainable development, with economic, social and environmental gains being sought jointly and simultaneously through the planning system.

The NPPF states in paragraph 114 that Local Planning authorities should:

'set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure'

With this *'great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and areas of outstanding natural beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas and should be given great weight in National Parks and Broads'.[4]*

In relation to climate change Paragraph 99 of the NPPF recognises the important role that green infrastructure plays in reducing vulnerability:

'Local Plans should take account of climate change over the longer term, including factors such as flood risk, coastal change, water supply and changes to biodiversity and landscape. New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures.

Whilst the NPPF planning guidance must be considered, other guidance is of particular relevance to informing the GI Strategy for North Tyneside.

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[4] National Planning Policy Framework (DCLG) 2012 paragraph 115

North Tyneside's Adopted Unitary Development Plan

The North Tyneside Council's UDP is a statutory plan and policy document, adopted in 2002. It sets out a strategy for the Borough including policies for the improvement of its physical environment, conservation of its natural beauty and management of traffic. Chapter 9 of the UDP sets out the general strategy and specific policies relating to open space and recreation.

The establishment of wildlife corridors, as this plan will set out, is fully supported by the NPPF. It states that Local Planning Authorities should set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.

North Tyneside's Emerging Local Plan

North Tyneside Council is currently underway preparing a Local Plan, which will replace the UDP. The Local Plan is proposed to be adopted in mid 2017. Until the Local Plan is in place, some policies of the UDP are 'saved' to ensure that comprehensive planning policy coverage remains in place. Saved policies of the UDP remain in force and will be used in determining planning applications.

The Local Plan will provide a planning policy framework to help achieve sustainable development, the core principle underlying planning, appropriate to the distinctive characteristics and needs of North Tyneside. It will set out the development needs of the Borough and provide guidance on how they can be met. The priorities that the Local Plan will address include:

- The homes and jobs needed in the Borough
- Retail, leisure and other commercial development.
- Infrastructure provision for transport, telecommunications, waste management, water, flood
- Risk, coastal change, minerals and energy.
- Provision of health facilities, community and cultural infrastructure and other local facilities.
- Climate change mitigation and adaptation.
- Conservation and enhancement of natural and built environment.

The GI strategy provides evidence on the amount of green space in the Borough and where we are performing well or need to improve. By looking at our green assets as a connected network of multifunctional 'green infrastructure' we can deliver many more benefits for the economy, environment and the community.

Taking into consideration the benefits of green infrastructure set out in the beginning of this document, it is clear that green infrastructure has a key role in helping to realise the emerging Local Plans vision for the Borough. The evidence will be used in formulating the policies of the Local Plan. The guidance within this GI strategy will be used to give greater detail when those policies are being applied.

Other relevant documents

North Tyneside Council has created various strategies and guidance that all relate to specific areas of GI; they include the following:

Our North Tyneside (2013-2014)

The Our North Tyneside Council Plan 2013 identifies the priorities for the Borough up to 2017. It will be delivered through a partnership between the Council, local people, communities, businesses, and local voluntary and public sector organisations.

The Plan sets out four themes, within which are the aims and the actions needed to achieve those aims.

The four themes are:

1. Our people
2. Our places
3. Our economy
4. Our partners

The GI Strategy plays a part in achieving the aims of the Our North Tyneside Council
Plan, especially in the "Our people" theme, which aims to increase the health of residents and promote access to our parks, open spaces and play sites. Ultimately it is about making our places attractive to live and invest into in order to regenerate the Borough.

The North Tyneside Greenspace Strategy (2015)

The Strategy sets out the current provision of different types of green space across the Borough, and by setting local provision standards, identifies where there are deficiencies in existing quantity, distribution or quality of green space. It also includes the results of a Borough-wide assessment of the quality and value of all publicly accessible green spaces. This information will help to determine where new or improved provision is needed and where there are deficiencies in greenspace.

The Strategy looks at all publicly accessible green space of at least 0.1ha, regardless of owner or manager. The Strategy does not include private gardens, countryside and farmland. There is a great diversity in the nature of green space within the Borough. For the purposes of this Strategy however, the following categories are used:

-Parks and public gardens

-Natural and semi-natural green spaces

-Green corridors

-Outdoor recreational facilities

-Amenity green space

-Provision for children and young people

-Allotments

-Cemeteries and churchyards

-Beaches and foreshore

The North Tyneside Playing Pitch Strategy (2013-2023)

The provision of outdoor sports facilities is demand and participation-led; it is therefore not simple to calculate a provision standard. The North Tyneside Playing Pitch Strategy involved extensive research into the quality, adequacy, supply and demand of pitches in the Borough and it is therefore deemed appropriate to look towards it for appropriate standards.

The North Tyneside Play Strategy (2011- 2014)

The strategy, which has almost reached its life span, provides a clear, strategic framework for the maintenance and improvement of existing playing pitches and ancillary facilities for the Borough. The Council will seek to address shortfalls in provision resulting from current and future demand (as a result of population growth) with developers, facility providers in the public, private and voluntary sectors and other interested parties as resources allow.

Healthy Parks, Healthy People, Healthy Communities. A Parks Strategy for North Tyneside (2011-2021)

The strategy identifies how parks and green spaces benefit residents, workers and visitors in North Tyneside as they:

-Play a significant role in creating an attractive and vibrant place to live, work and visit

-Benefit the local and regional economy

-Improve the health and well-being of our communities

-Provide an important role in North Tyneside's society, culture and heritage

Two successful applications to the Heritage Lottery Fund are helping to regenerate Wallsend parks and Northumberland Park. Churchill Playing Fields/Souter Park and Killingworth Lake have been earmarked for future refurbishments. Overall the report details the improvement in the quality of parks with the number of Green Flag accredited parks on the increase with the target to achieve one new Green Flag accredited park per year.

Park name	First award	Consecutive awards
The Rising Sun Country Park	2005	10
Benton Quarry Park	2011	4
Marden Quarry Park	2012	3
Killingworth Lakeside Park	2013	2
Wallsend Parks	2014	1

The North Tyneside Allotment Strategy (2009-2015)

The North Tyneside Allotment Strategy 2009-2015 sets out the Council's commitment and vision for allotments. The Strategy identifies:

- What the Council wants to achieve through the allotment service for current and future plot holders and other North Tyneside residents,
- How the Council will work with plot holders, site associations, members of the local community and other voluntary and statutory organisations to make its vision a reality,
- The resource implications of the Strategy and how the Council plans to attract those Allotments resources.

Allotments are in high demand across the Borough with a waiting list stretching approximately six years. These should consequently be protected from development. Amongst other objectives greater tenant participation is being encouraged in the management of allotment sites.

The Tyne and Wear Rights of Way Improvement Plan (RoWIP) (2011-2021)

The plan provides a list of guiding principles which included increasing access to the countryside, supporting the safety of people using PROWs and providing a better countryside experience. The Plan also indicates that new housing development should not have a detrimental effect on the PROW network.

The Newcastle and North Tyneside Biodiversity Action Plan (BAP) (2011)

The action plan supports the protection and enhancement of a variety of species and habitat action plans within the Borough. The aim of the BAP is to protect and enhance nationally and locally important species and habitats, most of which are contained, but not confined, to these sites and to contribute to National UK BAP targets.

The most important sites are internationally designated sites; the Northumbria Coast Ramsar and the Northumbria Coast Special Protection Area that run from the Scottish Borders to the Durham Coast, including sections of the North Tyneside coastline.

At the national level, two Sites of Special Scientific Interest (SSSI) are designated along the coast;
Northumberland Shore, and Tynemouth to Seaton Sluice . Within Newcastle City, but adjoining the Borough boundary, is a further SSSI, Gosforth Park.

Throughout the Borough, there are also seven statutory designated Local Nature Reserves together with 22 non-statutory designated Local Wildlife Sites.

There are a number of habitats and features, not in designated sites, that make a contribution to local biodiversity. Examples may include river banks, ponds, wetlands, woodlands, hedgerows, waggonways and common land. These may be of importance to local people and wildlife, or form corridors or wildlife links between designated sites. The Council also has 30 Sites of Local Interest (previously Sites of Local Conservation Interest). Although not formally designated, these local sites have the potential to be upgraded and designated with some investment and management.

The links between the open spaces are equally as important as the spaces themselves. Throughout the strategies and guidance the importance of accessibility and protecting pedestrian, cycle and multi-use routes is promoted. It is also documented that these should be high quality routes considering all users including horse riders and the disabled.

North Tyneside Joint Strategic Needs Assessment (2013)

The JSNA brings together a wide range of information about the current and future health and well-being needs of the local population. It provides an opportunity to look forward so that we can plan to ensure that we are able to meet the needs of local communities in the future. The JSNA is one of the major influences in directing our commissioning priorities and planning service developments.

The document identifies how health and well-being is influenced by the communities in which people live and is affected by the nature of their physical environment. While the Borough is well served with excellent parks, beaches and good public transport, access is not equitable for all. For some groups of people for example those living in the North West and North East of the Borough access to health and wellbeing facilities are more challenging.

In order to improve, actions need to be generated to systematically tackle the social determinants of health and well being rather than just simply focussing on the more apparent and immediate causes of poor health such as smoking, obesity and alcohol.

All of the discussed documents place an emphasis on the need for a greater understanding and knowledge of the natural environment and its value to the population. A key theme within these documents is the need to consult with local communities when developing and designing future GI sites.

North Tyneside's Tree Management Policy (2010)

This document provides a framework that defines North Tyneside's management of authority owned 'tree stock'. It recognises the important part played by trees in our environment and the increasing awareness of trees and tree related issues.

North Tyneside's Climate Change Strategy (2010-2015)

The Climate Change Strategy was introduced, in 2009, as a driver to ensure that reducing carbon emissions became embedded across council operations and the community. In May 2009, North Tyneside Council as successful in attaining a place on the Local Authority Carbon Management Programme, which determine the Council's baseline carbon footprint and provided a quantified strategy to drive down carbon emissions over a five-year period.

North Tyneside Council has already made a commitment to reduce carbon emissions from its activities by introducing an aspirational target of 34% by 2015 from the baseline of 2008-2009. However, we also recognise that one of our main visions is to make North Tyneside a low-carbon economy that has adapted well to the impact of climate change. This will entail large-scale changes to existing practices and policies in embedding carbon management across the entire organisation.

The Climate Change Strategy itself builds on the Sustainable Development Strategy and puts into place an integrated approach in fulfilling the social, environmental and economic objectives within North Tyneside. It also operates on a long-term perspective, but includes targets and actions to be achieved in both short and medium-term timescales. The strategy aims to be a flexible document, reviewed on an annual basis using the principles of this strategy in incorporating four overarching themes, which can be defined as:

• Reduction in CO2 equivalent emissions
• Adaption to climate change
• Promotion of sustainable development
• Delivery of the Carbon Management Action Plan

Water Cycle Study and Surface Water Management Plan

URS (formally Scott Wilson) was commissioned to carry out a Water Cycle Study and a Surface Water Management Plan to satisfy the Growth Point conditions placed on North Tyneside Council by the Government as well as the Floods and Water Management Bill. The outputs of the reports, together with the previous Strategic Flood Risk Assessment will influence Local Plan land allocations, control drainage, and inform flood risk management measures.

Surface Water Management Plan 2012

Surface water management plans (SWMP) investigate local flooding issues. SWMPs should identify options to mitigate local flooding and incorporate a realistic action plan to implement or deliver the agreed management measures.

The plan will provide a strategic approach through which key local partners, with responsibility for surface water and drainage, can work together.

Water Cycle Study 2013

When looking at the future growth of North Tyneside and the development of more buildings for residential and employment purposes, it is vital to consider the impact upon the existing water and sewage infrastructure.

The WCS suggests the most appropriate methods to improve the infrastructure, if necessary, or indicate that certain development proposals be adjusted to reduce costs where possible. The study also considers the risks of potential flooding.

North Tyneside Habitat Regulations Assessment

North Tyneside Council is preparing its Local Plan, which will set out the planning policies for guiding development and regeneration in the Borough up until 2032. As part of the preparation process, the Council is required to assess the need (screen) for, and complete if required, an 'Appropriate Assessment' (AA) of the Local Plan; this process is known as a Habitats Regulations Assessment (HRA). This considers the potential impacts of the Local Plan, alone and in combination with other plans or projects, on sites considered to be of European importance for nature conservation. The requirement for HRA is established through Article 6(3) of the Habitats Directive 92/43/EEC. Within North Tyneside's boundaries is the Northumbria Coast Special Protection Area and Ramsar site.
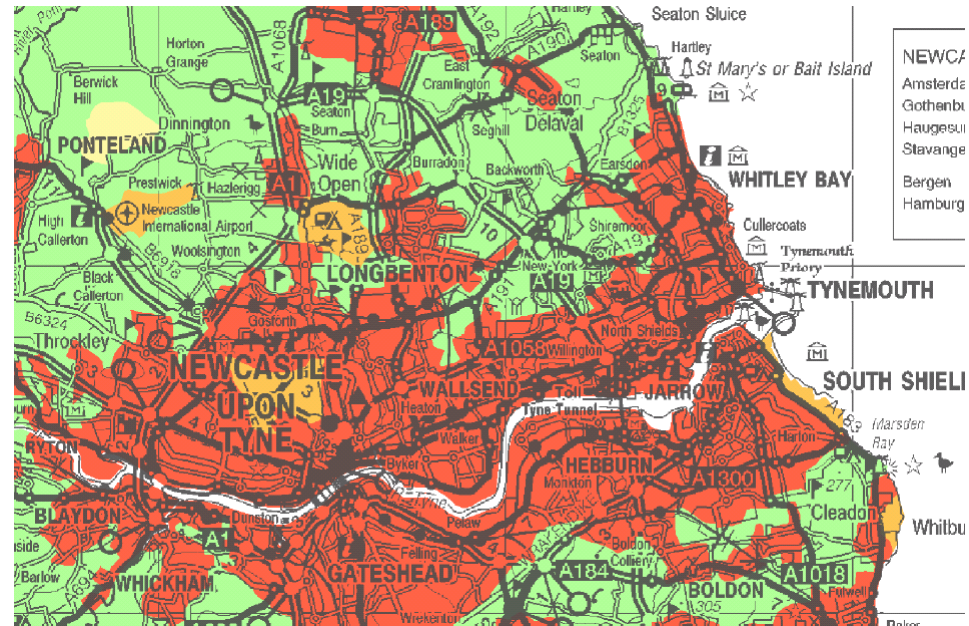
Appendix B- Designated Sites

SINCIs (data taken from GIS attribute)	SLCs- (Data taken from GIS attribute table)	Local Wildlife Sites
Swallow Pond	Brenkly Colliery Plantation	Backworth Pond
Backworth Pond	Seaton Burn House Woods	Annitsford
Eccles Colliery	Fordley Marsh	Killingworth Village Churchyard
Seaton Burns Ponds	Killingworth Lake (2)	Burradon Colliery
West Allotment Pond	Killingworth Lake (1)	Brierdene
Annitsford Pond	Killingworth Moor	Willington Gut Saltmarsh
Killingworth Village Churchyard	Killingworth High Pit	Holywell Dene
Burradon Colliery	Backworth C Pit Plantation	Little Waters
Whitley Bay Cemetery	Rising Sun Country Park	Northumberland Park
Brierdene	Richardson Dees Arboretum	Tyne Entrance
Holywell Dene	Hall Grounds	Howdon Dock Wetlands
Little Waters	The Allotment Pond	Seaton Burns Pond
Wallsend Dene	Red House Pond"	Weetslade Country Park
Hadrian Park Pond	Seaton Burn High School Nature Reserve	Sacred Heart
Currys point and Wetlands	Westmoor Meadow	Eccles Colliery Extension
Northumberland Park	Seaton Burn Allotments	Eccles Colliery
Preston Cemetery	Tynemouth Boating Lake	Earsdon Churchyard
Tyne Entrance	Chirton Dene park	Silverlink Park and Waggonway
Eccles Colliery Part 1 of 2	Benton Cemetery	Station Road Watercourse
The Rising Sun Pit Heap	Killingworth Village Park and Pond	Hadrian Pond Watercourse
Howdon Wetland	Stephenson Railway Grassland	Hadrian Park Pond
Weetslade Colliery	Marden Meadow	Swallow pond
Marden Quarry	Brown Point Clifftop Grassland	Wallsend Dene
	Killingworth Waggonway Plantation	Marden Quarry
	Backworth Woods	Currys Point and Wetlands

	Earsdon Churchyard	Whitley Bay Cemetery
	Fewnwick Pit Heap	
SSSIs	**RAMSAR and special protection areas**	**Local Nature Reserves**
Tynemouth to Seaton Sluice Cliffs SSSI	Northumbria Coast Ramsar Site	Annitsford Pond
Northumberland Shore SSSI	Richardson Dene Park	Holywell Dene
	Northumbria Coast Special Protection Area (SPA)	Marden Quarry
		Silverlink Park
		St Mary's Island
		Swallow Pond
		Wallsend Dene
		Tyne River Bed
		Preston Cemetery

Appendix C- Agricultural Land

The map within this appendix from the 2011 SEA scoping report shows the agricultural grades within North Tyneside. Agricultural land is categorised into grades 1-5, with grades 1,2 and 3a considered the best and most versatile. The map reveals that North Tyneside does not contain any agricultural land of significant value however areas should be protected in light of their GI value, recognising how development can help improve the quality of existing GI assets.
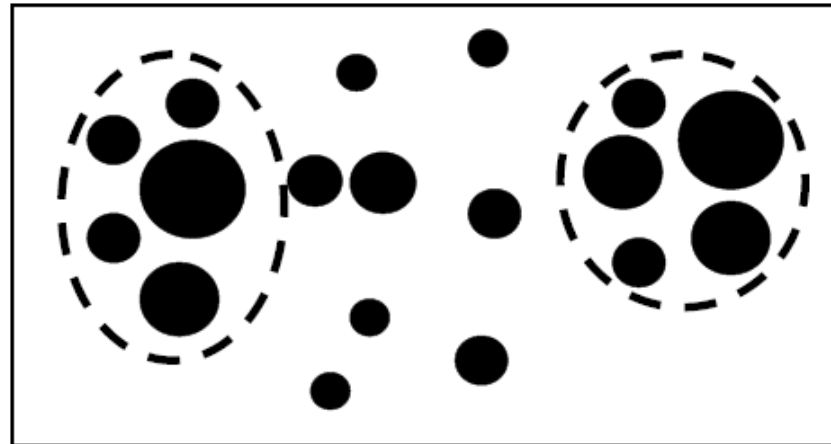

North Tyneside's Agricultural Land Value (Source: SEA 2011)

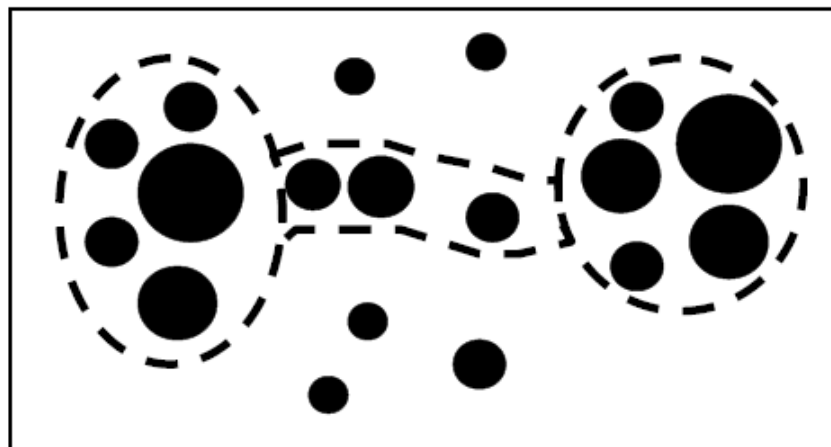## Appendix D- Wildlife Corridor Methodology Summary

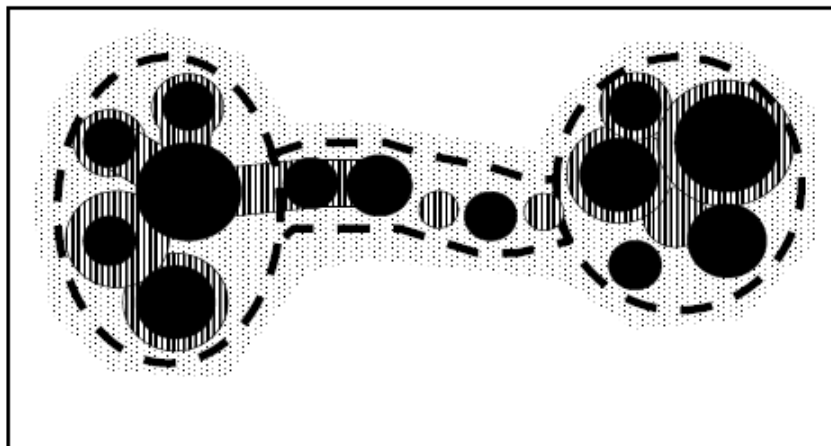1. Existing designated sites and valuable habitats were mapped on GIS.
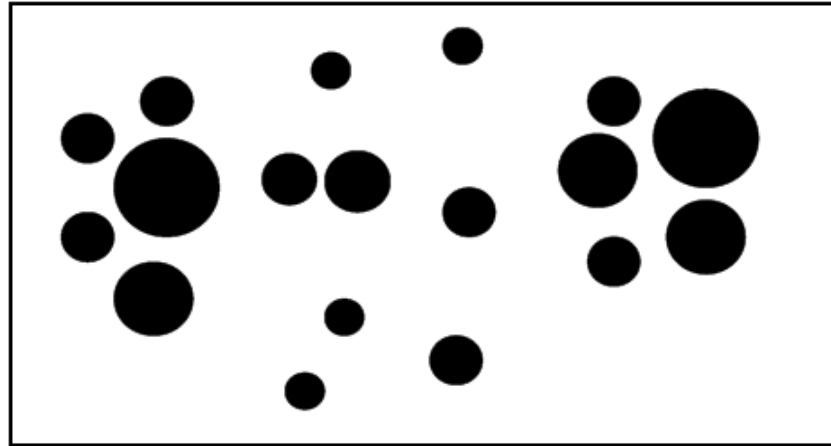
2. Clusters of habitats/sites which form the core wildlife areas were identified.

3. Network links were identified and plotted between the core areas.

4. Potential buffers, links and stepping stones were created to produce large habitat areas, and to create functional wildlife corridors.

5. Outside the network, wildlife habitats and sites will continue to be managed and protected, and can be buffered by habitat creation and/or appropriate management.