Process Journey for Local Planning Authorities

Developing Green Infrastructure Policies and Strategies using the Green Infrastructure Framework- Principles and Standards for England

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Contents

1.0 Introduction

1.0.1 This Process Journey has been designed for local authority planners to use the Green Infrastructure Framework to develop green and blue infrastructure strategy and policy. It has relevance for developing green and blue infrastructure strategies, the green infrastructure components of a local plan, related strategies or a green infrastructure delivery plan. It can also be used to help embed green infrastructure informed decision making across local authority departments and for sharing with external stakeholders. This can guide wider thinking and planning for green infrastructure outside of the planning system and may include retrofitting and management of green infrastructure. The aim is to enable the development of informed and comprehensive green infrastructure related policy and strategy that is based on the Natural England Green Infrastructure Principles, Standards and data, which can be built on to address local needs and respond to local opportunities.

1.0.2 This Process Journey provides:
- An overview diagram showing recommended steps to take
- A flowchart showing more detail on the steps to take and relationships to the Green Infrastructure Framework's Principles
- Suggested actions to take at each stage of the process

1.0.3 Each step of the process includes related links to on-line resources including:
- Government policy and guidance
- Evidence which supports the theory behind the step
- Relevant tools

1.0.4 This Process Journey is one part of the Green Infrastructure Framework, and it should be used in conjunction with:
- The 15 Principles of Green Infrastructure
- The on-line Green Infrastructure Mapping Database and User Guide
- The Green Infrastructure Headline standards
- The Green Infrastructure Planning and Design Guide

1.0.5 These are available on the [Natural England Green Infrastructure Framework and Standards for England website.](#)

1.0.6 Please note the term green infrastructure covers blue infrastructure as well for the purposes of this process journey. Documents mentioned in the text are referenced at the end of each section.

Why is this Process Journey relevant?

1.0.7   Government guidance on the Natural environment
(http://www.gov.uk/guidance/natural-environment Paragraph: 007 Reference ID:
8-007-20190721) states:

'How can a strategic approach be taken to green infrastructure?

Strategic policies can identify the location of existing and proposed green
infrastructure networks and set out appropriate policies for their protection
and enhancement. To inform these, and support their implementation, green
infrastructure frameworks or strategies prepared at a district-wide scale (or
wider) can be a useful tool. These need to be evidence-based and include
assessments of the quality of current green infrastructure and any gaps in
provision. Existing national and local strategies – for example on tree and
woodland provision – can inform the approach to green infrastructure; and
standards such as the Accessible Natural Greenspace Standard can be
applied when assessing provision.

The green infrastructure strategy can inform other plan policies,
infrastructure delivery requirements and Community Infrastructure Levy
schedules. In view of their potential scope and use, authorities need to
collaborate with neighbouring authorities and stakeholders such as Local
Nature Partnerships, Health and Wellbeing Boards and Local Enterprise
Partnerships when developing green infrastructure strategies.'

1.0.8   The Green Infrastructure Framework includes the following Headline Standards:
1. Green Infrastructure Strategy Standard
2. Accessible Greenspace Standards, including Quality Standards
3. Urban Nature Recovery Standard
4. Urban Greening Factor Standard
5. Urban Tree Canopy Cover Standard

1.0.9   The area-wide Green Infrastructure Strategy Standard states:

- Local authorities, working in partnership with stakeholders including local
communities, assess and strategically plan their green infrastructure provision,
for example as part of a Green Infrastructure Strategy. Plans set out how green
infrastructure will help to create greener, beautiful, healthier and more
prosperous neighbourhoods, with a thriving nature network that can reduce
air and water pollution, support sustainable drainage and help places adapt to
climate change.

- In doing this, they apply the 15 Green Infrastructure Principles and the Green
Infrastructure Standards locally (adapting them to local context where

appropriate) and set green infrastructure policies, proposals and development requirements in development plans and local design codes. Local authorities set SMART targets in a Delivery Plan for achieving the Green Infrastructure Framework Standards and local policies over time, as well as arrangements for the long term management and maintenance of all green infrastructure.

- Plan and monitor and evaluate progress against delivery of these local targets every five years.

1.0.10   This Process Journey can support Local Planning Authorities in meeting the area-wide Green Infrastructure Strategy Standard. Full details of the Standards can be accessed through the Natural England Green Infrastructure website. This includes recommendations at both area wide policy level and for major developments.

Figure 1 - Overview of the process of using the Green Infrastructure Framework to develop Green Infrastructure strategies and local policy
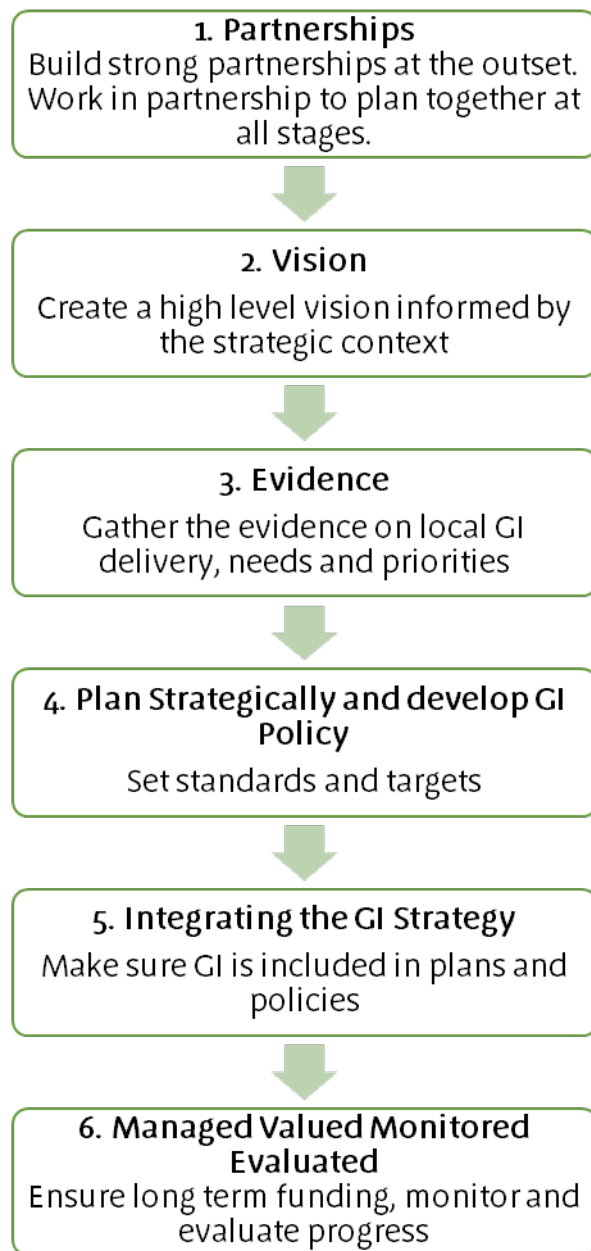
1. Partnerships
Build strong partnerships at the outset. Work in partnership to plan together at all stages.

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2. Vision
Create a high level vision informed by the strategic context

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3. Evidence
Gather the evidence on local GI delivery, needs and priorities

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4. Plan Strategically and develop GI Policy
Set standards and targets

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5. Integrating the GI Strategy
Make sure GI is included in plans and policies

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6. Managed Valued Monitored Evaluated
Ensure long term funding, monitor and evaluate progress

Table 2 - Overview of the process of using the Green Infrastructure Framework to develop Green Infrastructure strategies and local policy

Stage	Steps to take	Related GI Principles
1. Partnerships	Establish a lasting partnership approach with a diverse and inclusive set of stakeholders from the outset. To co-plan, develop and deliver a vision for green infrastructure in the area.	How 1: Partnerships and Vision
2. Vision Informed by Strategic Context	Review: • The National Green Infrastructure Principles • The current local, regional and national planning policy and planning practice guidance • How green infrastructure fits into the local planning framework Create: • A high-level vision for green infrastructure in the area.	How 1: Partnerships and Vision How 3 Plan Strategically
3. Evidence	Understand the existing green infrastructure network and needs by: • Assessing quality, quantity and connectivity of current green infrastructure assets. • Analysing how green infrastructure is delivering benefits to meet needs and priorities including understanding what people want, and what is most important to them. • Identifying gaps in provision, inequalities in distribution and opportunities for new or enhanced green infrastructure provision • Noting the pressures and drivers of change Identify priorities which green infrastructure could help address, which could be related to: • Thriving nature and biodiversity gains • Health and wellbeing benefits • Supporting community prosperity and increasing community cohesion and pride • Improving water management	How 2: Evidence

Stage	Steps to take	Related GI Principles
	• Resilience to climate change and carbon reduction	
4. Plan Strategically and develop green infrastructure policy and targets	Prepare a green infrastructure strategy Based on the evidence collected, green infrastructure policies and targets should: • Meet people's needs, address gaps in provision, inequalities in distribution and plan for new or enhanced multifunctional green infrastructure • Help meet wider policy objectives • Include implementation mechanisms including funding	How 3 Plan Strategically How 4 Design
5. Integrating the Green Infrastructure Strategy	Consider: • Ensure join up between Local Nature Recovery Strategies and green infrastructure strategies and green infrastructure delivery plans • Use the evidence on local character to design good green infrastructure as part of Local Design Guides/Codes • Include Green Infrastructure Standards in Local Design Codes • Embed green infrastructure in all relevant chapters/policies in local plans including local plan site allocations • Set requirements for green infrastructure information within planning validation checklists • Ensure green infrastructure is included across local government and stakeholder policies and strategies	How 3 Plan Strategically How 4 Design
6. Managed valued monitored and evaluated	Ensure green infrastructure is governed, managed, monitored, maintained and funded for the long term Evaluate how the green infrastructure strategy/policy performs against Green Infrastructure Standards and local objectives	How 5 Managed Valued Monitored and Evaluated

2.0 Six Stage Process Journey

2.1 Stage 1 – Partnerships

Overview

2.1.1   Establish a lasting partnership approach with a diverse and inclusive set of stakeholders from the outset.

Detailed Description

2.1.2   Public engagement and partnership working is widely recognised as the key to making better quality decisions for more sustainable outcomes. Furthermore, environmental issues are often complex, dynamic, at different scales and involve multiple stakeholder groups. There is therefore a need to develop participatory decision-making which is flexible, transparent, and inclusive of different knowledge and values. Voices which are often marginalised should be empowered to engage and speak up.

2.1.3   Partnership working, collaboration and stakeholder engagement are therefore critical for planning and delivering green infrastructure that meets local needs. A fully rounded vision for green infrastructure in an area should be possible through an inclusive partnership approach. It is particularly important to engage with groups who have specific needs and to make this as diverse and inclusive as possible, for example understanding the needs of those with physically disabilities or those from different ethnic groups

2.1.4   In the case of statutory consultations such as for a local plan, green infrastructure may form a part of a wider set of engagement. It is important to share the whole process and motivate partners to implement the resulting policies collectively. Consideration should be given to mapping all stakeholders, as beneficiaries of green infrastructure can sometimes be hidden. There may also be a need to support capacity building to ensure engagement and ultimately to support initiatives.

2.1.5   The following should be considered:
- Practitioners and decision-makers should take time to understand the local context in which engagement is being carried out.
- The length and time scale of the engagement process and how often it might be necessary to engage with participants. Engage stakeholders in dialogue as early as possible in the decision-making process.

- Use communication processes to ensure broad engagement such as digital for professionals and face to face for local stakeholders and those without digital access.
- Recognise that different tools and approaches for engagement will work differently in different situations.
- Making the most of existing partnerships. Carry out a stakeholder analysis and identify stakeholder groups, statutory bodies, NGOs, local authority departments, community representatives, developers and landowners with an interest.
- Manage realistic expectations of the engagement process by establishing a shared stakeholder understanding of what can and can't be included in the process and therefore vision, strategy and policy.
- Identifying priority issues and common concerns across agencies and stakeholders including what are the relevant hooks and motivations for each.
- Examination of the geographical boundaries to ensure that interests outside of the area which can impact, are fully considered.
- Understand any historical barriers between the stakeholders that could impact on developing a common vision, such as poor coordination between the implementing agencies or fragmentation and duplication.
- Consider whether a skills audit is required – does the partnership have the necessary skills and knowledge.
- Power dynamics should be managed effectively including how different stakeholders can and input equally.

2.1.6   In identifying potential partners, it is essential to consider:
- Green infrastructure users
- Organisations who own or manage greenspaces
- Organisations that provide services on green infrastructure

2.1.7   All can potentially be investors further down the line, using the right language can be important to tap into this and strengthen the connections between users and providers.

How can the Green Infrastructure Framework be applied to this step?

2.1.8   When identifying partners, it will be important to consider the outcomes that green infrastructure policy can help to deliver. Reference to the 5 Benefits or 'Why' Green Infrastructure Principles can help to identify relevant leaders and how green infrastructure can meet their objectives. Table 1 below lists high level outcomes and which organisations it may be important to work with.

Why Principle	Outcomes	Suggested partners
Why 1: Nature Rich Beautiful Places	Explore how green infrastructure can achieve a measurable increase in biodiversity through the creation, enhancement and connectivity of new and existing habitats and how developer Biodiversity Net Gain contributions can help contribute	- Biodiversity Net Gain leads, local biodiversity or ecology experts, local NGOs and groups (including Local Nature Partnerships). - Statutory bodies such as Forestry Commission - Landowners and land managers - Landscape architects, planners and managers; urban designers
Why 2: Active and healthy places	Explore how green infrastructure can address health inequalities and support activities that are beneficial to health and wellbeing	- Directors of Public Health, environmental health practitioners, Integrated Care Boards and Health and Wellbeing Boards, Integrated Care Partnerships. - Community Safety Officers and the Police - Local community groups, such as tenants and resident's associations, plus single interest groups
Why 3: Thriving and prosperous places	Explore how green infrastructure can facilitate inclusive prosperity and regeneration, helping to create high quality environments which attract businesses and investors	- Regeneration leads and Local Enterprise Partnerships. - Chambers of Commerce - Transport / highways stakeholders. Green infrastructure corridors alongside transport infrastructure can be an important part of the green infrastructure network - Major developers active in the locality - Schools and education providers - Local Councillors, lead members and Members of Parliament - Local Industries
Why 4: Improved water management	Explore how green infrastructure can reduce water run off volumes and improve water quality.	- Lead Local Flood Authorities and Water Companies and local resilience forums where relevant. - Environment Agency

Why 5: Resilient and climate positive places	Explore how to design, deliver and manage green infrastructure to mitigate climate change and address the effects of climate change. For example, how to reduce the risk of flooding, minimise the urban heat island effect and how to help wildlife to adapt through design.	- Net zero and climate change mitigation and adaptation leads.

2.1.9   It will be critical for stakeholders to understand how well the green infrastructure is performing and meeting local needs; this might be at different scales e.g., local authority level or masterplan area. This can be done through creating working relationships between organisations, local authority departments managing the green infrastructure and planning officers. This should help with defining common or overarching priorities. A focus on long term stewardship, maintenance and functionality can also be important parts of the discussion.

2.1.10   Some local authorities have found it useful to measure the outcomes through identification of ecosystem services and/or the United Nations Sustainable Development Goals. This has advantages in creating common objectives across departmental and sector boundaries.

2.1.11   Desired outcome from this step:
- An established, well informed green infrastructure partnership and good connections with associated partnerships.

Government policy and guidance, Evidence and Process tools for Stage 1

2.1.12   Government Policy and guidance
- HM Government (2018a) A Green Future: Our 25 Year Plan to Improve the Environment. Chapter 3.

2.1.13   Evidence
- HM Government (2016) Local Action Project Final report WT1580
- Scott, A.J. and Hislop, M. (2020) What does good green infrastructure policy look like? Town and Country Planning Association. Available at: TCPA_PERFECT_ExpertP3-2.qxd

2.1.14   Process tools
- HM Government (2018b) Consultation principles

- Community Places, [Community Planning toolkit](#)
- Natural England (2023) [Green Infrastructure Framework](#)
- [United Nations Sustainable Development Goals](#)

2.2 Stage 2 - Vision informed by strategic context

Overview

2.2.1 Review:
- The National Green Infrastructure Principles
- The current local, regional and national planning policy and planning practice guidance
- How Green Infrastructure fits into the local planning framework

2.2.2 Create:
- A high-level vision for green infrastructure in the area

Review of policies and strategies

2.2.3 This review process should seek to identify all the green infrastructure specific policies and all the policies which contribute to green infrastructure. To achieve this the following courses of action are recommended:
- Review relevant national green infrastructure planning policy and guidance for example, National Planning Policy Framework, Planning Practice Guidance, National Model Design Code, National Design Guide
- Check relevant adopted or emerging regional or area wide policies such as combined authority strategies
- Examine relevant adopted or emerging local authority policies
- Consider strategies produced by relevant local organisations

2.2.4 The breadth of local policies to be examined can be understood by reviewing the Natural England Green Infrastructure Principles. For instance, for biodiversity (including Biodiversity Net Gain), tree and woodland strategies, landscape character and Local Nature Recovery Strategies can all be considered. Documents such as river basin management plans, local greenspace strategies, masterplans, if available are all relevant. Policies including net zero, air quality targets, flood risk reduction, food production or physical and mental health and sports activity will be important. Policies to be reviewed will be a mix of statutory and non-statutory.

2.2.5 Ideally the effectiveness of the current policies in delivering green infrastructure should be reviewed.

2.2.6   Existing evidence on local needs including information prepared to inform the Local Plan. Neighbourhood plans will be relevant. Other assessments such as strategic flood risk assessments (SFRAs), open space assessments and walking and cycling strategies should be used where possible. The SFRA might identify needs and opportunities for Sustainable Drainage Systems (SuDS) or river restoration.

2.2.7   Green infrastructure requires an integrated approach and as a result the related policy can be multi-layered and technical. Translating policy into a digestible form can be important and can usefully include identifying the relevant aspects such as policies and duties (sometimes described as 'hooks'). Then translating these for different audiences to create common understanding (sometimes referred to as 'bridges'). Once relevant policies have been reviewed it should be possible to develop a high-level vision with stakeholders, explaining an aspirational description of the direction of travel and what can be accomplished in the long-term. The resulting vision can be an important tool to engage, and ensure partnerships are working towards the same common goals over time.

2.2.8   Best practice studies can also inform engagement and ensure local green infrastructure strategy and policy deliver a range of environmental, social, health and economic policy objectives as part of place-making and place-keeping.

2.2.9   In certain circumstances it can be useful to reverse the process and conduct a high level vision first before reviewing the policies etc. This can lead to less constrained thinking and a more creative process initially, with a later reality check. This may prove more attractive to stakeholders and can also gain good results, provided it is explained at the outset to ensure realistic expectations. The vision should reach beyond planning boundaries and offer hooks for multifunctional green infrastructure, to ensure buy in from different local authority departments and stakeholders.

2.2.10   The five Benefits or 'Why' Green Infrastructure Principles can define the breadth of the vision and inform development of high-level outcomes. It may also be helpful to consider at the outset how national Green Infrastructure Standards, such as Accessible Greenspace Standards or Urban Woodland Canopy Cover Standards, can be applied locally based on local character, ambition and priorities to support the vision.

2.2.11   To help with stakeholder engagement and long-term thinking it can be useful to develop a Theory of Change at this stage. A Theory of Change (see HM treasury Magenta book) can build understanding as to how green infrastructure policies will achieve the expected outcomes (setting out all the steps expected to be involved in achieving the desired outcomes), the assumptions made, the quality and strength of the evidence supporting them, and wider contextual factors such as risks and opportunities.

Desired outcomes from this step

2.2.12   To ensure that:
- All relevant policy reviewed
- A high level vision for the area

Government policy and guidance, Evidence and Process tools for Stage 2

2.2.13   Government Policy and guidance
- HM Government (2018) Green Book. Available at: www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent/the-green-book-2020
- Ministry of Housing, Communities & Local Government (2019) Planning Practice Guidance for the Natural Environment. Green Infrastructure section. Available at: Natural environment - GOV.UK (www.gov.uk)
- Department for Environment, Food & Rural Affairs (2020) Enabling a Natural Capital Approach (ENCA). Available at: Enabling a Natural Capital Approach (ENCA) - GOV.UK (www.gov.uk)
- Department for Environment, Food & Rural Affairs (2015) River Basin Management Plans. Available at: http://www.gov.uk/government/collections/river-basin-management-plans-2015

2.2.14   Evidence
- Office for National Statistics (2018) UK natural capital: ecosystem accounts for urban areas. Available at: Natural Capital - Office for National Statistics (ons.gov.uk)
- Rolls, S. and Sunderland, T. (2014) Microeconomic Evidence for the Benefits of Investment in the Environment 2 (MEBIE2). Natural England Research Reports, Number 057. Available at: Microeconomic Evidence for the Benefits of Investment in the Environment 2 (MEBIE2) - NERR057 (naturalengland.org.uk)
- Natural England (2020) The People and Nature Survey. Available at: www.gov.uk/government/collections/people-and-nature-survey-for-england

2.2.15   Process tools
- Natural England (2023) Green Infrastructure Framework
- Garden Communities toolkit Homes England (2019) Available at: www.gov.uk/guidance/garden-communities/developing-a-vision
- United Nations Development Group Theory of Change Available at: Microsoft Word - UNDG-UNDAF-Companion-Pieces-7-Theory-of-Change.docx

2.3 Stage 3 - Evidence

Overview

2.3.1   Understand the existing green infrastructure network and needs by:
- Assessing quality, quantity and connectivity of current green infrastructure assets
- Analysing how green infrastructure is delivering benefits to meet needs and priorities including understanding what people want, and what is most important to them
- Identifying gaps in provision, inequalities in distribution and opportunities for new or enhanced green infrastructure provision
- Noting the pressures and drivers of change

2.3.2   Identify priorities which green infrastructure could help address, which could be related to:
- Thriving nature and biodiversity gains
- Health and wellbeing benefits
- Supporting community prosperity and increasing community cohesion and pride
- Improving water management
- Resilience to climate change and carbon reduction targets

Steps in gathering evidence

2.3.3   Evidence gathering should focus on understanding how well the green infrastructure in an area functions. An assessment of the benefits GI assets provides, set against needs and local priorities should usually form part of green infrastructure evidence analysis. This should help with identifying any gaps in provision, inequalities in distribution and opportunities for new or enhanced green infrastructure. Spatial data can be particularly important in understanding the green infrastructure networks. Understanding pressures and drivers of change and how they are impacting GI now, and in the future will also be important.

2.3.4   In terms of data collection and processing it can be useful to consider the following steps:
- Identify the essential information, this may have become apparent during initial stakeholder discussions and evidence analysis.
- Review this information to highlight gaps in the evidence.
- Undertake targeted and prioritised evidence gathering. Consider the capacity available to analyse it to avoid effort on data that is unlikely to be used.

- Secure a budget and decide a timescale. There will be a range of collection methods, the most suitable will depend on available budget and timescales, both for obtaining, analysing, and maintaining the evidence.
- Collate the data centrally so it can be securely used by decision makers and those who need to be kept informed.
- Decide how often data should be collected and reviewed. Build necessary resources for this into long-term budgets.

2.3.5   Evidence should include an understanding of the quantity, quality and connectivity of green and blue infrastructure including:
- Parks and Gardens – urban parks, country and regional parks, formal gardens
- Amenity Greenspace – informal recreation spaces, housing greenspaces, domestic gardens, village greens, urban commons, other incidental space
- Natural and semi-natural urban greenspaces - woodland and scrub, grassland, heath or moor, wetlands, open and running water, wastelands and disturbed ground.
- Green and blue corridors – rivers and canals including their banks, road and rail corridors, green bridges, cycling routes, pedestrian paths, and rights of way.
- Vegetated sustainable drainage systems, including green roofs, rain gardens and biofiltration strips, swales, ponds, detention basins
- Features for species such as hedgehog highways, corridors used by bats and migratory routes for birds.
- Other greenspaces - allotments, community gardens and orchards, private gardens, city farms, cemeteries and churchyards.
- Street trees and other trees outside of woodland

2.3.6   The above points need to be set in an understanding of the social context including factors such as population density, car ownership, the index of multiple deprivation, key health indicators. The Natural England Green Infrastructure Mapping Database Home includes digitally accessible maps providing open data on green infrastructure across England to help develop appropriate proposals for new and /or enhanced green infrastructure. The maps show the distribution of different types of green and blue infrastructure, including those areas that are accessible and an assessment against the Accessible Greenspace Standards. The maps include socio economic data such as the Index of Multiple Deprivation. This means it is possible to look at where associated factors coincide, such as those locations that have low levels of greenspace and high levels of deprivation. Such analysis can help with targeting green infrastructure investment.

2.3.7   This mapped information can be shared easily with partners and stakeholders. The data underpinning the maps can be downloaded and this means additional local

data can be added to enhance local understanding and highlight locally relevant issues.

How can the Green Infrastructure Framework be applied to this step?

2.3.8   To provide context, data on environmental, social and economic challenges and needs in the area should be gathered, so that GI can be planned to address these key challenges. Evidence can be grouped together around the 5 'Why' and 5 What Green Infrastructure Principles. Table 2 below is not exhaustive but gives some common sources of data and lines of enquiry.

WHY Principles	Relevant evidence
Why 1: Nature Rich Beautiful Places	The Natural England Green Infrastructure Mapping Database includes mapped data on all green and blue infrastructure including designated sites. Local Nature Recovery Strategies will provide a rich source of information and help with interpretation of how sites link together as an ecological network. Enabling a Natural Capital Approach (ENCA) can help to find resources which can be used to gather evidence. Natural capital indicators help identify the benefits which are likely being provided by green infrastructure assets linked through to the benefits. Natural England's Natural Capital Atlases show evidence at a broad-scale.
Why 2: Active and healthy places	Evidence on the levels of physical and mental health conditions, life expectancy, noise pollution, urban temperatures, and poor air quality can be gathered to inform thinking on health priorities. The Natural England Green Infrastructure Mapping Database includes mapped data on health and disability. Gov.uk contains data on air pollution; local air quality monitoring may also have taken place.
Why 3: Thriving and prosperous places	Local evidence on locations for development, regeneration and vacant land can be used to inform green infrastructure opportunity mapping. The Natural England Green Infrastructure Mapping Database includes mapped data on the Index of Multiple Deprivation to help with targeting. The Local Environment and Economic Development toolkit can help plan economic development to gain growth benefits from the natural environment.
Why 4: Improved water management	Flood risk maps, water quality and water supply data are available and can help plan green infrastructure at local and catchment scales. Gov.uk contains water quality, water supply and flood risk data.

Why 5: Resilient and climate positive places	Climate Change action plans, and the data that supports them, can help inform standards or targets. Gov.uk contains flood risk maps.
WHAT Principles	**Relevant evidence**
What 1: Multifunctional	Participatory techniques with stakeholders and surveys of users of green infrastructure assets can help with gathering local knowledge and assessing the levels of use and quality local greenspaces. The Environmental Benefits from Nature Tool can be used to assess the multifunctionality of green infrastructure and provides links to datasets relevant to 18 ecosystem services.
What 2: Varied	The Natural England Green Infrastructure Mapping Database includes mapped data on all green and blue infrastructure by type. This can be supplemented with local data.
What 3: Connected	Traffic surveys and highway and rights of network maps and active travel routes can be useful to help determine areas of need and gaps in the network. Habitat network maps can indicate biodiversity linkages. Ecosystem service maps can indicate how benefits might be flowing to people, and where there might need for more green infrastructure to provide benefits or solve particular problems. Local Nature Recovery Strategies will provide information on how sites link together as an ecological network. A local Natural Capital Plan, if available, will include spatial, physical and sometimes economic data on relevant green infrastructure.
What 4: Accessible	Accessible Greenspace Standard (AGS) analysis and, where carried out, Green Flag criteria assessments can help to inform needs based on both proximity and quality. The Natural England Green Infrastructure Mapping Database includes AGS analysis.
What 5: Character - Responding to local character	National Character Area Profiles provide regional information on character. County or district Landscape Character Assessments (LCAs), townscape and historic character studies provide further detail. Most National Parks and Areas of Outstanding Natural Beauty also have LCAs, and all have management plans that describe their area's key characteristics.

	A few places may have more local sources of information such as a [Neighbourhood Plan](#) or [Local LCA](#). All can be used to understand an area's character and inform the overall approach to green infrastructure (conserve, restore, enhance or create character).

Table 2 - Provides a list of relevant evidence for the 5 Why and 5 What Green Infrastructure Principles

Analysing the evidence to identify priorities

2.3.9   A lot of the processes and information contained in this section may have already been undertaken as part of the local plan process, the following text assumes it has not. Understanding gaps in provision can be complex, as it means understanding the benefits provided by existing green infrastructure, the needs and whether they are met in different locations, suppressed and future demand and the strengths and weaknesses of multifunctional green infrastructure networks. In process form this is shown in the flowchart below.
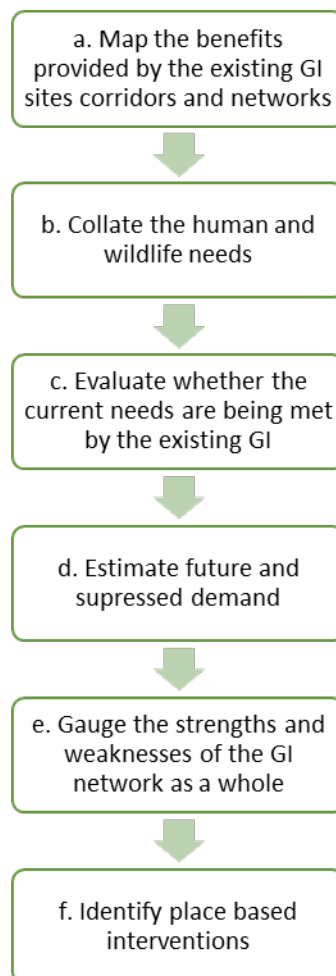

a. Map the benefits provided by the existing GI sites corridors and networks

b. Collate the human and wildlife needs

c. Evaluate whether the current needs are being met by the existing GI

d. Estimate future and supressed demand

e. Gauge the strengths and weaknesses of the GI network as a whole

f. Identify place based interventions

Figure 2. Steps in the process to gain and analyse relevant green infrastructure evidence

a. Map the benefits provided by the existing green infrastructure sites corridors and networks

2.3.10   The benefits of green infrastructure should be identified through examination of how the sites, corridors and networks perform against the Natural England Green Infrastructure Principles as explained above. For the purposes of a green infrastructure strategy it is not necessary to identify all the detail of benefits provided, more whether a benefit exists and to what extent. The benefits information should be collated through a combination of mapped data to help understand the inter-relationship between sites and show corridors and networks. Plus tables listing the green infrastructure benefits provided for each site.

b. Collate the human and wildlife needs

2.3.11   Demand will be influenced by a number of factors. At a green infrastructure strategy level these may include:
- Population - density, age profile, health – physical and mental, ethnicity, index of multiple deprivation
- Car ownership
- The need to link together complementary land uses to provide connectivity
- Land use change – new homes and employment uses
- Specific risks such as whether in a flood risk area or air or water quality management areas

2.3.12   At a site level demand factors may also include:
- Access barriers to sites – roads, railways, main water courses
- The size, quality, facilities available and location of existing green infrastructure assets
- Community safety, crime and anti-social behaviour

2.3.13   For the purposes of individual development sites, detail will be required on the benefits for instance through the [Environmental Benefits from Nature Tool](#). Asking local communities what they need and want can provide valuable evidence. They can highlight what they value, priority issues and the kinds of green infrastructure that would make a positive difference to their lives. The survey and analysis process with communities is likely to require 'unpacking' of the issues. For example, explaining where strategic tree planting could have greatest benefit for managing flood risk or addressing water quality issues. This can help explain cause and effect and get them on board.

2.3.14   At a site level analysis should take account of quality as well as quantity. The Green Flag criteria are a useful way to assess the green infrastructure quality and benefits for individual greenspaces. This approach is based on 8 criteria each of which are scored on scale of 1 to 10. The criteria are:

- A Welcoming Place
- Healthy, Safe and Secure
- Well Maintained and Clean
- Environmental Management
- Biodiversity, Landscape and Heritage
- Community Involvement
- Marketing and Communication
- Management

2.3.15   Population density can be a big factor, for example accessible green infrastructure may not be close to populations or it may be so intensively used that the quality of experience reduces. A lack of green infrastructure supply can supress demand, hide needs and affect consultation responses. Community Engagement should allow for realistic aspiration.

2.3.16   Additional information on demand can be determined through a partnership approach. Local stakeholders can help identify relevant evidence. These might include social, health, environment, transport, community safety and regeneration policy leads. Working from what is important to stakeholders and then providing the necessary hooks in green infrastructure policy will be essential.

c. Evaluate whether the current needs are being met by the existing green infrastructure

2.3.17   The demands and needs expressed by specific groups can be plotted against the available supply of green infrastructure. This is best taken forward on topic basis initially. For instance the availability of children's play space. The location of populations and play space can be examined using the Natural England Green Infrastructure Maps and supplemented by local data. The maps can highlight spatial relationships to user groups. The locations of parks with play spaces can be shown with distances overlaid onto the surrounding area to show the catchments. (see AGS analysis in the next section). These straight line distances can be improved with local network data on access such as the location of entrances and actual walking routes.

2.3.18   Specific tools are available for some aspects of strategic green infrastructure demand and supply such as the Sport England Playing pitch calculator. This can be valuable at a green infrastructure strategy level.

d. Estimate future and supressed demand

2.3.19   Land use change for instance planned residential areas and new locations for employment use will impact on future green infrastructure demand. Where green

infrastructure policies are to be included in a local plan, the associated sustainability appraisal should help determine how policies and proposals are tested against environmental, social and economic objectives. Spatial analysis around the location of new development, its impacts on existing habitats, and potential demand for biodiversity units in different areas might be appropriate. This could help to identify how future needs may arise as a result of new housing development or climate change. Overall understanding the pressures and drivers of change is critical. Priorities and implementation should be established for a specific period e.g., the timeframe of a local plan. If priorities need to change this can be established through a formal review process.

e. Gauge the strengths and weaknesses of the green infrastructure network as a whole

2.3.20   Network analysis can be challenging. Looking at the extent to which linear features such transport corridors and water courses connect green infrastructure assets together, can help highlight connectivity. For instance how many greenspaces, woodlands, nature areas etc are linked within a river corridor and where are the gaps? How easy it is to travel between them sustainably? How can network connectivity be created or strengthened by adding in additional green infrastructure sites or access routes? Listing the green infrastructure assets in a particular corridor and their uses, such as for active travel, can help illustrate what assets are missing and how these could be enhanced to support better use. Barriers to use can also be taken into account. These might be physical barriers such as railway lines and motorways or psychological barriers such as anti-social behaviour hotspots deterring users. Long term pressures such as climate change may be a strong driver and be a key focus for justification for green infrastructure assessment and investment.

2.3.21   For some green infrastructure services such as flood risk mitigation, air quality and heat reduction, how the green infrastructure interacts will be more important than physical connectivity. So flood risk reduction may be improved across a catchment but the individual woodlands which reduce the water flow will not be next to one another. Specialist advice will be needed to understand these relationships. The emerging Local Nature Recovery Strategies and Nature Recovery Network should help with defining wildlife networks and gaps in them and their potential co-benefits, for example, for carbon sequestration. Natural England, Forestry Commission and the Environment Agency will often be the go to organisations for advice.

f. Place based interventions

2.3.22   Identifying place-based interventions at a strategic level can be identified through opportunity and deficiency mapping. This should lead to a key role of a green

infrastructure Strategy, which is to identify areas for protection and enhancement of GI or reinforce their strategic importance if already identified. Opportunities may also be funding led or created through identification by the local community or interest group.

Bringing it together

2.3.23   It is important to assess success across the range of audiences. The evidence on the local needs can generate discussion about the overarching priorities for an area. Prioritisation can be based on considering how to maximise multiple benefits together (biodiversity, health, prosperity, water management and climate change) and in what quantity and quality. Defining the integrated actions to deliver a range of benefits can be developed using a matrix approach. This can list the benefits provided in each location, including new the opportunities, overlaps of benefits on the ground, synergies and conflicts between benefits. These should be openly discussed by stakeholders to facilitate collaborative decision-making. The matrix can also begin to show where trade-offs between areas of conflict can be resolved. This may in turn help to refine the vision created in step 2 with more information on what could be delivered how and where. This can also lead to an updated Theory of Change.

2.3.24   Once all the evidence has been collated it is important to define:
1.   Areas identified for strategic green infrastructure
2.   Focus areas for green infrastructure intervention based on needs
3.   Areas of green infrastructure opportunity

Desired outcomes from this step

2.3.25   To ensure:
- A full review of all relevant green infrastructure evidence
- Identified green infrastructure priorities for the area

Government policy and guidance, Evidence and Process tools for Stage 3

2.3.26   Government Policy and guidance
- The Aqua Book: guidance on producing quality analysis for government www.gov.uk/government/publications/the-aqua-book-guidance-on-producing-quality-analysis-for-government
- Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework. Chapters 3 and 15. Available at: National Planning Policy Framework - GOV.UK (www.gov.uk)

2.3.27   Evidence
- UK natural capital accounts ONS. Available at: www.ons.gov.uk/economy/environmentalaccounts/bulletins/uknaturalcapital/urbanaccounts
- Landscape Institute (2013) Green Infrastructure: An integrated approach to land use. Available at: GreenInfrastructureLIPositionStatement2013.pdf (windows.net)
- Natural England (2021) Natural Capital Atlases: Mapping Indicators for County and City Regions (NECR318). Available at: Natural Capital Atlases: Mapping Indicators for County and City Regions - NECR318 (naturalengland.org.uk)
- Jerome, G. Sinnett, D. Burgess, S. Calvert, T. Mortlock, R. (2019) A framework for assessing the quality of green infrastructure in the built environment in the UK. Available at: A framework for assessing the quality of green infrastructure in the built environment in the UK - ScienceDirect

2.3.28   Process tools
- Natural England (2023) Green Infrastructure Framework
- Lusardi, J., Rice, P. Waters, R.D. AND Craven J. (2018). Natural Capital Indicators: for defining and measuring change in natural capital. Natural England Research Report, Number 076 Available at: Natural Capital Indicators: for defining and measuring change in natural capital - NERR076 (naturalengland.org.uk)
- Natural England (2021) Principles of the Environmental Benefits from Nature (EBN tool) approach – Beta Version (Beta Version, July 2021) Available at: The Environmental Benefits from Nature Tool - Beta Test Version - JP038 (naturalengland.org.uk)
- Natural England (2021) Biodiversity metric 3.1. Available at: The Biodiversity Metric 3.1 - JP039 (naturalengland.org.uk)
- Defra (2021) Natural Capital Evidence handbook. Available at: Natural Capital Evidence Handbook: to support place-based planning and decision-making - NERR092 (naturalengland.org.uk)
- Ecosystems Knowledge Network – Tools Assessor. Available at: Tool Assessor - Ecosystems Knowledge Network
- Natural England (2020) Climate Change adaption manual. ISBN 978-1-84754-343-8 Catalogue Code: NE751. Available at: Climate Change Adaptation Manual - NE751 (naturalengland.org.uk)
- Health and green infrastructure - Natural England A Rapid Scoping Review of Health and Wellbeing Evidence for the Framework of Green Infrastructure Standards (2020) NEER015 Available at: http://publications.naturalengland.org.uk/publication/4799558023643136
- Sport England Playing Pitch calculator. Available at: Playing Pitch Calculator | Sport England

- Ecosystems Knowledge Network (2017) Local Environment and Economic Development toolkit. Available at: The Local Environment and Economic Development (LEED) Toolkit - Ecosystems Knowledge Network

2.4 Stage 4 – Plan Strategically and develop green infrastructure policy and targets

Overview

2.4.1   Based on the evidence collected, green infrastructure policies and targets should:
- Meet people's needs, address gaps in provision, inequalities in distribution and plan for new or enhanced multifunctional green infrastructure
- Help meet wider policy objectives
- Include implementation mechanisms including funding

Prepare a Green Infrastructure Strategy

2.4.2   Once the partnership has developed the overarching vision, established the underpinning evidence and identified environmental, social and economic needs and local priorities, it should be possible to define and develop a green infrastructure strategy and action or delivery plan which includes targets. These should aim to meet people's needs and address gaps in provision, inequalities in distribution and plan for new or enhanced multifunctional green infrastructure, as well as connecting to related policy objectives.

2.4.3   The National Planning Policy Framework (NPPF) Paragraph 20 states:
- 'Strategic policies should set out an overall strategy for the pattern, scale and design quality of places, and make sufficient provision for: conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure, and planning measures to address climate change mitigation and adaptation.'

2.4.4   The NPPF Paragraph 175 states:
- 'Plans should: take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.'

2.4.5   A green infrastructure strategy should seek to secure green infrastructure as a key asset at all scales, and integrate and mainstream green infrastructure into social, health and economic polices not just environmental policy. In a local plan consideration should be given to the strength of wording of green infrastructure

policies. An assessment of the strength of the policy wording including the extent to which the policy and supporting text promotes action can be useful. For instance, does the policy say you may wish to consider, or this action should be taken. This can make a difference in whether existing green infrastructure assets are safeguarded and not lost. Where this is unavoidable policies should ensure that mitigation and compensation for green infrastructure is designed to meets needs rather than simply replacing what has been lost. Green infrastructure policies should work together with policies on Biodiversity Net Gain to ensure an uplift in quantity and quality of green infrastructure.

How can the Green Infrastructure Framework be applied to a green infrastructure strategy?

2.4.6   The Green Infrastructure Framework includes the following Headline Standards:
- Green Infrastructure Strategy Standard
- Accessible Greenspace Standards, including Quality Standards
- Urban Nature Recovery Standard
- Urban Greening Factor Standard
- Urban Tree Canopy Cover Standard

2.4.7   The area-wide Green Infrastructure Strategy Standard states:

- Local authorities, working in partnership with stakeholders including local communities, assess and strategically plan their green infrastructure provision, for example as part of a Green Infrastructure Strategy. Plans set out how green infrastructure will help to create greener, beautiful, healthier and more prosperous neighbourhoods, with a thriving nature network that can reduce air and water pollution, support sustainable drainage and help places adapt to climate change.

- In doing this, they apply the 15 Green Infrastructure Principles and the Green Infrastructure Standards locally (adapting them to local context where appropriate) and set green infrastructure policies, proposals and development requirements in development plans and local design codes. Local authorities set SMART targets in a Delivery Plan for achieving the Green Infrastructure Framework Standards and local policies over time, as well as arrangements for the long term management and maintenance of all green infrastructure.

- Plan and monitor and evaluate progress against delivery of these local targets every five years.

2.4.8   The Natural England GI Planning and Design Guide can help inform the design, and can be used alongside the National Design Guide, the National Model Design Code and requirements in local authority local design codes. The Design Guide describes the 'Building Blocks' of green infrastructure which include:

- sustainable drainage systems,
- green and blue roofs,
- green walls,
- rain gardens,
- swales,
- features for species,
- trees in hard landscapes,
- street furniture and utility structures,
- traffic-free routes,
- allotments,
- orchards,
- private domestic gardens,
- green spaces (including parks and burial grounds),
- more natural spaces (including woodlands, grassland, scrub, and hedgerows),
- heritage features and the historic environment,
- blue spaces (including wetlands).

2.4.9 A green infrastructure strategy can provide a design overview by:
  - Describing an area's character in broad terms, what is special about it and broader landscape scale opportunities
  - Identifying areas to be safeguarded primarily for green infrastructure, particularly corridors and networks.

2.4.10 Green Infrastructure Principles What 5 and How 4 cover character and design. They emphasise how the role of green infrastructure should respond to local landscape and townscape character using green infrastructure to help change it where that will bring benefits, or to conserve, enhance or restore it, where keeping the character is desirable. A green infrastructure strategy should also seek to understand the cultural and social aspects of an area by involving local people in identifying what they value about an area and also, what they would like to change.

2.4.11 A green infrastructure strategy can identify strategic delivery sites that provide benefits to meet identified needs associated with new development, as well as retrospective needs associated with existing settlements. Strategic long term thinking to connect together green infrastructure assets either through enhancements of existing sites, or creation of new green infrastructure assets should be undertaken. Strategic sites for Biodiversity Net Gain can equally form part of multifunctional green infrastructure strategic planning and could include strategic areas for habitat banks. Including where habitat creation or enhancement works that deliver biodiversity uplift have been undertaken with the express purpose of providing off-site biodiversity units to the market.

2.4.12 Local GI strategies should use the Natural England Green Infrastructure Framework as a starting point, reflect national policy, and aim to give consistency and clarity on the quantity and quality of green infrastructure that is needed in an area. Green infrastructure strategies should also contribute to delivery of the Nature Recovery Network, Local Nature Recovery Strategies and Biodiversity Net Gain; meet net zero targets; and enhance public health, provide for active travel and foster sustainable economic growth and regeneration.

How can the GI Framework be applied to local planning policy?

2.4.13 To assess whether new local planning policy or policies cover the breadth of green infrastructure at a strategic level, it can be useful to review whether the issues in the 5 'Why' Green Infrastructure Principles – green infrastructure for nature, health, prosperity, water management and climate resilience and the 5 'What' Green Infrastructure Principles – multifunctional, varied, connected, accessible and reflecting local character, are fully considered in local planning policy.

2.4.14 Local authorities are encouraged to use the following in developing and writing policy:
- Standards
- Targets

2.4.15 The GI Standards Framework includes the following Headline Standards:
- Green Infrastructure Strategy Standard
- Accessible Greenspace Standards, including Quality Standards
- Urban Nature Recovery Standard
- Urban Greening Factor Standard
- Urban Tree Canopy Cover Standard

2.4.16 The area-wide Green Infrastructure Strategy Standard states:

- Local authorities, working in partnership with stakeholders including local communities, assess and strategically plan their green infrastructure provision, for example as part of a Green Infrastructure Strategy. Plans set out how green infrastructure will help to create greener, beautiful, healthier and more prosperous neighbourhoods, with a thriving nature network that can reduce air and water pollution, support sustainable drainage and help places adapt to climate change.

- In doing this, they apply the 15 Green Infrastructure Principles and the Green Infrastructure Standards locally (adapting them to local context where appropriate) and set green infrastructure policies, proposals and development requirements in development plans and local design codes. Local authorities set SMART targets in a Delivery Plan for achieving the Green Infrastructure

Standards and local policies over time, as well as arrangements for the long term management and maintenance of all green infrastructure.

- Plan and monitor and evaluate progress against delivery of these local targets every five years.

2.4.17   The major development Green Infrastructure Strategy Standard states:

- Each major new development has a Green Infrastructure Plan (which may be part of a Design and Access Statement) setting out how the development will deliver the Green Infrastructure Framework's 15 Green Infrastructure Principles and the Green Infrastructure Standards as set out in local green infrastructure policies, proposals and development requirements in development plans and local design codes. The green infrastructure delivered within (or associated with) major new developments should be managed, maintained and monitored for a minimum of 30 years.

2.4.18   The Strategy Standard and the other Headline Standards can be used as the starting point for locally developed policy. The benefits of this approach are as follows:

a. Standards

2.4.19   Standards can provide the output measures so that developers have certainty over what green infrastructure is needed on site. They should be included as site-specific and area-based requirements in site allocation policies.

2.4.20   At an area wide level standards can provide the overall framework and context for decisions that can be made to allow for variations across an area so that factors such as, higher needs and limited opportunities can be taken account of at a local level.

b. Targets

2.4.21   In order for the green infrastructure standards to be delivered local authorities should set green infrastructure targets. These should include delivery levels over time. For instance a % of people having good quality publicly accessible greenspaces within 15 minutes' walk from home by 2030, by 2040 and 100% by X date. These targets can be area wide or location specific depending on the anticipated levels of land use change in terms of development and projects, and therefore opportunity to meet them.

Funding

2.4.22   The multifunctional nature of green infrastructure means it can be implemented and funded in number of ways. The challenge is to identify the opportunities to draw together differing delivery mechanisms and funding sources. This is where having a strong partnership approach and collaborative projects can make the difference. Partnerships need to be cross sectoral to bring together various sources of funding. Funding may be public, private, philanthropic or third sector.

2.4.23   In terms of funding sources the Town and Country Planning Association maintain a database for green infrastructure broken down by sector type.

Desired outcomes from this step

2.4.24   To ensure that:
- A GI strategy or local plan policies are written
- Potential implementation mechanisms and funding for GI are identified.

Government policy and guidance, Evidence and Process tools for Stage 4

2.4.25   Government Policy and guidance
- Ministry of Housing, Communities & Local Government (2019) Planning Practice Guidance for the Natural Environment. GI section. Available at: Natural environment - GOV.UK (www.gov.uk)

2.4.26   Evidence
- Natural England (2014) National Character Area profiles: data for local decision making. Available at: National Character Area profiles - GOV.UK (www.gov.uk)
- National Park and AONB management plans – access via the relevant National Park or AONB website.
- Monteiro R, Ferreira J, Antunes P (2020) Green Infrastructure Planning Principles: An Integrated Literature Review. Available at: Land | Free Full-Text | Green Infrastructure Planning Principles: An Integrated Literature Review (mdpi.com)

2.4.27   Process tools
- Natural England (2023) Green Infrastructure Framework
- HM Treasury (2018) Guide to developing the project business case. ISBN 978-1-5286-0460-4, CCS0518648068-1 PU2145. Available at: Guide to developing the Project Business Case (gov.wales)
- Landscape Institute (2017) Townscape character assessment. Available at: Townscape character assessment | Landscape Institute

- Natural England and Department for Environment, Food & Rural Affairs (2014) Landscape and seascape character assessments. Available at: Landscape and seascape character assessments - GOV.UK (www.gov.uk)
- Historic England (no date) Historic Landscape Characterisation. Available at: Historic Landscape Characterisation: a Tool for Understanding and Managing Whole Areas | Historic England
- UK Green Building Council (2019) Practical Guide to Developing and Implementing a GI strategy. Available at: Practical-how-to-guide-Developing-and-Implementing-a-GI-Strategy-UKGBC-Jan-2019-Final-v4-web.pdf
- Town and Country Planning Association (2022) Funding sources for green infrastructure. Available at: Funding sources for green infrastructure - Town and Country Planning Association (tcpa.org.uk)

2.5 Stage 5 – Integrating the green infrastructure strategy
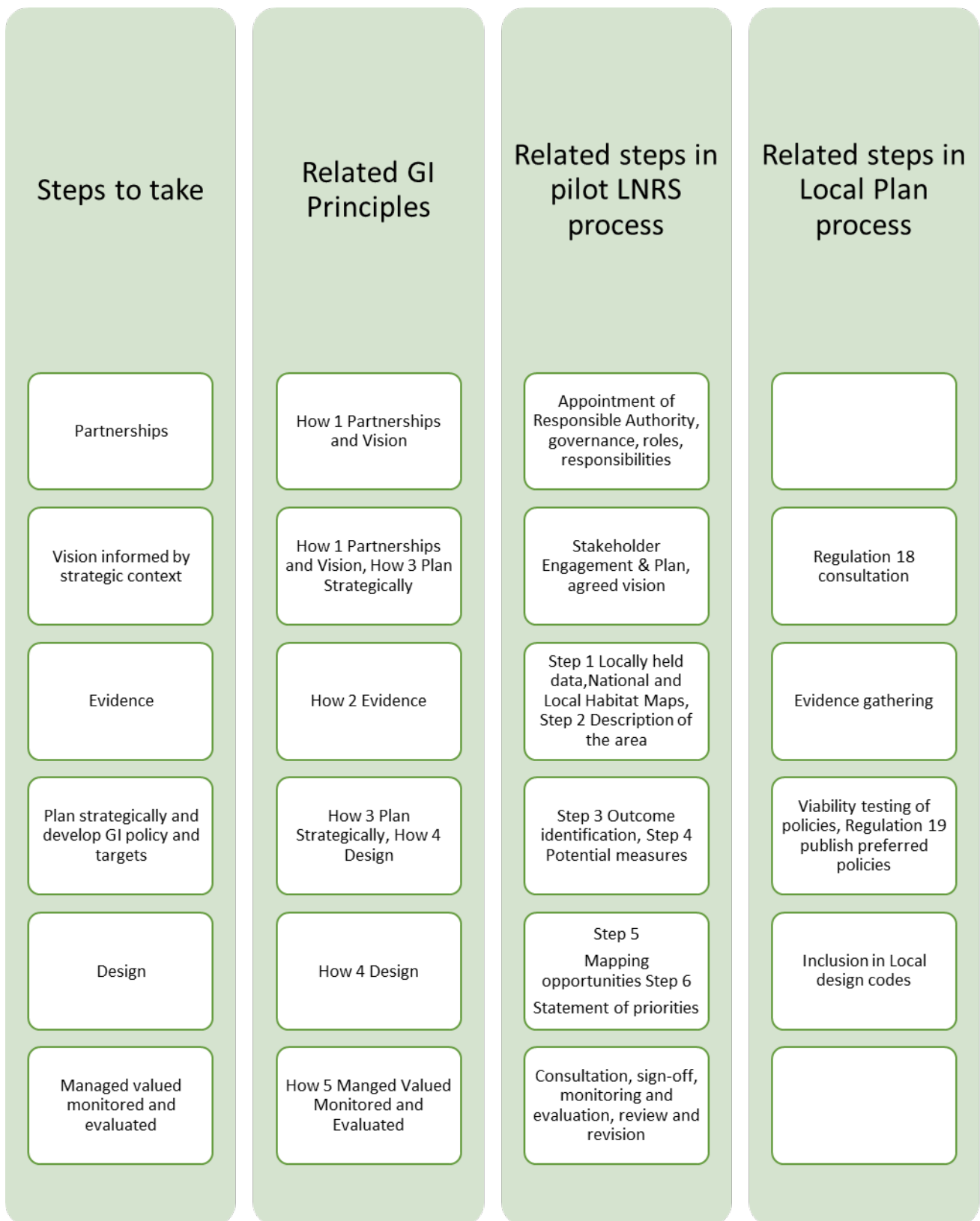
Overview

2.5.1   Consider:
- Ensure join up between Local Nature Recovery Strategies and green infrastructure Strategies and green infrastructure Delivery Plans
- Using the evidence on local character to design good green infrastructure as part of Local Design Guides
- Including Green Infrastructure Standards in Local Design Codes
- Embedding GI in relevant chapters in local plans including local plan site allocations
- Set requirements for green infrastructure information within planning validation checklists
- Ensuring green infrastructure is included across local government and stakeholder policies and strategies

Join up between Local Nature Recovery Strategies and green infrastructure strategies and green infrastructure delivery plans

2.5.2   For green infrastructure to be sustainable then delivery needs to be embedded in actions plans of all the partners and cross referenced, so synergies and opportunities are not lost. This can also help to reduce duplication of effort. To illustrate this Figure 3 below shows how the Process Journey steps interrelate with the Green Infrastructure How Principles and can run parallel to Local Nature Recovery Strategy and Local plan processes. The aim is to show that much of

thinking, evidence and consultation that will be needed to develop a green infrastructure strategy or green infrastructure local plan policy may have already been undertaken or that the initiatives can run in parallel, therefore saving time and effort.

Figure 3 - The relationships between developing a **green infrastructure** strategy, the Green Infrastructure Principles, the LNRS and local plan processes

Steps to take	Related GI Principles	Related steps in pilot LNRS process	Related steps in Local Plan process
Partnerships	How 1 Partnerships and Vision	Appointment of Responsible Authority, governance, roles, responsibilities	
Vision informed by strategic context	How 1 Partnerships and Vision, How 3 Plan Strategically	Stakeholder Engagement & Plan, agreed vision	Regulation 18 consultation
Evidence	How 2 Evidence	Step 1 Locally held data, National and Local Habitat Maps, Step 2 Description of the area	Evidence gathering
Plan strategically and develop GI policy and targets	How 3 Plan Strategically, How 4 Design	Step 3 Outcome identification, Step 4 Potential measures	Viability testing of policies, Regulation 19 publish preferred policies
Design	How 4 Design	Step 5 Mapping opportunities Step 6 Statement of priorities	Inclusion in Local design codes
Managed valued monitored and evaluated	How 5 Manged Valued Monitored and Evaluated	Consultation, sign-off, monitoring and evaluation, review and revision	

2.5.3 There are a number of parallel processes between the development of a green infrastructure strategy and an LNRS and so they can be developed in parallel or be informed by one another. They can use much of the same evidence, involve the

same stakeholders, use the same or complementary delivery mechanisms and have some very similar outcomes. However, an LNRS will be primarily led by improving biodiversity, whereas green infrastructure strategies will have a multifunctional approach which is likely to be driven by more social factors such as health, access and recreation. Therefore gains can be made in not duplicating effort but care should be taken to ensure that green infrastructure strategies retain a wider focus.

Integrating with Local Design Codes

2.5.4   Local planning authorities can use design guides and codes to provide a local framework for green infrastructure. This should ensure that built design is complemented and integrated with green infrastructure to create distinctive places with a consistent and high quality standard of design. The geographic coverage, level of detail and degree of prescription should enable green infrastructure to be tailored to the circumstances and scale of change in each place and, should allow a suitable degree of variety. The Natural England Green Infrastructure Planning and Design Guide provides comprehensive details of what good green infrastructure design looks like and identifies how green infrastructure can contribute to the National Design Guide's ten characteristics of well-designed places. It identifies the building blocks of green infrastructure and how the Green Infrastructure Standards can be applied in different areas such as urban centres and high streets, urban areas, streets, sub-urban and rural areas.

2.5.5   Incorporating Green Infrastructure standards into local design codes will be important. The evidence collected in previous steps should provide this context which can be used to inform appropriate design policies and advice and provide maximum clarity about design expectations at an early stage.

2.5.6   The Natural England Green Infrastructure Planning and Design Guide uses ten area types these are:
- Deep urban and high streets
- Urban
- Suburban
- Streets
- Rural
- Commercial business, Industrial
- Schools and Education
- Healthcare facilities
- Parks and Gardens
- Linear Infrastructure

2.5.7   Design approaches to green infrastructure should be considered for all relevant area types. This can then be reflected in strategic advice in the green infrastructure strategy.

2.5.8   The role of a green infrastructure strategy in design terms is therefore to provide the wider understanding and context of an area's landscape/townscape and historic character to create well-designed, beautiful and distinctive places. The contribution that green infrastructure can make to good design should be clearly stated. Factors such as the scale of change likely in an area and the contribution a location can make to strategic green infrastructure should be considerations.

Local Plans

2.5.9   Use of the Green Infrastructure Framework in developing local planning policy is set out in 2.4.11 above. The role of the local plan should be to include these policies but also to:
- Explain how the policies work in combination
- Where they should be applied geographically
- How the policy can be applied in different circumstances

2.5.10   The application of the policies in combination is very important. This is because the Standards can be met in combination in a single location. So for instance the Urban Greening Factor can include greenspace which can meet Accessible Greenspace Standards, and that site can include trees which can meet the Urban Tree Canopy Cover Standard. Explaining this clearly in the local plan so that developers can understand that each requirement doesn't load on top of one another but can be achieved in combination is crucial.

2.5.11   Explaining where the policies should be applied geographically is important, as the Green Infrastructure Standards have been developed with a focus on addressing deficiencies in green infrastructure in urban areas. However, deficiencies also occur in small towns, villages and the urban fringe but the opportunities to address a lack of green infrastructure in different areas will vary. Dense urban areas may have far fewer opportunities than the urban fringe. Therefore, taking this into account and linking to the design guide area types will be important. This flexibility means that different standards can be applied to different areas but overall can combine to meet an area wide standard.

2.5.12   Different circumstances will play a part. Locations in areas with lower rainfall might not require rain gardens and might be better suited to less areas of grass. Locations with higher rainfall might need the opposite and more SUDS. Therefore, circumstances should feed into the thinking of how Green Infrastructure standards are applied.

2.5.13   When in discussions with developers over site allocations, it is possible that concerns over viability may be raised in the context of including green infrastructure provision. However, planned correctly good quality green infrastructure can increase the speed at which properties sell or are let, increasing profitability for developers.

2.5.14   Due to the broad nature of green infrastructure the local plan should also make reference to green infrastructure in chapters which are not environment based, to ensure join up across, health, transport and employment programmes and projects.

Validation checklists

2.5.15   Working with development managers, it is also worth considering setting requirements for green infrastructure information within planning validation checklists. This can ensure that green infrastructure is considered fully from the early stages in a planning application. Theses could relate to the green infrastructure green infrastructure standards. and ensure the right quantity and quality of green infrastructure in the right location.

Stakeholder policies

2.5.16   The cross cutting nature of green infrastructure means that effective policy, delivery and maintenance requires a multidisciplinary approach. Therefore integrating green infrastructure policy across local authority departments and stakeholders is important. Ensuring that green infrastructure is fully picked up means that effort will be required in checking complementary documents and attending forums where green infrastructure can provide an integrating element. This does not have to be onerous if green infrastructure is considered in early in consultations and opportunities are taken to inform interested parties to highlight the advantages of joined delivery.

Desired outcome from this step

2.5.17   To ensure:
   • green infrastructure in fully integrated within and across related policy and guidance documents.

Government policy and guidance, Evidence and Process tools for Stage 5

2.5.18   Government Policy and guidance
   - Ministry of Housing, Communities & Local Government (2019) Planning Practice Guidance for the Natural Environment. Landscape section. Available at: Natural environment - GOV.UK (www.gov.uk)

- Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2021) National Model Design Code: Part 1 - The Coding Process. Available at: [National Model Design Code - GOV.UK (www.gov.uk)](#)
- HM Government (2018a) A Green Future: Our 25 Year Plan to Improve the Environment. Chapter 2. Available at: [25 Year Environment Plan - GOV.UK (www.gov.uk)](#)
- Ministry of Housing, Communities & Local Government (2021) National Design Guide. Context and identity sections. Available at: [National design guide - GOV.UK (www.gov.uk)](#)
- Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework. Chapters 2 and 15. Available at: [National Planning Policy Framework - GOV.UK (www.gov.uk)](#)
- Ministry of Housing, Communities and Local Government (2021) Build back better high streets Available at: https://www.gov.uk/government/publications/build-back-better-high-streets

2.5.19   Evidence
- Monteiro R, Ferreira J, Antunes P (2020) Green Infrastructure Planning Principles: An Integrated Literature Review. Available at: [Land | Free Full-Text | Green Infrastructure Planning Principles: An Integrated Literature Review (mdpi.com)](#)

2.5.20   Process tools
- Natural England (2023) [Green Infrastructure Framework](#) and [Green Infrastructure Planning and Design Guide](#)
- Design Council (2019) Design Review Principles and Practice. Available at: [Design Review: Principles and Practice - Design Council](#)
- Natural Resources Wales (2019) Green Space and Well- Being, a good practice guide for housing associations. Available at: [Green Space and Well-being a good practice guide for housing associations Linc Cymru.pdf - Google Drive](#)
- Illman, S. and Wilson, S. CIRIA (2020) Guidance on the construction of SuDS (C768F) ISBN: 978-0-86017-783-8 Available at: www.ciria.org/Search?SearchTerms=Guidance%20on%20the%20construction%20of%20SuDS
- Landscape Institute (2013) Green Infrastructure: An integrated approach to land use. Available at: [GreenInfrastructureLIPositionStatement2013.pdf (windows.net)](#)
- Also see character-related evidence listed under Step 3.

2.6 Stage 6 - Managed Valued Monitored and Evaluated

Overview

2.6.1   Adopt policies, establish good governance, funding and management, monitor and evaluate progress
- Ensure green infrastructure is governed, managed, monitored, maintained and funded for the long term
- Evaluate how the green infrastructure strategy/policy performs against Green Infrastructure Standards and local objectives

2.6.2   Considering the governance, funding, management, maintenance and monitoring of green infrastructure for the long term is important to lock in benefits especially where this fall outside of planning requirements.

Managed

2.6.3   The interrelationship between management of different sites to achieve green infrastructure outcomes across a landscape such as flood risk, means that a strategic approach to management across land parcels, organisations and boundaries will be necessary. One key element is to embed green infrastructure in decision making across council services and avoid silo working. A process of mainstreaming or ensuring that green infrastructure is considered across the board is essential. Delivery Plans can be a useful source of information and provide a point for integration for green infrastructure as they will identify the infrastructure required to cater for new growth. Scenario testing can be useful particularly where the consequences of ignoring or fully integrating green infrastructure can be shown.

2.6.4   Some council departments for example, grounds maintenance and their contractors can be very important in ensuring green infrastructure provides the right services at the right quality. Engaging local communities and other stakeholders in discussions on long term planning, and opportunities to involve them in delivery and ongoing management may be valuable. Securing commitments around long-term stewardship of green infrastructure is likely to be an important consideration along with a multidisciplinary approach.

Valued and Funded

2.6.5   Green infrastructure is most likely to be successful where there is a mix of the public, private and third sectors, working together. This can include joint approaches to securing funding. New green funding and finance mechanisms are emerging, carbon credits, Green Recovery funds, and Biodiversity Net Gain which offers funding over a 30-year period, can help address revenue funding. Investing

in nature based solutions is now perceived as a reputational necessity by many companies. Through the Environmental Social and Corporate Governance agenda interest in investment in nature to reduce business risk is also growing. This is becoming a practical reality as well as supply chains are affected by climate change. New reporting standards for climate related financial disclosures could be used to support investment in green infrastructure. Approaches such as biophilic design are creating a greener, healthier working environments for staff which can enhance mental and physical health and enhance productivity. Aligning good economics with environmental outcomes can help create positive perceptions and move greenspaces and green infrastructure from being liabilities to assets. A critical point on finance is to make sure the local authority has the right treasury tests in place to work with green investors to implement green infrastructure.

2.6.6   It may also be necessary to gain evidence which moves away from conventional cost benefit analysis. These tend to undervalue the contribution of environmental factors and so may not provide a strong enough case for green infrastructure. Instead, an ecosystem services or natural capital approach can help to map the functionality of green infrastructure against need, for example understanding where sustainable drainage systems or tree planting could have greatest benefit for managing flood risk, and addressing water quality issues. It can also be beneficial to map the links between key policy objectives, ecosystem services and how these meet, or could meet, the needs of different users. Enabling a Natural Capital Approach (ENCA) can help to find the right approach to valuing green infrastructure. Increasingly green infrastructure is seen as a mechanism to address environmental justice and equity. Demonstrating that the benefits of green infrastructure can be attributed to those most in need should ideally be included in valuation processes.

2.6.7   The Biodiversity Metric 3.1 is a biodiversity accounting tool that can be used for calculating biodiversity losses and gains from a development. It includes within it many common green infrastructure habitat features, such as SUDs, green roofs and walls etc and their inclusion in a scheme design can contribute towards meeting BNG requirements. The Environmental Benefits from Nature tool is a voluntary tool designed to work alongside Biodiversity metric 3.1. It uses a habitat-based approach to provide a common and consistent means of considering the direct impact of land use change across 18 ecosystem service services. Both can provide site-based information that can inform the planning of green infrastructure interventions as part of biodiversity net gain.

2.6.8   A green infrastructure strategy can also help secure funding through demonstrating the importance of green infrastructure, which can feed through to Community Infrastructure Levy requirements.

Monitored and Evaluated

2.6.9   It will be important to monitor and evaluate how green infrastructure policies and strategy are performing over time. Reviewing the Theory of Change can help with evaluating how effective green infrastructure policies have been in delivering the 'Why' Green Infrastructure outcomes. In terms of what to monitor the Green Infrastructure Standards should be used in conjunction with indicators, benchmarks and targets developed in stage three above.

2.6.10   The Natural England Green Infrastructure Standards set out that green infrastructure delivered within (or associated with) major new developments should be managed, maintained and monitored for a minimum of 30 years.

2.6.11   The Green Infrastructure Mapping Database can be used to provides a baseline over which change can be monitored. Other resources such as the Natural Capital indicators can also be used for assessment. They can provide measurable properties which can be used to understand the state of natural assets, how they are changing, and how this relates to benefits of green infrastructure.

2.6.12   Improving the quality of data underpinning green infrastructure policies can help with monitoring their effectiveness. Citizen Science is one way of improving the quality of local data and mapping and monitoring of green infrastructure assets. For example, Forest Research is developing its urban tree cover map using citizen science processes.

2.6.13   Evaluation of policy and green infrastructure provision will require quantitative and qualitative data. These should be set against:
   - The extent to which needs and priorities established in step 2 have been covered in green infrastructure policies.
   - If Green Infrastructure Standards e.g. the Accessible Greenspace Standard (AGS) and Urban Greening Factor (UGF), are being met and what the trajectory is.
   - The implementation of locally set targets to meet needs
   - Performance against user survey information
   - Delivery against a theory of change

2.6.14   Frequency of evaluation may vary depending on the level of land use change in an area and the levels of need. Dovetailing evaluation into other review processes is likely to reduce duplication of effort and provide more joined up results. Local Planning Authorities should aim to report progress against green infrastructure targets every five years. Learning from the evaluation and monitoring should prompt adaptive management and refining of the plans and policies.

Desired outcome from this step

2.6.15   Ensure:
- Governance, management processes are in place for green infrastructure
- Maintenance for green infrastructure regimes for good green infrastructure are established
- Long term monitoring and evaluation processes are in place for green infrastructure policies and sites

Government policy and guidance, Evidence and Process tools for Stage 6

2.6.16   Government Policy and guidance
- Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework. Chapters 12. Available at: National Planning Policy Framework - GOV.UK (www.gov.uk)
- Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2019) Planning Practice Guidance for the Natural Environment. Green infrastructure section. Available at: Natural environment - GOV.UK (www.gov.uk)
- Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2020) Community Infrastructure Levy. Available at: Community Infrastructure Levy - GOV.UK (www.gov.uk)
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- Ministry of Housing, Communities & Local Government (2021) National Design Guide. Available at: National design guide - GOV.UK (www.gov.uk)
- HM Treasury (2020) The Magenta Book. Available at: The Magenta Book - GOV.UK (www.gov.uk)
- Department for Environment, Food & Rural Affairs (2020) Enabling a Natural Capital Approach (ENCA). Available at: Enabling a Natural Capital Approach (ENCA) - GOV.UK (www.gov.uk)

2.6.17   Evidence
- Revaluing Parks and Greenspaces FIELDS IN TRUST (2018) ISBN 978-1-9999541-0-9. Available at: www.fieldsintrust.org/Upload/file/research/Revaluing-Parks-and-Green-Spaces-Report.pdf
- Natural England (2016) Putting economic values on green infrastructure improvements. Access to Evidence Information Note EIN022. Available at: Putting economic values on green infrastructure improvements - EIN022 (naturalengland.org.uk)

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2.6.18   Process tools
- Natural England (2023) Green Infrastructure Framework and Green Infrastructure Planning and Design Guide
- CIPPEC (no date). Toolkit No. 5 How can we monitor and evaluate policy influence? Data collection methods. Available at: guia05_ingles_cippec_me1.pdf (publishing.service.gov.uk)
- University of Oxford (2018) Tools for Planning and Evaluating Urban Green Infrastructure: Bicester and Beyond. Available at: Environmental Change Institute - University of Oxford

3.0 Future modifications

3.0.1   The introduction of Local Nature Recovery Strategies (LNRSs) across England will affect the process of local policy and plan-making including green infrastructure. Guidance on how Local Planning Authorities need to have regard to LNRSs will be made available by government in due course. In addition, the Government has committed to comprehensive reform of the planning system. The Process Journey will be updated to reflect changes in guidance and policy to avoid duplication and maximise benefits.

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