Essex Green Infrastructure Standards

Technical Guidance

DRAFT

Essex County Council

Acknowledgements

The Essex Green Infrastructure Standards Framework Guidance has been drafted through collaboration with the following stakeholders and partners as a result of the Making Better Planning for Better Placemaking and Place-Keeping workshops held between September and November 2020.

- Building with Nature
- Environment Agency
- Essex County Council
    - Spatial Planning
    - Growth & Development
    - Environment and Climate Action
        - Energy and Low Carbon
        - Flood and Water Management
        - Green Infrastructure
    - Essex Housing
    - New Settlements
    - Minerals and Waste
    - Highways Active Travel
    - Place Services
        - Built Environment
        - Landscape
        - Arboriculture
        - Ecology
- Essex Planning Officer Association representatives from:
    - Basildon Borough Council
    - Braintree District Council
    - Brentwood Borough Council
    - Castle Point Borough Council
    - Chelmsford City Council

- Colchester Borough Council
- Epping Forest District Council
- Harlow Council
- Maldon District Council
- Rochford District Council
- Southend City Council
- Tendring District Council
- Thurrock Council
- Uttlesford District Council

- Essex Wildlife Trust
- Natural England[1]
    - National Green Infrastructure Standards Framework Trials
    - Brillianto
        - Green Infrastructure Consultancy

- Northumbria University
- RSPB
- Tree Council
- University of East Anglia
    - School of Environmental Sciences: Centre for Social and Economic Research on the Global Environment (CSERGE)
- Wilderness Foundation

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1. INTRODUCTION

1.1. Purpose of this Guidance.

1.1.1.   This guidance provides support to professionals in the built environment, highways, health, and environment to deliver better Green Infrastructure (GI). Essex's Nine GI standards have been developed to support policy and development management in the planning and delivery of multifunctional GI for placemaking and placekeeping. These standards are written as a form of assessment criteria to enable policy and development management to go beyond the statutory requirements, to create great places for people and wildlife to thrive.

1.1.2.   The standards will help with policy and strategy writing, master-planning, design, and implementations of developments. They can be applied to GI projects and to the management and maintenance of GI.

1.1.3.   This document can assist in:

- the improvement of planning policy,
- framing planning conditions for future planning applications; and
- shaping project delivery in securing multifunctional GI in the long-term.

1.1.4.   This document brings together existing guidance, examples of good practices and information on how to meet the GI Standards. That will be laid out in the [Essex Design Guide](2). Figure 1: An example of the relationship between GI and strategic documents below illustrates the relationship between multifunctional GI and other Strategic documents for Essex.

1.1.5.   The flow diagram in **Figure 2** provides an overview of what this guidance includes and provides navigation for each of the nine principles and standards:

1.2. Who this document is for?

1.2.1.   This is the technical Essex GI Standards document, content is relevant to professional in the built environment, highways, health, and environment. A non-technical summary document has also been produced for those without specialist knowledge of the subject area.

1.2.2.   Developers, staff from New Settlements and, Essex Housing, Landscape, Architects/ Designers, Ecologists, Building Control,

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Engineers, Essex Highways, Health and Wellbeing and Public Health, Natural Environment, Green Spaces and Country Parks, Flood and Water Management, those involved in long-term management and maintenance, community and amenity groups, and those producing Neighbourhood Plans can use this guide to help understand how multifunctional GI can deliver benefits to both the built and natural environment.

1.2.3.   This guidance will also be useful to the 15 Local Authorities Planning and environment departments in Essex (including 2 Unitary Authorities) listed below:

- Basildon Borough Council
- Braintree District Council
- Brentwood Borough Council
- Castle Point District Council
- Chelmsford City Council
- Colchester Borough Council
- Epping Forest District Council
- Harlow Council
- Maldon District Council
- Rochford District Council
- Tendring District Council
- Uttlesford District Council
- Southend-In Sea Borough Council
- Thurrock Council
- Essex County Council

Figure 1: An example of the relationship between GI and strategic documents
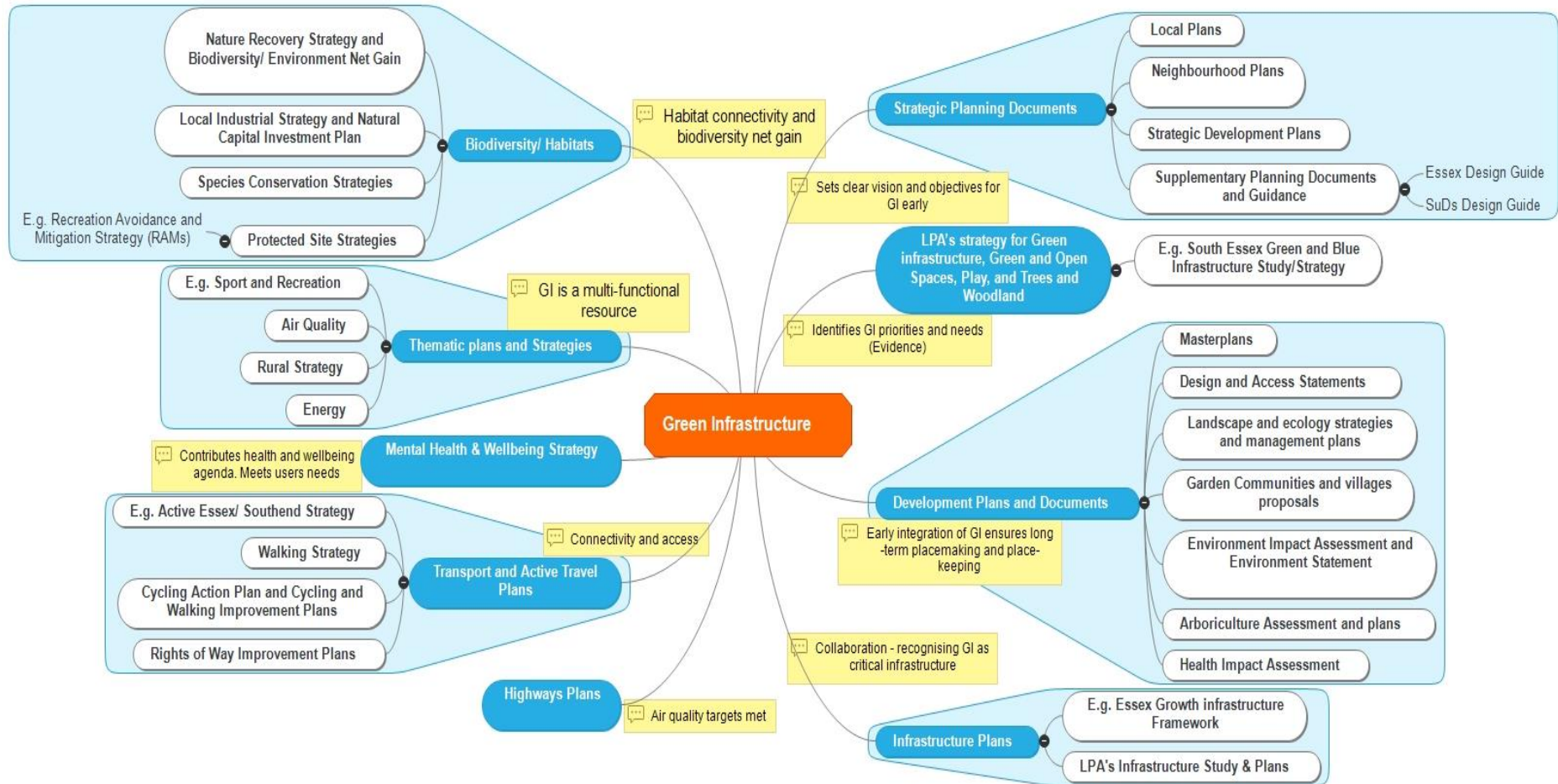
Figure 2: Summary of what the guidance includes and how to use each of the principles in this guidance

The 9 GI Principles & Standards
- To inform GI decision making and policies.

Background: Why the GI Principle & Standards matter?
- Review Guidance
- Provides an understaning of why each GI Principle and Standard are important.

How to improve &/or achieve the Principle
- What steps you need to take towards meeting the principle and standards

Meeting the Principle - Indicators/Measures of Success
- Summary guidance and checklist to self-assess on how to deliver the principle.
- To measure progress and monitor delivery, including using qualitative or quantitive indicators to benchmark GI provision.

Furhter Guidance and Information
- A list of further reading, guidance and tools available to develop better understanding of each Principle and Standards

Case Study/Illustrative examples
- Examples of best practice and lessons learnt from local and national case studies

1.3. Introduction to Green Infrastructure

What is Green Infrastructure?

1.3.1. Green infrastructure can be defined as a carefully planned network of high quality natural and semi-natural assets and habitat types, of green and blue spaces, and other strategic planned environmental features that maintain and deliver our ecosystem services[3]. It provides multifunctional benefits integral to the health and wellbeing of our communities and to the ecology and economy of the county. Green infrastructure is often referred to as a network of these natural and semi-natural assets and spaces, which are joined together connecting urban and rural areas and are habitually strategically planned ([Essex Green Infrastructure Strategy](), 2020).[4]

1.3.2. Green Infrastructure (GI) includes parks and gardens, amenity greenspace, natural and semi-natural urban greenspaces, green corridors, water (coast, rivers, lakes and ponds) and other public spaces as diverse as allotments and city farms.

1.3.3. GI is multifunctional (such as flood management, recreation, or/ and habitats) at a range of scales that collectively deliver a range of environmental, social and economic benefits. It is important that the diversity of these functions and benefits is recognised in planning, policy, and decision-making. [Annex C]() explains why our GI is essential for our social, economic, and environmental wellbeing.

1.3.4. The delivery of multifunctional GI to deliver multiple benefits will help Local Planning Authorities and partners to address several key political challenges. This includes

- **Climate Emergency** – Several Essex local authorities have made a declaration to achieve Net Zero by 2050 and to take action on climate change. In 2020, [Essex Climate Action Commission]() (ECAC) (an independent commission) was set up to advise on and make recommendations about how Essex can improve the environment and the economy through tackling climate change. This covers 6 themes which include the built environment, transport and land use and GI.

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[3] Ecosystem services are the benefits provided by ecosystems in the form of goods and services that underpins our economy by producing value for people. These goods/services are classified along four functional categories:
1. Cultural services - the non-material benefits such as recreation, aesthetic and spiritual enrichment
2. Provisioning services – products obtained such as fresh water, food, energy, timber and wood fuel.
3. Supporting services – such as wildlife, nutrient cycle, water cycle, photosynthesis
4. Regulating services – protection from hazards such as the regulation of air quality, climate, flooding and erosion; water purification; disease and pest control and pollination.

[4] NPPF (2020) proposed amendments defines GI as, 'a network of multifunctional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity and quality of life benefits for local communities.'

Good GI will help deliver climate change adaptation and mitigation and contribute to meet our carbon net zero target, as set out in the ECAC report – [Net Zero: Making Essex Carbon Neutral](#).

- **Ecological Emergency** – The need to make space for nature and meet the requirement in the [National Planning Policy Framework](#) (paras 174-5; 179) - Biodiversity Net Gain. An opportunity to showcase how developments can be positive in contributing to nature and creating great places.
- **Public Health / Active Lives Agendas** - Covid19 response to people's health and wellbeing has highlighted the importance for GI.
- **Green Growth Agenda** – To ensure we deliver better placemaking and place-keeping in plans and exemplar developments that people would want to live now and in the future.

GI Principles and Standards

1.3.5. HM Government's 25 Year Environment Plan includes a commitment to develop a National Framework of Green Infrastructure Standards. Natural England have been working with Defra and others to design the Framework. The framework in 2021 includes:

- Fifteen principles of good GI,
- Process maps to help policy makers, planners, and developers
- Standards for GI (updated Accessible Natural Greenspace Standards and Urban Greening Factors),
- National baseline maps of GI with reference to key population and socio-economic data; and
- Supporting guidance, the Essex GI Standard Guidance builds upon.

1.3.6. The Environment Act (2021) puts the 25 Year Environment Plan into law and create a statutory framework for environmental principles and introduce Local Nature Recovery Strategies that will establish priorities and map proposals for specific actions to drive nature's recovery and provide wider environmental benefits.

1.3.7. We have built upon and adapted this framework to the Essex context through a series of workshops to ensure that the GI Principles and Standards for Essex are suitable and locally oriented to meet the needs of our county. Essex is a large and varied county where the majority is rural in character, covering approximately 3,676km2. It also has significant urban settlements. It borders to the north the counties of Suffolk and Cambridgeshire, to the west the county of Hertfordshire and the Greater London area to the Southwest. A major challenge for Essex is to maintain a healthy natural environment in line with the unprecedented development and population growth, impacts from climate change, ecological and health emergencies we face in Essex, while allowing for meaningful connections between people and nature.

1.3.8.   The Essex GI standards will help strengthen GI policy and secure delivery within new developments to strengthen Essex's GI. As a result, this will enhance ecological networks and contribute to the national targets for biodiversity net gain and species abundance. As well as contributing towards ECAC recommendation for 30% of all land in Essex will enhance biodiversity and the natural environment by creating natural GI by 2040, increased urban greening and a move towards natural flood management The standards enable local planning authorities and developers to have informed discussions with stakeholders about the appropriate level of multifunctional GI that should be provided to deliver locally relevant outcomes, such as climate change, biodiversity and environment net gains.

1.3.9.   The need to meet the requirement in the National Planning Policy Framework (paras 174-5; 179) and the Environment Act (2021) for Biodiversity Net Gain, the need for green growth and the response from Covid-19 highlight the importance for GI to ensure we deliver better placemaking and place-keeping. This aligns with messages of the planning white paper for beautiful places.

1.4. Introduction to this Guidance and the Essex GI Standards

1.4.1.   The Essex GI Principles and Standards have been developed by planners, policy and decision makers, other practitioners (from both public and third sectors) across Essex and academic experts from University of Northumbria and University of East Anglia. 1.1.1.1.1.1.1.1Annex D provides a summary of how the GI Standards for Essex were developed.

1.4.2.   A summary of the Essex GI Principles and Standards can be found at section 2. Essex Green Infrastructure Standards

Document Contents

1.4.3.   This technical Essex GI standards guidance contains information on each of the nine key Essex GI Principles and Standards. Contents focuses on the technical application of the principles and standards and aspects of the planning process. In addition, this document demonstrates best practice and what good GI looks like for each of the outlined principles and standards.

1.4.4.   Non-technical summary of the Essex GI Standards has also been produced for those without specialist knowledge of the subject area.

1.4.5.   For each principle and standard, this document contains:

- **An Introduction to the Principle and Standard**
- **Guidance specifically for Development Management**, this includes: -
- Why the principle and standard matters,
- How to achieve and/or improve the principle's delivery and,
- Guidance on meeting the principles, including indicators and measures of success.
- **Guidance specifically for Policy**, this includes: -
- Why the principle and standard matters,
- How to achieve and/or improve the principle's delivery and,
- Guidance on meeting the principles, including indicators and measures of success.
- **Additional resources and further guidance,** including: -
- Case Studies and illustrative examples and,
- How to achieve and/or improve the principle's delivery

1.5. Application of the Essex GI Standards

1.5.1. ECC's Green Infrastructure team will apply the Essex GI Principles and Standards to consultations. These standards can be applied to major developments as outlined in the National Planning Policy Framework (NPPF). Conclusions drawn will inform the responses to planning policy and applications consultations. For further information, please see 1.1.1.1.1.1.1.1Annex B that outlines our GI checklist for development.

1.5.2. This approach to green infrastructure design, planning and delivery will be promoted where possible and will be the foundation of comments. It is recommended that the principles and standards are applied as early as possible at the design and feasibility stage of policy development and for strategic documents/plans, developments, or projects.

1.5.3. The additional Building with Nature (BnW) standards should be applied by developers wishing to deliver exceptional sites across the county. The Building with Nature benchmark is underpinned by a set of 12 standards which, taken together, describe high-quality green infrastructure. The standards extend across the range of challenges and opportunities associated with the design, delivery, and maintenance of GI features, particularly in the context of planning and developing sustainable, healthy and liveable places.

1.5.4. ECCs Green Infrastructure team is not a statutory consultee for green infrastructure. Therefore, the weight of the comments provided will be determined by the corresponding district, borough, or city council. The compliance and delivery of GI features will be managed by the planning system.

1.5.5.   For those second-tier authorities who are interested in adopting this guidance as a supplementary planning document, please contact greeninfrastructure@essex.gov.uk for further information and support.

2. ESSEX GREEN INFRASTRUCTURE STANDARDS

2.1.1.   The "Making Better Planning for Better Placemaking" and" Place-Keeping" workshops held October – November 2020 identified the following Essex GI Principles:

	Mainstreaming and integration		Evidence-led		Multifunctional outcomes
	Early collaboration and engagement		Managing different expectations		Health, Wellbeing and Social Equity
	Increased connectivity		Commitment to delivery (via strong policy wording)		Stewardship and maintenance

2.1.2.   These GI principles are the core components needed for delivering better placemaking and place-keeping. These principles were translated into 9 proposed GI standards for Essex as set out in Table 1: The GI Principles and the corresponding GI Standards for Essex The GI Standards defines the outcome that is required to ensure the GI Principles have been achieved.

Table 1: The GI Principles and the corresponding GI Standards for Essex

	GI Principles	GI Standards
1.	Mainstreaming and Integration	The Placemaking and Place-keeping policies in Local Plans recognise GI as a key delivery mechanism. GI

	GI Principles	GI Standards
		functions and associated benefits are recognised and valued in key strategic documents and policies, beyond those with an environmental scope.
2.	Evidence-led	The planning, design and delivery of GI is evidence-led using natural capital and ecosystem service assessments, and GI GIS mapping to ensure appropriate place-based GI interventions are being implemented and enhanced.
3.	Multifunctionality	GI interventions are designed, planned and delivered to enhance multifunctionality and deliver multiple benefits to people and biodiversity in both rural and urban areas.
4.	Early Engagement	There is early collaboration and engagement with all relevant stakeholders, partners and communities to support the delivery of effective and connected GI.
5.	Managing different expectations	Differing views need to be identified early and managed effectively and in a transparent manner to secure both short- and long-term outcomes.
6.	Heath, Wellbeing and Social Equity	GI Is designed to meet different people's needs (including physical and mental health), providing accessibility to GI, green spaces and local amenities, while ensuring GI is inclusive to all. This includes: • Targeting GI interventions to those groups and areas most in need as part of a place-keeping agenda. • Reducing health and wellbeing inequalities between different populations e.g. access to green space and ecosystem service benefits.
7.	Connectivity	GI interventions are designed, planned and delivered and connected across multiple scales; from the wider landscape scale network to more local and neighbourhood scales including green corridors habitat and nature recovery networks to enhance connectivity for people, wildlife and habitats.

	GI Principles	GI Standards
8.	Strong policy wording and commitment	Policy for GI is strongly worded with a commitment to positive action(s) as reflected in statutory plans and industry/local guidance and supported by incentives and clear guidance about what success looks like.
9.	Stewardship	The long-term management and stewardship plans are identified at the early stage with the necessary funding and monitoring components in place.

3. PRINCIPLE 1: MAINSTREAMING AND INTEGRATION

3.1. Standard
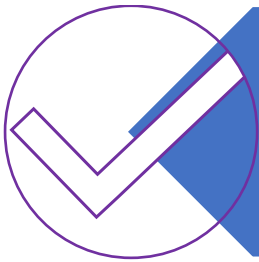
The Placemaking and Place-keeping policies in Local Plans recognise GI as a key delivery mechanism. GI functions and associated benefits are recognised and valued in key strategic documents and policies, beyond those with an environmental scope

3.2. Guidance for Development Management

Why does it matter?

3.2.1.   GI is often pursed in its own environmental silo which results in the submission of planning applications where the delivery of GI is only proposed at singular locations rather than embedded across the whole site.

3.2.2.   GI needs to be embedded throughout development proposals and projects to reflect its contribution as critical infrastructure for social and economic prosperity.

3.2.3.   GI provides an important delivery mechanism for dealing with the climate emergency, post Covid-19 recovery plans, health and wellbeing and biodiversity decline.

3.2.4.   It is important to recognise the role that GI has in both placemaking and place-keeping outcomes. These outcomes usually lie outside the development process, thus making them harder to achieve. Administering the delivery of strategic tools such as Community Infrastructure Levy and Biodiversity Net Gain offer significant potential.

How to Achieve and/or Improve this Principle?

3.2.5.   GI needs to be integral design component at the earliest pre-application and masterplanning stages of development to illustrate a strong commitment to the protection and provision of GI on site.

3.2.6.   Schemes must demonstrate that GI is integral to the distinctiveness of place and designed to protect the local landscape and heritage from the outset.

3.2.7.   A GI audit (or equivalent) needs to be completed to outline and access the existing site GI. Where possible, existing GI is to be incorporated as part of the design. Where the removal of high value GI is unavoidable then suitable location will need to be identified and replaced to equal or enhanced quality.

3.2.8.   GI features, where possible, must be connected to the wider landscape GI network within the site and beyond the site boundary. This will prevent habitat fragmentation and enhance environmental net-gain.

3.2.9.   Another measure of success is the mainstreaming of GI, championing its benefits into several of these strategic documents:

Masterplans	Provide designs for specific spaces within a site.

	They seek multifunctional benefits generated by GI assets. They identify likely management and maintenance costs at the outset and potential design solutions to suit the budget.
Design and Access Statements	A short report accompanying and supporting a planning application. They provide a framework to explain how a proposed development is a suitable response to the site and its setting. It incorporates GI as part of the sites vision. It explains and illustrates the design and phase delivery of GI.
Landscape and ecology strategies and management plans	A management plan details how the protected or otherwise notable species and habitats on site will be protected throughout the construction and operation phases of the proposed development. It will ensure appropriate management and maintenance arrangements and funding mechanisms are put in place to maintain high-quality value and benefits of the GI assets.
Environment Impact Assessment and Environment Statement/ Habitat Regulations Assessment/	An assessment and report of the environmental consequences of a plan, policy, program, or projects. It identifies mitigating measures. It can help identify appropriate measures for avoiding or reducing significant adverse effects on the functionality of existing GI assets however small and can also assist in identifying measures for compensating/off-setting unavoidable significant adverse effects on GI assets to protect the overall integrity of the surrounding GI network.
Strategic Environmental Assessment (SEA) and sustainability appraisal (SA)	SEA is a systematic process for evaluating the environmental implications of a proposed policy, plan or programme and provides means for looking at cumulative effects and appropriately address them at the earliest stage of decision making alongside economic and social considerations. A SA is integral to the preparation and development of a local plan or sustainable development strategy. It helps to identify how sustainable development is being addressed.
Arboriculture Assessment and plans	A tree survey that considers how a proposed development and its associated trees will co-exist and interact in the present and future. It provides recommendations of tree selection as part of wider GI network. It encourages the protection of existing trees and hedgerow as part of the Construction Environment Management Plans. As well as a Schedule of advanced planting to create a landscape structure.

Garden Communities and villages proposals	Aims to provide new housing, infrastructure, jobs and services in sustainable settlements. In its nature GI should be the heart of the proposal and integrated in the vision and throughout every stage of the planning and design.
Health Impact Assessment	It is an assessment used to judge the potential health effects of a policy, programme or project on a population. The assessment will ensure that adequate attention is paid to the role GI plays and accessibility in improving the long-term health of people.

Meeting the Principle

3.2.10. The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

3.2.11. The following checklist will help you with the understanding of how to deliver principle 1 and meet the standard.

- Integration – GI is identified as a key design principle that delivers the priorities of local policies as set out in Local and Neighbourhood Plans, GI strategies and other strategic documents (i.e. health and wellbeing and water management).
- Vision – Multifunctional GI is included as part of the wider vision for the development and is designed in light of meeting local policy, priorities and needs.
- Embedding – Embed commitment to GI principles within the masterplan, development design and across core strategic documents, such as Design and Access Statement, Environment Statement, Landscape and GI Strategy/Parameter Plans, Landscape and Ecology Management Plans and Construction Environment Management Plans. This will protect, enhance and create GI and support arrangements for its long-term management.

Measures of Success

3.2.12. If these statements are true for your planning application/ strategic document /project, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

- GI has been identified as integral to place-making and place-keeping and is part of the design process from the outset.
- GI has been embedded in development proposals outside its usual 'natural environment' focus recognising its value as an economic and social asset.
- The impact on GI has been optimised in the delivery of the development proposal.
- The multifunctionality of GI has been optimised in the delivery of the development proposal.

3.3. Guidance for Policy

Why does it matter?

3.3.1. GI is often pursued in its own environmental silo which limits its impact on other key standards and may lead to disintegrated policy development.

3.3.2. GI priorities and principles need to be embedded into strategic plans, policies and projects reflecting its contribution as critical infrastructure for social and economic prosperity.

3.3.3. GI provides an important delivery mechanism for dealing with the climate emergency, Post-Covid recovery plans, health and wellbeing and biodiversity decline. These serve as contemporary political hooks to create initial traction outside traditional environment policy among a wide range of stakeholders.

3.3.4. It is important to identify other "hooks[5]" that relate to a particular place, site or key audience. Using hooks to deliver GI helps to achieve all the other standards featured in the guide.

3.3.5. It is important to recognise the role that GI has in both placemaking and place-keeping outcomes. These outcomes usually lie outside the development process, thus making them harder to achieve. Here more strategic tools such as Community Infrastructure Levy and Biodiversity Net Gain offer significant potential.

How to Achieve and/or Improve this Principle?

3.3.6. You will need to plan and integrate the GI network with other services and identify the crossover opportunities within their strategic plans and documents. To embed and integrate objectives for GI into a range of local policies, plans, developments and projects, it can be useful for you to develop a simple map of relationships and list of supportive strategic documents as shown in Figure 1: An example of the relationship between GI and strategic documents (Section 1.1). This will assist in.

- Mapping out where a link exists as well as its strengths.
- Identify where you need to make new links
- Defining the specific policy and strategy objectives that may enhance that link

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[5] Hooks may be defined as any policy or legislative term, duty or priority that relate to a GI function or benefit relevant to a particular user audience

3.3.7.	A measure of success is the mainstreaming of GI, championing its benefits into several of these strategic documents:
Local Plans (outside environment chapter)	Sets out the spatial strategy and identify detailed locations of GI. They identify areas where actions can strengthen the GI network and links. They contain policies that support the incorporation of GI in the design of a new place or regeneration of an existing area.
Strategic Development Plans **(outside environmental chapter)**	Addresses important land use issues that cross local authority boundaries or involve strategic infrastructure; local plans; and supplementary guidance. Identify the strategic project areas which can embed the wider concept of GI and networks. They designate and protect strategic routes for active travel.
Supplementary Planning Documents and Guidance	Supports the Local Plan and set out more detailed design principles for place-making and ways GI can be included in the design of a new place. They provide a guide to the delivery of a high-quality, well managed GI network.
Neighbourhood Plans	Identifies planning policy fora neighbourhood area to guide future development. It may contain a vision, aims, planning policies, proposals for improving the area or providing new facilities, or allocation of key sites for specific kinds of development. GI is incorporated from an early stage in both the site selection and policy formation processes as an integral part of the wider planning for the area.
Local Planning Authority's strategy for Green infrastructure, Green and Open Spaces, Play, and Trees and Woodland	Identifies actions that are based on their own open space standards or ANGSTs and meet their accessibility, quality and quantity needs. They identify where existing GI could be enhanced and where there may be opportunities to increase GI through new initiatives It sets clear strategic goals for the delivery of multifunctional GI.
Infrastructure Plans	Identifies the infrastructure requirements including social, physical and GI. The plan sets out what is needed, where it is needed and when it is needed. GI is identified as critical infrastructure. Gaps in GI provision identified, providing a framework for new

	development, and determining how existing assets can be used to better effect.
Highways Plans	It gives details of specific funding, activities and projects that will be delivered over a time period.

The plan to recognise GI as a critical infrastructure to manage a number of challenges such as air pollution, noise, stormwater runoff, habitat fragmentation etc. The public realm as a green corridor, bridge, tunnel or stepping stone to connect to a wider GI network. It sets out measures for replacing trees removed and schedule for street and urban planting, including mowing of verges for the benefit of biodiversity. Identity GI management and maintenance plans and programmes, recognising GI can be designed to reduce costs (i.e. SuDs). |
| Transport and Active Travel Plans

Walking Strategy

Cycling Action Plan and Cycling and Walking Improvement Plans

Rights of Way Improvement Plans | Promotes the use of sustainable and active travel. It will provide a basis on influencing how new communities are developed and inform bids for external funding for a range of active travel measures.

GI has been planned early through a combined approach. Either retrofitting new or enhanced GI to existing active travel routes or adding to new cycle or walking or bridle paths. Greening routes will make the active travel experience more enjoyable and the use of alternative sustainable modes attractive for all users. Grey-green infrastructure integration e.g., at key transport hubs like railway stations (Cycling facilities like hire, repair/ safe storage). |
| Mental Health & Wellbeing Strategy | It outlines the priority areas and how through collaboration services and partners can work together to improve people's health and reduce health inequalities that exist in Essex.

The strategy demonstrates links to the GI Strategies. It identifies and integrates the health and wellbeing benefits from GI to decision making through the delivery and/or promotion of green care. Green Care is a wide range of treatment programmes using the natural environment as a resource to deliver nature-based activities or encourage healthy livening.

Through good GI design is can mitigate noise and air pollution, provide

Extreme heat adaptation to CC via plants, e.g., evapotranspiration à moderating temperature extremes. Connecting people to nature through providing green |

	spaces to relax and enjoy. It also provides more opportunities for an active lifestyle.
Thematic plans e.g. Sport and Recreation Air Quality Action Plan	This includes a number of cross cutting themed action plans and strategies that have explicit linkages in terms of benefits GI can provide. These plans provide a framework and detailed plans outlining actions needed to reach one or more goals/objectives. Gi is recognised as a multifunctional resource that delivers a number of benefits that will contribute to meeting the plans objectives.
Local Nature Recovery Strategy and Biodiversity/ Environment Net Gain	It maps out current biodiversity levels and identify opportunities for enhancement to wider Nature Recovery Networks. It identifies areas where off setting could have the most benefit for biodiversity and to consider what habitat types and ecological features would provide the greatest value in a sustainable way. It integrates nature gain strategies into planning and management of all working and cultural landscapes to ensure that new development enhances the environment, contributes to our ecological networks and conserves our precious landscapes. It needs all planning applications to complete the 'Essex Biodiversity Validation Checklist'. As well as how developments and projects can secure net gains for biodiversity as part of GI provision.
Species Conservation Strategies	Guides the protection, conservation and management of particular species at greatest risk. It encourages better management and creation of GI to strategically identify priority areas that can benefit locally native species, focussing on recognised nature conservation priorities. To protect, enhance and create diverse, species-rich, ecologically functional habitats as part of the GI Network and Nature Recovery Networks that benefit the widest range of species possible. GI is included as part of the surveying, planning and zoning and developing measures to mitigate or compensate for any impact on the species.
Protected Site Strategies	Seek to achieve a similar purpose to the Species Conservation Strategies in respect of protected sites. It provides a more strategic approach to the complex challenge of protecting and restoring species and habitats at risk while enabling much needed development.

	GI is designed and delivered to addresses the requirement to provide suitable avoidance or mitigation measures to manage any potential impacts of growth on protected sites.
Green Belt Policy	Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.
Local Industrial Strategy, and Natural Capital Investment Plan	It sets out a clear framework and evidence base, that allows for the complexity of investments in natural assets (in terms of scale, type and service provision) to be accommodated and managed in a practical way. The Strategy recognises GI as a type of natural capital delivering a range of functions and benefits. This includes GI contribution to economic growth and green job creations, protecting infrastructure and industrial supply chain from climate risks, and providing opportunities for environmental net gain through the planning system. This will increase competitive advantage of a local economy by creating healthy places people want to live, work and visit.

Meeting the Principle

3.3.8.   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

3.3.9.   The following checklist will help you with the understanding of how to deliver principle 1 and meet the standard.

- Integration - Assess where you are now with current policy, objectives and principles for GI. Develop your list of supporting documents. Identify and strengthen and maintain links between GI and local policy, plans, strategy, development and projects.
- Vision - Set out the role GI can play in delivering across the spectrum of policy and other strategic documents.
- Embedding - Embed commitment to GI principles across your policy, strategy and other strategic documents. This will protect, enhance and create GI and support arrangements for its long-term management.
- Performance - Develop arrangements for the monitoring and review of local GI ambitions. This will ensure they remain relevant to the delivery of local policy, strategy and strategic document.

3.3.10.   Use the Green Infrastructure Policy Assessment tool (criteria A-C) (Northumbria University 2019) to assess the mainstreaming outcomes. Ensure that GI is embedded outside the environmental chapter (See Principle 8: Strong Policy Wording and Commitment., GI Planning Policy Assessment Matrix).

Measures of Success

3.3.11.   If these statements are true for your policy/ planning application/ strategic document /project, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

- GI has been identified as integral to place-making and place-keeping and is part of the design process from the outset.
- There is breadth as well as depth of policies – that provide full coverage of a range of GI functions and benefits.

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3.4. Further Guidance and Information

Case Studies/ Illustrative Examples

3.4.1.   Annex A includes a selection of illustrative examples and best practice case studies that illustrate the application of the GI Standards. In regard to mainstreaming and integration, please see:

- South Downs National Park 2014-2033
- Essex Green Infrastructure Strategy
- Essex Design Guide
- Maldon District Design Guide

External Resources

3.4.2.   Perfect Expert Paper 3: What does good green infrastructure policy look like?; 2020:
https://www.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1592825117.pdf

3.4.3.   Green Infrastructure in South Worcestershire: Mainstreaming the Concept; Natural England, 2012 (Chapter 9 pages 87 – 107):
http://publications.naturalengland.org.uk/publication/46011

3.4.4.   The Green Book guidance - embedding natural capital into public policy appraisal; Natural Capital Committee, 2020 Pages 9, 27-28):
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937652/ncc-green-book-advice.pdf

4. PRINCIPLE 2: EVIDENCE-LED.

4.1. Standard
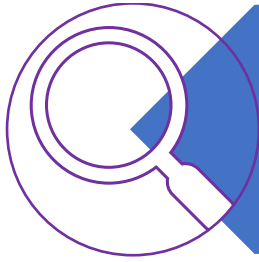
The planning, design and delivery of GI is evidence-led using natural capital and ecosystem service assessments, and GI GIS mapping to ensure appropriate place-based GI interventions are being implemented and enhanced.

4.2. Guidance for Development Management

Why does it matter?

4.2.1. Evidence is essential for understanding the current provision and value of GI for assessing the requirements and priorities of an area.

4.2.2. An evidence-led approach helps make better and more defensible decisions, informing action that has the desired impact.

4.2.3. An evidence-led approach involves using the best evidence available but in a proportionate manner.

4.2.4. Evidence should be recent and reliable data according to industry best practice.

- Evidence-led means the use of the best available data, information and knowledge to help make decisions.
- Evidence is any information that can help shape and inform your activity.
- Evidence can be quantitative (e.g. facts and figures, data, measurements, statistics, targets, monitoring data, information on the economic value of GI, cost: benefit ratios).
- Evidence can be qualitative (e.g. people's survey responses, description of landscape character, drivers or policy needs).
- Ideally evidence should incorporate both quantitative and qualitative data sources.
- It is important to combine evidence from a broad range of sources – reflecting the multifunctional nature of GI.

4.2.5. Good quality, relevant and up to date evidence underpins all standards here.

How to Achieve and/or Improve this Principle?

4.2.6. GI needs to be integral design component at the earliest pre-application and masterplanning stages of development to illustrate a strong commitment to the protection and provision of GI on site. For more information regarding this, please see: Principle 1: Mainstreaming and Integration

4.2.7. A GI audit (or equivalent) needs to be completed to outline and access the existing site GI. Where possible, existing GI is to be incorporated as part of the design with strongly worded commitments for this made. Where the removal of high value GI is unavoidable then suitable location will need to be identified and replaced to equal or enhanced quality.

Again, strongly worded commitments for the mitigation of GI lose are expected.

4.2.8.   Early engagement with stakeholders is expected and will help to identify and bring together evidence and resources available and establish any gaps. A Community GI Needs Assessment can cut across multiple local services. It can help to inform local policy, strategy, design and investment in GI. Doing such an assessment will ensure the capability to deliver specific community needs and aspirations. For example, by providing opportunities for improved health and well-being and access to nature. As part of the assessment, you will need to identify the key issues and drivers, such as health inequalities, climate change etc. Undertake a GI audit to assess what GI is present and its value in terms of the functions and benefits they provide. Identify what resources is currently available and any gaps. Then understand what the community need, if using LPAs accessibility, quality and quantity standards, Accessible Natural Green Space Standard (ANGSts) and/or Urban Greening Factor. As well as through community engagement and consultation (see Principle 4: Early Engagement). You will need to review and consolidate the data gathered. From this develop a community action plan, which prioritise needs and can inform local plans and GI strategies.

4.2.9.   Proposals are expected to be informed by existing data and strategies. For example, the Essex Green Infrastructure Strategy, South Essex Strategic Green and Blue Infrastructure-Study and Green Essex StoryMap, GIS spatial analysis (as shown in Case Study 5). In addition, Some Local Planning Authorities have undertaken green/open space, play, sport and infrastructure assessment/study. An alignment with 'Local and County GI resources and evidence' will enable a coordinated approach to securing multifunctional GI across Essex and meet common priorities.

4.2.10.   A Biodiversity Metric should be used to calculate biodiversity losses and gains for terrestrial and/or intertidal habitats. This evidence-led approach will ensure development proposals result in biodiversity net-gain.

Meeting the Principle

4.2.11.   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

4.2.12.   The following check list provides guidance on taking an evidence-led approach:

4.2.13. Step One: Evidence Planning, Gathering and Analysis

- Identify a plan as a starting point in terms of the results being sought and develop a framework on how the results will be achieved, who by and for what purpose.
- Engage with key stakeholders and experts gathering local knowledge and evidence.
- Undertake an audit of existing GI within the site boundary, identifying existing GI assets, areas for improvement and opportunities to meet gaps in provision in response to local need, that contributes to a wider GI landscape network.
  - A baseline of existing GI assets through either Local Planning Authorities own data or Green Essex StoryMap or Natural England's national GI mapping to provide a consistent local/ national baseline.
  - A desktop scoping exercise using key search terms in academic databases and by following citations. Search terms related to GI (e.g. greenspace, Water (blue infrastructure), parks, biodiversity, street trees, woodlands), and associate benefits (e.g. health and wellbeing etc.). To provide further evidence to the value of GI in terms of the current functions and benefits those assets are delivering (ecosystem service – economic, social and environment).
- Ensuring careful interpretation of the evidence is taken (e.g. as to what findings really mean/show) and adequate attention is taken to applying it in practice.
- You may need to do further community engagement and consultation to engage in stakeholder knowledge and to assess community needs for GI.

4.2.14. Step two – Landscape/ GI Parameter Plan;

- Broadly indicating location, quantum, multifunctionality, and connectivity of GI features within the development.
- How new GI features have been designed in response to existing features delivering multifunctionality, within the development and in the wider area;
- How existing green infrastructure features that characterise the local environment are retained and protected, in particular where this includes irreplaceable natural habitat, such as ancient woodland;
- The development demonstrates: a clear commitment to deliver GI across different phases of construction and an indication of the preferred options for management and maintenance is secured through conditions attached to the development form part of the determination of outline planning permission.

4.2.15. Stage Three – Full Planning Application

- As above, existing and new GI that respond to local or national policy and how these have been retained and protected, or enhanced to deliver wider environmental net gain;
- GI Plan/ Landscape and Ecology Management Plan or equivalent detailing an options appraisal of the preferred work schedule,

maintenance activities/frequencies and responsibilities for a minimum of 10 years and funding mechanism for long-term management of GI.
- Documentation provided relating to GI conditioned as part of the determination at outline, such as Gi Strategy, Landscape and Ecology Management Plan, Construction Environment Management Plans.

4.2.16.   Stage Four – Reserved Matters

- As above, plus any documentation conditioned as part of the approval.
- If quantum, location, functionality and connectivity of GI has changed from Outline and/or Full application stages this will need to be justified.
- Any further documentation relating to securing the long-term management and maintenance, and monitoring and remediation, of GI.

Measures of Success

4.2.17.   If these statements are true for your planning application, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

- Development proposals demonstrate an evidence-led approach, through the provision of a proportional, relevant, up to date and accessible evidence base. This can take the form of an assessment of existing GI assets, GI Parameter maps, Relevant surveys of public preferences and priorities can be used as part of the evidence base.
- Biodiversity net gain calculation should capture both quality and quantity metrics.
- Environment Impact Assessment, Scoping Opinion and Environment Statement identify appropriate measures for avoiding or reducing significant adverse effects on the functionality of existing GI assets however small and also assist in identifying measures for compensating/off-setting unavoidable significant adverse effects on GI assets to protect the overall integrity of the surrounding GI network (including the number of designated sites in neighbouring area).

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4.3. Guidance for Policy

Why does it matter?

4.3.1. The NPPF, Paragraph 31 requires that "The preparation and review of all policies should be underpinned by relevant and up-to-date evidence…"

4.3.2. Evidence is essential for understanding the current provision and value of GI for assessing the requirements and priorities of an area.

4.3.3. An evidence-led approach helps make better and more defensible decisions, informing action that has the desired impact.

4.3.4. An evidence-led approach involves using the best evidence available but in a proportionate manner.

4.3.5. An evidence-led approach avoids policy on presumption or anecdotes, assumptions and personal experience or other sources that are not robust.

4.3.6. Evidence should be recent and reliable data according to industry best practice.

- Evidence-led means the use of the best available data, information and knowledge to help make decisions.
- Evidence is any information that can help shape and inform your activity.
- Evidence can be quantitative (e.g. facts and figures, data, measurements, statistics, targets, monitoring data, information on the economic value of GI, cost: benefit ratios).
- Evidence can be qualitative (e.g. people's survey responses, description of landscape character, drivers or policy needs).
- Ideally evidence should incorporate both quantitative and qualitative data sources.
- It is important to combine evidence from a broad range of sources – reflecting the multifunctional nature of GI.

4.3.7. Good quality, relevant and up to date evidence underpins all standards here.

How to Achieve and/or Improve this Principle?

4.3.8. Evidence is required to inform all statutory and non-statutory plans, policies, projects and programmes. It is recommended that you prioritise evidence gathering requirements and undertake an evidence audit and gap analyses to inform an action plan for evidence gathering. Evidence

must be proportional, however. In some case, there may be a need for you to take a strategic approach and commission new evidence, to address any evidence gaps as sometimes the assessment of the "best available evidence" can result in the conclusion that there is not enough evidence to make a good decision. For example, the cost for GI long term maintenance.

4.3.9.   There is an opportunity to pool resources, such as data, staff time etc and available tools and strategies. For example, the Essex Green Infrastructure Strategy, South Essex Strategic Green and Blue Infrastructure-Study and Green Essex StoryMap, GIS spatial analysis (Please see 1.1.1.1.1.1.1.1Annex A, Green Essex StoryMap for more details). Some Local Planning Authorities have undertaken green/open space, play, sport and infrastructure assessment/study. An alignment with 'Local and County GI resources and evidence' will enable a coordinated approach to securing multifunctional GI across Essex and meet common priorities. Through early engagement with stakeholders will help to identify and bring together evidence and resources available and establish any gaps (see, Principle 4: Early Engagement.).

4.3.10.   A Community GI Needs Assessment can cut across multiple local services. It can help to inform local policy, strategy, design and investment in GI. Doing such an assessment will ensure the capability to deliver specific community needs and aspirations. For example, by providing opportunities for improved health and well-being and access to nature. As part of the assessment, you will need to identify the key issues and drivers, such as health inequalities, climate change etc. Undertake a GI audit to assess what GI is present and its value in terms of the functions and benefits they provide. Identify what resources is currently available and any gaps. Then understand what the community need, if using LPAs accessibility, quality and quantity standards, Accessible Natural Green Space Standard (ANGSts) and/or Urban Greening Factor. As well as through community engagement and consultation (see Principle 4: Early Engagement). You will need to review and consolidate the data gathered. From this develop a community action plan, which prioritise needs and can inform local plans and GI strategies.

4.3.11.   The North West region developed 5 steps to delivering a GI strategy in 2008. These steps include:

- Form a GI partnership (pre-cursor to good and comprehensive evidence gathering).
- GI Audit – knowing what assets you got and what information you have about the assets & where you need to close gaps before you can proceed.

- Functionality assessment – what benefits do the assets provide? (including spatial analysis).
- Needs assessment - what are the policy needs? What are the community needs? (including spatial analysis).
- Action/ implementation/ Intervention Plan (directly or via policy setting).

Meeting the Principle

4.3.12. The indicators below provide examples of what you can do to meet this principle and describe what delivering well against this principle looks like.

Indicators

4.3.13. The following check list provides guidance on taking an evidence-led approach:

4.3.14. Step One: Evidence Planning

- Identify a clear goal and objectives as a critical starting point in terms of the results being sought and develop a framework on how the results will be achieved, who by and for what purpose.
- Think about what form(s) of evidence will be most persuasive tailored to your audiences.
- Explore partnerships with key stakeholders identifying who has the skills and knowledge and evidence already as well as who can support new evidence activities.
- Make time for exploratory (or inductive) research and review what's been done before, building on earlier work, rather than starting from scratch.

4.3.15. Step 2: Evidence Gathering

- Undertake an evidence needs assessment - You can use data and analysis to develop a spatial plan of where you need to improve local GI provision – opportunity mapping and help you to inform your strategic GI network. This will include the following:
  - Create a baseline of existing GI assets through either your own or Green Essex StoryMap or Natural England's national GI mapping to provide a consistent local/ national baseline.
  - Using organisational data available.
  - Undertake a desktop scoping exercise using key search terms in academic databases and by following citations. Search terms related to GI (e.g. greenspace, Water (blue infrastructure), parks, biodiversity, street trees, woodlands), and associate benefits (e.g. health and wellbeing etc.).

- To provide further evidence to the value of GI in terms of the current functions and benefits those assets are delivering (ecosystem service – economic, social and environment).
- You will need to select benchmarks and standards- Such as [Accessible Natural Green Space Standards](#), [Urban Greening Factors](#) and [Building with Nature](#).
- You can use these to assess community needs for GI and monitor the supply of functions. Select those that are most relevant to your local area.
- You may need to do further community engagement and consultation to engage in stakeholder knowledge.
- The priorities and needs of communities (demand, i.e. health, climate change adaptation, recreation, aesthetic).

4.3.16.   Step three – Analysis data and prioritise

- You will need to review and consolidate the data gathered
- Ensuring careful interpretation of the evidence is taken (e.g. as to what findings really mean/show) and adequate attention is taken to applying it in practice.
- By appraising by critically judging the trustworthiness and relevance of the evidence.
- Cross checking with stakeholders for agreement.
- Develop a community action plan, which prioritise needs.
- This will help to inform local plans and GI strategies.
- Develop plans that conserve assets currently providing important benefits.
- Enhance those assets so that they deliver more functions and benefits.
- Create new assets in areas of identified deficiency.
- The evidence from this assessment will help you to inform your strategic GI network.

4.3.17.   Step four - Monitoring and evaluation

- Monitoring and evaluation of the evidence to check it is up to date. The need for up to date may vary depending on the type of data. For instance, community needs may change more quickly, so need updating. As communities and their environments are dynamic and change over time. Although GI will also need to develop with the community over time to ensure it continues to provide for their needs - the existing GI network is likely to change relatively slowly.

Measures of Success

4.3.18.　If these statements are true for your policy/ planning application/ strategic document /project, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

- Statutory plans, planning policy, industry/local guidance, development proposals and projects demonstrate an evidence-led approach, through the provision of a proportional, relevant, up to date and accessible evidence base. This can take the form of need, demand and supply assessments such as an assessment of existing GI assets, maps, community needs assessment action plan and diagrams that identify opportunities to protect and enhance existing, and create new GI assets, that deliver multiple functions and benefits.
- Relevant surveys of public preferences and priorities can be used as part of the evidence base.
- Natural capital assessments should capture both quality and quantity metrics.
- A monitoring and evaluation process is in place to review and update evidence.

4.4. Further Guidance and Information

Case Study Examples

4.4.1.   1.1.1.1.1.1.1.1Annex A includes a selection of illustrative examples and best practice case studies that illustrate the application of the GI Standards. In regards to evidence-led, please see:

- Green Essex StoryMap

External Resources

4.4.2.   North West Green Infrastructure Guide; North West Green Infrastructure Think Tank, 2008:
http://www.greeninfrastructurenw.co.uk/resources/GIguide.pdf

4.4.3.   National Character Area Profiles, 2014 (East of England, 81, 82[AONB], 86 & 111): https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles

4.4.4.   For further links to useful resources of evidence on the benefits of GI or tools to get statistics, opportunity mapping etc see Appendix 3 :Additional Resources.

5. PRINCIPLE 3: MULTIFUNCTIONALITY.

5.1. Standard
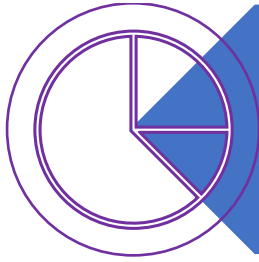
GI interventions are designed, planned and delivered to enhance multifunctionality and deliver multiple benefits to people and biodiversity in both rural and urban areas.

5.2. Guidance for Development Management

Why does it matter?

5.2.1. All too often plans, and projects are designed and delivered to address one problem identified within in its own silo whereas there may be considerable scope to design solutions that deliver multiple benefits. The multifunctionality of GI is an important asset here to help identify multiple benefits to solve different challenges.

5.2.2. A healthy environment is a living network that provides multiple functions delivering multiple benefits to people such as health and wellbeing, cleaner air, active travel, and local food production.

5.2.3. Interactions between functions serve the requirements of local economics, the environment and wider society.

5.2.4. Most grey infrastructure has a single function which limits the benefits that can occur.

5.2.5. A well-planned and managed GI can help Essex meet and respond to these challenges, e.g. in the context of a "Green Recovery" in response to the 2020 pandemic.

How to Achieve and/or Improve this Principle?

5.2.6. You will need to outline a commitment to the delivery of multifunctional GI in development proposals and projects. Here the identification of relevant hooks is important within/outside the usual environmental domains as detailed below: -

5.2.7. **Enhancing biodiversity/environmental net gains** - Biodiverse environments are the foundation for the flow of other benefits. Mandatory Biodiversity Net Gain will be implemented through the planning system (i.e. Development management procedures in accordance with Local Plan policy) with a consistent approach for developers to follow which makes it a key policy hook. Furthermore, there is a role for local planning authorities/developers concerning strategic planning and development management to capture wider environmental gains. Both biodiversity and environment net gain deliver multiple benefits that impact on economic and social health and wellbeing.

5.2.8. **Creating place identity and character** – Good planning requires creating a strong place identity for an area. GI forms a critical component of this jigsaw. There is a need to recognise the role planning and the public realm (i.e. highways) has in the protection and improvement of GI to enhance the character, quality and create a sense

of place. It gives people a role in public space, enhancing a sense of ownership and pride.

5.2.9. **Providing recreation for all ages and abilities** - GI provision should improve equity allowing all residents access to quality green space. Often it is economically disadvantaged communities that have poorer health and educational outcomes. These communities also have the lowest levels of access to nature. Some areas may not always be well served due to settlement evolution and the presence of barriers to access, such as roads and people's perception of accessibility and its inclusivity. More detail on this under Principle 6: Health, Wellbeing And Social Equity.

5.2.10. **Improving Health and wellbeing** - Access to nature-rich environments and green space has a positive impact on health and wellbeing. Access to good quality parks and green spaces at all scales is important. It ensures that most people can experience nature and lead more active and healthy lives. GI can help tackle the obesity and inactivity crisis and thereby preventing many illnesses including cancer, heart attacks and strokes (these are the 3 biggest killers in the UK). More detail on this under Principle 6: Health, Wellbeing And Social Equity.

5.2.11. **Natural flood and water management and sustainable drainage integrated as part of green space, highways and other provision** - Flooding remains one of the most frequent natural hazards in Essex and is predicted to experience an increase in flooding, extreme weather events and summer droughts through climate change. GI provides significant opportunities to deliver space for water and natural options for flood alleviation and water management.

5.2.12. **Climate change adaptation and mitigation** - As the climate changes, the UK needs to plan for more extreme weather events. Practitioners should design, implement and manage GI to provide natural solutions to climate challenges. Here nature recovery networks and improved connectivity become key to help wildlife move and adapt. They will also reduce carbon emissions helping to meet net-zero carbon targets. GI also reduces urban heat by cooling the air.

5.2.13. **Improving Air Quality** - GI also cleans the air we breathe by filtering particulates. Planting of GI to create attractive environments that will incentivise active travel, such as walking, cycling and horse riding. Use GI to create vegetation barriers that reduce the public's exposure to what is emitted. Avoid putting barriers in the wrong places – adopting the 'Right Tree, Right Place' philosophy.

5.2.14. Increasing economic activity (including agricultural)/ educational/volunteering opportunities - GI can support regeneration and add value to economic activity.

5.2.15. **Commercial and Industry** – High-quality environments with natural green spaces are attractive to people. They attract investment and support businesses. GI is an investment in an area's natural capital. This generates multiple services, benefits and returns on investment.

5.2.16. **Education** - GI provides learning opportunities as an 'outdoor classroom' relevant to both the National Curriculum and lifelong learning (e.g. forest schools and Continuing Professional Development). It is a valuable educational resource and has the potential to improve educational achievement, through improved concentration and self-esteem.

5.2.17. **Promoting both direct and recreational active travel routes** - Essex GI network can be used as a viable and sustainable transport option. In support of Health and Wellbeing, and the transport authority's promotion of active travel through walking, cycling, horse riding and other physical activity. Greening routes can be creatively designed to be accessible for all through the delivery of multi-user routes, to encourage leisure use, as well as providing commuting routes to work and school.

5.2.18. **Providing local access to food production opportunities (i.e. orchards and allotments)** – There is a growing concern around food security and access to orchards and allotments can be utilised for food production, whilst providing several therapeutic benefits.

Meeting the Principle

5.2.19. The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

5.2.20. The following check list provides guidance on what GI Benefits will need to be considered to deliver all or some of the outcomes listed above in section 5.2.7-5.2.18:

5.2.21. Understand the local role that GI can play in meeting the outcomes listed above.

5.2.22. Biodiversity/environmental net gains -

- Integrate GI planning with nature recovery for biodiversity. For example, make connections between GI Strategies and Local Nature Recovery Strategies; (e.g. wildlife corridors and green corridors for human recreation).

- Check links between GI and Biodiversity Net Gain (BNG). Incorporating GI into development can help to deliver wider Environmental Net Gain. BNG contributions could also help to finance investment in both on and offsite GI and the enhancement of existing GI (such as parks and greenspace).
- The design and implementation of GI should achieve a measurable increase in biodiversity. That means, achieving a Biodiversity Net Gain through the creation, enhancement and connectivity of new and existing habitats. A local nature recovery strategy should inform GI planning and delivery. It will set out principles for restoring and enhancing biodiverse and well-functioning ecological networks designed to deliver multiple benefits based on identified need.
- Essex already requires all planning applications to Essex County Council to complete the 'Essex Biodiversity Validation Checklist' . This checklist also offers guidance on how to submit the appropriate level of information about biodiversity, and further evidence that may be required, when making a planning application.

5.2.23.   Place identity and character –

- Promote the improvement of the public realm through GI to contribute to the reduction of pollutions and improve character and sense of place.
- Ensure that lost or degraded environmental features are compensated for by restoring or creating environmental features that are of greater value to wildlife and people.
- Explore opportunities to greening town centres.

5.2.24.   Recreation for all ages and abilities –

- See [Principle 6 Health, Wellbeing and Social Equity Section 8.2](#) for more details

5.2.25.   Health and wellbeing -

- See [Principle 6 Health, Wellbeing and Social Equity Section 8.2](#) for more details

5.2.26.   Natural flood and water management and sustainable drainage integrated as part of green space, highways, and other provision –

- Promote the use of nature-based solutions as a hierarchy priority. Including consideration of:
  - Vegetated sustainable drainage systems.
  - Natural flood management at a catchment scale, including watercourses and coastal areas.

- All development proposal should incorporate SuDS and natural flood management.
- Development should include biodiversity and open space provision, which will enhance biodiversity and provide aesthetic and amenity value, and safe public access. These designs should draw on national and local best practice guidance and must comply with requirements set out in the Essex SuDS Guide and national policy.

5.2.27. Climate change adaptation and mitigation (Inc. Air quality) -

- Create a strong link to carbon reduction and nature-based solutions. This will support climate change adaptation and mitigation, including consideration of:
  - Management techniques. This should demonstrate multifunctional GI solutions to flood and water management.
  - Tree planting, street trees, green roofs and other permeable vegetated surfaces; Use of tree pits and cells in hard surface areas to combine SuDs and secure the trees survival/
  - Interventions that support carbon storage, cooling effect and improved air quality such as tree planting.
  - Interventions that support carbon reduction such as active travel routes (for walking, cycling and horse-riding), or renewable energy generation (e.g. ground-source heat pumps, renewables or bioenergy). An example of a project that provides a dashboard to identify greenspace sites across Scotland according to their potential suitability for a range of green energy generation technologies is Greenspace Scotland ParkPower.

5.2.28. Economic activity (including agricultural)/ educational/volunteering opportunities -

- Consider how GI can contribute to regeneration and supporting a green economy.
- Developments to enhance educational premises for environmental education and biodiversity or open links to green spaces to provide access for existing schools.
- Promote environmental education for encouraging hands-on stewardship or restoration of GI, as well as provide opportunities for programmes such as Forest Schools and further education courses.
- Explore opportunities to work with the agricultural community to delivery GI benefits in their sustainable land management practices.

5.2.29. Promoting both direct and recreational active travel routes –

- GI must be designed into spaces to ensure that it is consistent with active design principles and good natural surveillance to promote community safety.
- Sustain and improve existing Greenways, Public Rights of Way and Highways GI network, working in collaboration with partners and engaging and involving Parish Councils and communities.
- New development will use appropriate GI design and its multi-functions that will enhance the quality, ease of accessibility, inclusivity and connectivity to green spaces, local amenities and across the development that is accessible to all
- To ensure connection to exiting and/or creation on new direct and recreational routes are accessible to all vulnerable road users, including equestrians.

5.2.30. Enhanced landscape character and design –

- Ensure that individual features (e.g. SuDs, Bird Boxes, trees etc.) contribute to a multifunctional network of GI operating at a landscape-scale.
- GI designed to reflect the local environment and positively contributes to local identity and landscape character.
- Strategic elements of the GI framework are brought forward in phase one of a development to create a landscape structure.

5.2.31. Minimising environmental impacts (i.e. Soil quality and Nutrient Cycles) –

- Assess opportunities for woodland creation and vegetation planting to help manage sediment and diffuse phosphate pollution by identifying the main sources and pathways of delivery to watercourses.
- Ensure GI is considered in the Environmental Impact Assessments.
- GI is designed and implemented to meet current good practice relating to environmental impacts through the consideration of the selection of species (e.g. trees) and planting design to address air quality, soil erosion, noise and light pollution.

5.2.32. Local access to food production opportunities (i.e. orchards and allotments) -

- Opportunities for food production needs to be considered as part of the green/open space provision that is delivered through a range of publicly accessible features, such as allotments, community orchards, community gardens, in addition to the provision of private gardens.
- Identify suitable areas for food cultivation, that provide access to all.

Measures of Success

5.2.33.   If these statements are true for your planning application, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

- Development proposals demonstrate multifunctional GI solutions to key planning challenges and good multifunctional GI design to that deliver multiple GI benefits .
- Delivery of the development comprises of a range of multifunctional features from the indicators above, while smaller developments to comprise of a minimum of single GI multifunctional element that contributes to a wider GI network. For example (not exhaustive):
    - All development proposals incorporate SuDS and natural flood management techniques that demonstrate multifunctional GI solutions to flood management. This includes biodiversity and open space provision, which will enhance biodiversity, natural capital and provide aesthetic and amenity value, and safe public access.
    - Street trees provide shade for buildings and people, flood and water management and stepping stone/ green corridor for wildlife.
    - Play areas to provide natural play for health and wellbeing, learning, biodiversity enhancement and flood and water management.
- The development has delivered environmental and/ or biodiversity net gain contributing to local environmental targets and has made provision for on-going monitoring to identify and remediation mitigation measures where it has been unsuccessful in achieving defined biodiversity targets and landscape-scale conservation priorities.

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5.3. Guidance for Policy

Why does it matter?

5.3.1.   In Local Plan site allocations, GI is often considered in silo to both other required infrastructure and the wider landscape and GI network in the side and beyond the boundary. However, there may be considerable scope to design solutions that deliver multiple benefits. The multifunctionality of GI is an important asset here to help identify multiple benefits to solve different challenges.

5.3.2.   National Planning Policy Framework (NPPF) Para 169. Major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The systems used should: a) take account of advice from the lead local flood authority; b) have appropriate proposed minimum operational standards; c) have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development; and d) where possible, provide multifunctional benefits.

5.3.3.   NPPF paragraph 130 ensures that developments both visually attractive as a result of good architecture, layout and appropriate landscaping and are sympathetic to the surrounding landscape character.

5.3.4.   A healthy environment is a living network that provides multiple functions delivering multiple benefits to people such as health and wellbeing, cleaner air, active travel and local food production.

5.3.5.   Interactions between functions serve the requirements of local economics, the environment and wider society.

5.3.6.   Most grey infrastructure has a single function which limits the benefits that can occur.

5.3.7.   A well-planned and managed GI can help Essex meet and respond to these challenges, e.g. in the context of a "Green Recovery" in response to the 2020 pandemic.

How to Achieve and/or Improve this Principle?

5.3.8.   You will need to outline a commitment to the delivery of multifunctional GI in Statutory plans, planning policy, industry/local guidance, development proposals and projects. Here the identification of relevant hooks is important within/outside the usual environmental domains as detailed below:

5.3.9.   GI is expected to be referenced and referred to across the whole of the policy documents rather than separated into a single section or chapter. A GI thread should run through the whole document.

5.3.10.   **Enhancing biodiversity/environmental net gains** - Mandatory Biodiversity Net Gain will be implemented through the planning system (i.e. Development management procedures in accordance with Local Plan policy). In that policies require the protection of key habitats and the delivery of GI to connect habitats, and deliver biodiversity and wider environmental net gains. Both biodiversity and environment net gain deliver multiple benefits that impact on economic and social health and wellbeing.

5.3.11.   **Creating place identify and character** – GI forms a critical component for creating a strong place identity for an area. Policies will need to ensure that the GI reflects the character of the local environment and positively contributes to local identity, landscape character, and creates a sense of place. . It gives people a role in public space, enhancing a sense of ownership and pride.

5.3.12.   **Providing recreation for all ages and abilities -** GI provision should improve equity allowing all residents access to quality green space. Policies can ensure that GI is designed to be accessible and inclusive to all ages and abilities through recognising the needs and strengths of local people, and how these may change over time. More detail on this under Principle 6: Health, Wellbeing And Social Equity.

5.3.13.   **Improving Health and Wellbeing -** Access to nature-rich environments and green space has a positive impact on health and wellbeing. GI can help address health in equalities in existing and new communities through the right design and location. The inclusion of GI within health and wellbeing policies can contribute to reducing and/or preventing such health inequalities. More detail on this under Principle 6 Health, Wellbeing and Social Equity.

5.3.14.   **Natural flood and water management and sustainable drainage integrated as part of green space, highways and other provision** - GI provides significant opportunities to deliver space for water and natural based solution for flood alleviation and water management. GI and/or Flood and Water Management/SuDs polices need to identify that GI positively contributes to surface water management and water quality. As well as delivery multiple benefits for people and wildlife.

5.3.15.   **Climate change adaptation and mitigation** – Majority of the Essex LPAs have declared climate emergency or climate action and have made a commitment to meet government targets. A move to net-zero. Policies will need to strengthen their position to meet these targets.

Through the delivery of good design, implementation and management of GI to provide natural solutions to climate challenges. Ensuring policies link to biodiversity net gain and Local Nature Recovery Strategy for Essex.

5.3.16.   **Improving Air Quality -** GI also cleans the air we breathe by filtering particulates. Planting of GI in the right location (i.e., 'Right Tree, Right Place' philosophy) to create attractive environments that will incentivise active travel, such as walking, cycling and horse riding. Therefore, policies will require new development and regeneration to incorporate GI that minimise environmental impacts and contribute to improved environmental quality.

5.3.17.   **Increasing economic activity (including agricultural)/ educational/volunteering opportunities** – Economic and/or educational policies to recognise the GI can support regeneration and add value to economic activity. As well as improved educational standards for Essex. GI delivers high- quality environments that will attract investment and support businesses in and too Essex. Policies will need to take into account the Agricultural Act and Environment Land Management Schemes with a move towards more Sustainable Land Management.

5.3.18.   **Promoting both direct and recreational active travel routes** - The Essex GI network through its Public Rights of Way, multi-user routes, cycle, river, tow and bridle paths can encourage more active lifestyles and provide attractive travel routes. These travel routes are integral provision for GI as green routes and corridors for people and wildlife. The policies for transport/active travel, health, environment and GI can ensure that developments create green routes that are accessible to all across and from the new development to existing settlements, urban centres, schools, transport interchanges and green spaces to encourage active lifestyles.

5.3.19.   **Providing local access to food production opportunities (i.e. orchards and allotments)** - The impact from climate change has led to growing concerns for our food security. The opportunities for food production are provided through a range of GI including allotments, community orchards, community gardens, city/school farms, and our agriculture land through the Environmental Land Management schemes. Policy can secure areas suitable for food production through the delivery and design of multifunctional GI. Whilst ensuring the GI provision for food production also provides for a wide range of other activities, including but not limited to, outdoor sports and natural play, spaces for

community and cultural events, and areas for tranquillity and quiet contemplation.

Meeting the Principle

5.3.20. The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

5.3.21. The following check list provides guidance on what GI Benefits will need to be considered as part of policy to ensure these policies deliver all or some of the outcomes listed above in paragraphs 5.3:10 – 5.3.19

5.3.22. Understand the role local policy can play in securing the delivery of GI to meet the outcomes listed above.

5.3.23. Biodiversity/environmental net gains -

- Policy includes reference to local biodiversity targets. Where these do not exist, reference is made to national targets.
- Policy requires developments to provide biodiversity net gain and wider environmental net gain. The design and implementation of GI should achieve a measurable increase in biodiversity. That means, achieving a Biodiversity Net Gain through the creation, enhancement and connectivity of new and existing habitats.

- Policy requires the protection of existing key habitat areas, and where this is not possible, requires restoration, creation, connectivity to or enhancement of more integrated, large scale areas for wildlife through biodiversity credits. BNG contributions can also help to finance investment in both on and offsite GI and the enhancement of existing GI (such as parks and greenspace).

- Policy to endorse and adhere to the local nature recovery strategy that will inform GI planning and delivery. It will set out principles for restoring and enhancing biodiverse and well-functioning ecological networks designed to deliver multiple benefits based on identified need.

- Essex already requires all planning applications to Essex County Council to complete the 'Essex Biodiversity Validation Checklist' . This checklist also offers guidance on how to submit the appropriate level of information about biodiversity, and further evidence that may be required, when making a planning application. Where developments do not require to provide

biodiversity net gain calculations policy can request the completion of the 'Essex Biodiversity Validation Checklist'.

5.3.24. Place identity and character –

- Policy to ensure that GI positively contributes to local character.

- Polices promote the improvement of the public realm through GI (such as street trees) to contribute to the reduction of pollutions and improve character and sense of place.

- Policies to ensure that lost or degraded environmental features are compensated for by restoring or creating environmental features that are of greater value to wildlife and people.

- Polices for the regeneration of town centres endorse GI as an opportunity to greening our town centres.

5.3.25. Recreation for all ages and abilities –

- See principle 6 Health, Wellbeing and Social Equity paragraphs 8.5.18-8.5.23 for more details

5.3.26. Health and wellbeing -

- See principle 6 Health, Wellbeing and Social Equity paragraphs 8.5.18-8.5.23 for more details

5.3.27. Natural flood and water management and sustainable drainage integrated as part of green space, highways and other provision –

- Policy to secure the use of nature-based solutions as a hierarchy priority for flood and water management. Including consideration for:

  - Soft landscaped sustainable drainage systems.

  - Natural flood management at a catchment scale, including watercourses and coastal areas.

  - All development proposal should incorporate SuDS and natural flood management.

  - Development should include biodiversity, open space provision and SuDs, which will enhance biodiversity and provide aesthetic and amenity value, and safe public access. These designs should draw on national and local best practice guidance and must comply with

requirements set out in the Essex SuDS Guide and national policy.

- Policy requires optimisation of water storage through inclusion of and/or retaining existing GI in as many locations across the development as possible, whilst creating stepping stones and improving connectivity as part of wider GI network.

- Policy to promote SuDs to been designed through multifunctional GI to contribute positively to additional functions and benefits relating to amenity and biodiversity.

5.3.28.   Climate change adaptation and mitigation (Inc. Air quality) -

- Policy to require that GI is designed through the use of nature-based solutions to minimises the development's environmental impact with respect to climate change (i.e., carbon emissions and storage, thermal comfort, light, noise, flood and water management; and enhances the quality of air, soil and water). Including the resilience of existing GI.

- Policy to endorse tree planting and tree lined streets (in line with NPPF), green roofs and other permeable vegetated surfaces; Use of tree pits and cells in hard surface areas to combine SuDs and secure the trees survival.

- Policy to support the inclusion of GI interventions for carbon reduction such as active travel multi user routes (for walking, cycling and horse-riding), or renewable energy generation (e.g. ground-source heat pumps, bio-renewables or bioenergy).

5.3.29.   Economic activity (including agricultural)/ educational/volunteering opportunities

- Policy will need to consider how GI can contribute to regeneration and supporting a green economy, through ensuring that:

  o Developments enhance educational premises for environmental education and biodiversity or open links to green spaces to provide access for existing schools.

  o Provision for exploring opportunities to developing green skills and job opportunities.

- o Explore opportunities from Environmental Land Management Schemes working with the agricultural community to delivery GI benefits in their sustainable land management practices.

5.3.30. Promoting both direct and recreational active travel routes –

- Policy applies local standards or the ANGSt for the provision and distance between accessible GI by means of active travel (e.g. walking, cycling and horse riding).
- Policy ensures that GI is designed into spaces that is consistent with active design principles and provide good natural surveillance to promote community safety.
- Policy requires connectivity to existing and new green routes (greenways), Public Rights of Way and highways GI network between features (i.e. green spaces, local amenities and across the development), to enhance ease of access for all, inclusivity and provide attractive active multi- user travel routes (for walking, cycling and horse riding).

5.3.31. Enhanced landscape character and design –

- Policy requires GI to be designed to reflect the local environment and positively contributes to local identity and landscape character.

- Policies demonstrating a clear commitment for all new development to contribute to protecting and enhancing existing local landscape character that positively adds to place distinctiveness; and ensuring that individual features (e.g. SuDs, Bird Boxes, trees etc.) contribute to a multifunctional network of GI operating at a landscape-scale.

5.3.32. Minimising environmental impacts (i.e. Soil quality and Nutrient Cycles) –

- Policy requires new development to incorporate GI to minimise environmental impacts and contribute to environmental quality, by meeting current good practice relating to environmental impacts through the consideration of the selection of species (e.g. trees) and planting design to address air quality, soil erosion, noise and light pollution.

5.3.33. Local access to food production opportunities (i.e. orchards and allotments) –

- Policy to encourage a range GI to meet different user needs, accessibilities and strengths; including the opportunities for food production as part of the green/open space provision that is delivered through a range of publicly accessible features, such as allotments, community orchards, community gardens, in addition to the provision of private gardens.

Measures of Success

5.3.34.   If these statements are true for your policy/ planning application/ strategic document /project, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

- Statutory plans, planning policy and industry/local guidance demonstrate multifunction GI solutions to key planning challenges.
- Plans, policies and guidance champion good multifunctional GI design to that deliver multiple GI benefits.
  - All development proposal incorporates SuDS and natural flood management techniques that demonstrate multifunctional GI solutions to flood management. This includes biodiversity and open space provision, which will enhance biodiversity, natural capital and provide aesthetic and amenity value, and safe public access.
  - Connecting GI design with other strategies and masterplans proposal such as surface water management strategies, landscape, utilities and habitat networks to coordinate delivery and implementation.

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5.4. Further Guidance and Information

Case Studies and Illustrative Examples

5.4.1.   Annex A includes a selection of illustrative examples and best practice case studies that illustrate the application of the GI Standards. In regard to multifunctionality, please see:

- Forth Valley Royal Hospital & Larbert Woods, Scotland
- Rain Garden Retrofitted as Basildon Hospital, Essex

External Resources

5.4.2.   Essex Sustainable Drainage Systems Design Guide; Essex County Council, 2020 (Pages 5,6,25,28 (section 2.16 GI & Biodiversity), 37-38): https://www.essexdesignguide.co.uk/media/2404/suds_design_guide_2020.pdf

5.4.3.   Achieving locally contextualised biodiversity-led multifunctional urban green infrastructure; TURAS project, 2016 https://repository.uel.ac.uk/download/822a447b7dc9afdcecd991ac7c8d3e5617a5e44c3980d8830cfac3a26ae3d0a3/4913075/BR_ecomimicry_v2.pdf

5.4.4.   Building with Nature User Guide for Policy Makers, 2017 (CORE11, pages 19-21, 31, 53-54) (Will need to request a free copy via info@buildingwithnature.org.uk): https://www.buildingwithnature.org.uk/

6. PRINCIPLE 4: EARLY ENGAGEMENT.

6.1. Standard
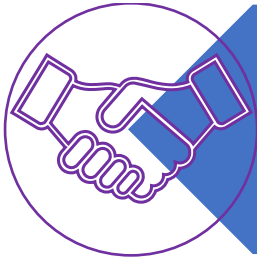
There is early collaboration and engagement with all relevant stakeholders, partners and communities to support the delivery of effective and connected GI.

6.2. Guidance for Development Management

Why does it matter?

6.2.1. Early and meaningful engagement with a wide range of stakeholders will result in:

- The Identification of issues, challenges, conflicts and opportunities that could be difficult to address if identified later on in a proposal.
- Reduces costs for a project with GI providing nature-based solutions to some of the challenges.
- Reduces cost for GI delivery and maintenance; allowing GI to be budgeted for from the start, rather than at the end as an addition.
- Delivery of a viable, sustainable and attractive proposal for the long-term.
- Ensures policy and planning is joined up.
- Identifies and optimises the multiple benefits for end users/ residents/ businesses.

How to Achieve and/or Improve this Principle?

6.2.2. You will need to engage relevant stakeholders, partners, experts and local communities in the identification of any plan, project, policy or programme. GI forms one part of that consideration set within wider placemaking and place keeping agendas and visions. It is important not to just engage on GI alone but within the wider aspects of the development

6.2.3. Developers are expected to provide and submit evidence of early and/or continued engagement regarding the provision and protection of green infrastructure on site.

6.2.4. Shifting stakeholder views and expectations will then need to be managed throughout the delivery of a project, development or the production of Local Plans and other strategic documents and guidance. (For more information on managing expectations, see Principle 5: Managing Different Expectations.

6.2.5. A set of good participatory principles have been developed in an ESRC funded Participology project using good practice case studies. Here it is important to note that early participation is only the starting point for an actively managed process and not simply a tick box exercise to meet some statutory requirement. Thus, it needs to be carefully designed into a participatory process that is bounded, inclusive and where the results are used to inform the wider processes and outcomes with feedback to those involved.

Meeting the Principle

6.2.6. The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

6.2.7. Profile your Stakeholders - Identify the stakeholders who will be affected by or influence your plan, policy, programme or project. Map out stakeholder interests and links to the development proposal and your priority for engagement. Develop a plan on how to engage and communicate. Agree on the best ways of working together.

6.2.8. Have an engagement strategy to get the right people involved early. Identify the key people in authority, stakeholders, community representatives, organisations and user groups to discuss and develop your plans from the start. Sectors and interests to consider will include:

- Highways, transport, drainage, utilities, public health, the education, ecology, heritage, landscape, parks/public space, finance, planning and community liaison authorities.

- Statutory consultees, statutory undertakers and trusts.

- Community representatives, user groups, Local Access Forums, business, education sector, and landowners and agricultural sector.

- Those who benefit from the GI, and those who could benefit in the future.

Measures of Success

6.2.9. Evidence documenting local stakeholder and community engagement on GI needs, creation, and enhancements. Including GI management and maintenance provisions

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6.3. Guidance for Policy

Why does it matter?

6.3.1. Early and meaningful engagement with a wide range of stakeholders will result in:

- The Identification of issues, challenges, conflicts and opportunities that could be difficult to address if identified later on in a proposal.
- Reduces costs for a project with GI providing nature-based solutions to some of the challenges.
- Reduces cost for GI delivery and maintenance; allowing GI to be budgeted for from the start, rather than at the end as an addition.
- Delivery of a viable, sustainable and attractive proposal for the long-term.
- Ensures policy and planning is joined up.
- Identifies and optimises the multiple benefits for end users/ residents/ businesses.

How to Achieve and/or Improve this Principle?

6.3.2. This early engagement process is also important for information gathering to able you to take a Principle 2: Evidence-Led) approach. In the early stages of Local Plans, development proposals and projects, understanding the differing viewpoints and priorities and non-negotiables is key to unlocking better outcomes. The power is definitely in designing and managing an effective and ongoing engagement process with ongoing feedback to participants of decisions taken.

6.3.3. Shifting stakeholder views and expectations will then need to be managed throughout the delivery of a project, development or the production of Local Plans and other strategic documents and guidance. (For more information on managing expectations, see Principle 5: Managing Different Expectations.

6.3.4. A set of good participatory principles have been developed in an ESRC funded Participology project using good practice case studies. Here it is important to note that early participation is only the starting point for an actively managed process and not simply a tick box exercise to meet some statutory requirement. Thus, it needs to be carefully designed into a participatory process that is bounded, inclusive and where the results are used to inform the wider processes and outcomes with feedback to those involved.

Meeting the Principle

6.3.5.   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

6.3.6.   Profile your Stakeholders - Identify the stakeholders who will be affected by or influence your plan, policy, programme or project. Map out stakeholder interests, skills and links to the development proposal and your priority for engagement. Develop a plan on how to engage and communicate. Agree on the best ways of working together.

6.3.7.   Develop a consultation and engagement strategy,(similar to the method set out by Chelmsford City Council or include this in a Statement of Community Involvement (SCI), similar to the approach taken by Essex Minerals and Waste Planning SCI and for South Essex Plan. These should include the following:

- An action plan that creates a partnership approach with community users at the heart, understanding needs and concerns. With and aim to establish a shared stakeholder understanding of what can and can't be included in the vision, strategy and policy.
- Have an engagement strategy to get the right people involved early. Identify the key people in authority, stakeholders, community representatives, organisations and user groups to discuss and develop your plans from the start. Sectors and interests to consider will include:
  - Highways, transport, drainage, utilities, public health, the education, ecology, heritage, landscape, parks/public space, finance, planning and community liaison authorities.
  - Statutory consultees, statutory undertakers and trusts.
  - Community representatives, user groups, Local Access Forums business, education sector, landowners and agricultural sector.
  - Those who benefit from the GI, and those who could benefit in the future.

6.3.8.   Regular communication throughout planning, design, delivery and management with meaningful long-term community engagement.

6.3.9.   Demonstrate Results - Share good stories of how early engagement helped the process and examples of where late engagement caused issues for the proposal or project is a good way to bring people on side. This can be achieved through:

- Try to use engaging visuals rather than just pages of bullets.
- Include recommendations and action items.

- Make the presentation of proposals concise, but informative and conversational.
- Try to send a pre-read to stakeholders, one day before, so they can prep some meaningful questions.
- Bring positive energy to the table.

6.3.10. Invest in Relationships - Effective teamwork is vital for working together towards a common goal. These are ideas on how to build a relationship with your stakeholder:

- Find out what personality type each stakeholder are through conversation and observing how they like to work.
- Hold regular meetings to discuss progress, blockers and next steps.
- Give and receive feedback. This is essential, without knowing what to improve and what's going well, we can't adjust and progress.

6.3.11. By taking steps to proactively improve the stage of engagement we can build better relationships, improve project outcomes and deliver multifunctional GI successfully

Measures of Success

6.3.12. Statutory plans, planning policy, development plans and industry/local guidance (such as arboriculture and Sustainable Drainage Systems) clearly define and have strong wording (see Principle 8: Strong Policy Wording and Commitment.) setting out the requirements for early engagement and collaboration

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6.4. Further Guidance and Information

Case Studies and Illustrative Examples

6.4.1. Annex A includes a selection of illustrative examples and best practice case studies that illustrate the application of the GI Standards. In regard to early engagement, please see:

- West Dunbartonshire Council, 'Our Green Network' Supplementary Guidance

External Resources

6.4.2. Good Practice Participation Principles; Participology, Scott et al, 2020: http://www.participology.com/citizen-principles.php#6

6.4.3. Engaging your local community with your park, My Community, 2020 (includes an engagement plan template): https://mycommunity.org.uk/files/downloads/Parks-and-Green-Spaces-Engaging-your-local-community-with-your-park-B.pdf

6.4.4. Community Planning Toolkit: Community Engagement; Town and Country Planning Association, 2014: https://www.communityplanningtoolkit.org/sites/default/files/Engagement.pdf

6.4.5. Commissioning Toolkit: 5-Stage Engagement Plan; Department For Communities and Local Government (DCLG): (NHS context, but very good generic principles and templates): https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/215006/dh_134407.pdf

7. PRINCIPLE 5: MANAGING DIFFERENT EXPECTATIONS.

7.1. Standard
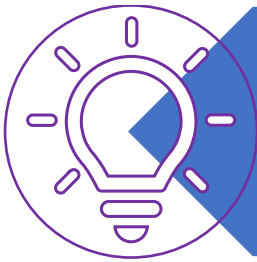
Differing views need to be identified early and managed effectively and in a transparent manner to secure both short- and long-term outcomes.

7.2. Guidance for Development Management

Why does it matter?

7.2.1.   Stakeholders' expectations need to be carefully managed and negotiated.

7.2.2.   Requirements need to be aligned, with an understanding of risk tolerance, and mitigate issues that would otherwise cause delay and avoid future mitigating costs.

7.2.3.   Good stakeholder management is essential, and a key component to ensuring the successful delivery of healthy and sustainable places.

7.2.4.   To ensure expectations are managed effectively and early on, it is important to deliver in line with Principle 4: Early Engagement.

How to Achieve and/or Improve this Principle?

7.2.5.   Good communication should be established between stakeholders and developers to ensure that a feasible agreement is reached and that all participants affected by the development or construction are informed. The openness and honesty established from the onset should allow for open direct line of communication for the future. Two-way communication is key to ensuring all stakeholders understand different positions of different interests in the master planning, design, and construction of the development to ensure good placemaking and place-keeping is achieved. Please look at Principle 4: Early Engagement. for how you can deliver effective early engagement.

7.2.6.   It's important to determine if there are any potential underlying issues that may arise in conflict by stakeholders early on, in order to determine the best solution. Conflicts are often caused by different interpretations of development plans and poor communication. Where there are different expectations between stakeholders, you will need to actively listen and understand the different stakeholder expectations and needs on:

- What each party wants.
- Why they want it.
- What is each party's priority?
- Any assumptions a stakeholder may have made (I.e., analyse needs).
- The scope for compromise.

7.2.7.   Once these are understood, you can look at ways of reaching a mutual agreement. Through capturing actions within the Statement of

Community Involvement and/or an action plan and risk register, as part of the early engagement strategy to be used when different expectations and issues arise. It is important to identify any issues and different expectations early on, but it is inevitable that conflicts could occur later down in the development design and construction stage. Hence the need to build a strong and resilient stakeholder network with on-going communication.

Meeting the Principle

7.2.8.   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

7.2.9.   Profile your Stakeholders - Identify the stakeholders who typically interact with or may do so (including any funders). Map out stakeholder interests and links and priority for engagement. Develop a plan on how to engage and communicate. Agree on the best ways of working together.

7.2.10.   Identify a champion, someone with energy for change or interests, that will help engage and connect to wider stakeholders, that you may not have been able to engage.

7.2.11.   As part of the development of a consultation and engagement strategy or Statement of Community Involvement (as mentioned in principle 4: Early Engagement), it includes.

- an action plan that creates a partnership approach with community users at the heart, understanding needs, concerns, and expectations.

7.2.12.   Identify the stakeholders' preferred method of communications.

7.2.13.   Keep stakeholders engaged throughout the process with timely updates.

- Regular communication throughout planning, design, delivery and management with meaningful long-term community engagement.
- Give stakeholders time, particularly those who are not formally organised, to develop their collective perspective.

7.2.14.   Accurately map expectations. Be crystal clear on the expectations from the stakeholder's point of view. Ask them how they will measure success. One way to come to a mutual agreement would be to facilitate a meeting will all stakeholders (where practical).

7.2.15. Invest in Relationships - Effective teamwork is vital for working together towards a common goal. These are ideas on how to build a relationship with your stakeholder:

- Find out what personality type each stakeholder are through conversation and observing how they like to work.
- Hold regular meetings to discuss progress, blockers and next steps.
- Give and receive feedback. This is essential, without knowing what to improve and what's going well, we can't adjust and progress.
- Engage the stakeholders in decision making, ensuring all stakeholders have equal access and capacity to participate.

Measures of Success

7.2.16. If these statements are true for your development/planning application, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

7.2.17. Demonstration that early, flexible and sustained engagement of stakeholders that enhances the opportunities for engagement and community input in the master planning, design, and delivery of the development has been undertaken. Through the Statement of Community Involvement and/or an engagement action and management plan logging all expectations, actions, resolutions and accountability.

7.2.18. That implementation of agreements must be assured.

7.3. Guidance for Policy

Why does it matter?

7.3.1. Conflict is a fact of life and should be welcomed and not feared or neglected but it is how it is managed that matters.

7.3.2. Engagement with key stakeholders (including community groups) will help policy makers understand the different viewpoints and expectations early on.

7.3.3. Challenges and expectations can be identified and managed using a transparent process recognising that there will always be differences in opinions and views.

7.3.4. To ensure expectations are managed effectively and early on, it is important to deliver in line with Principle 4: Early Engagement.

How to Achieve and/or Improve this Principle?

7.3.5. Good and open two-way communication is key to ensuring all stakeholders understand different positions of different interests in the process of designing, assessing, planning, delivering and evaluating statutory plans, industry/local guidance, projects and programmes, the purpose and what the next steps are to achieve good placemaking and place-keeping. Please look at Principle 4: Early Engagement. for how you can deliver effective early engagement.

7.3.6. Conflict is a fact of life and should be welcomed and not feared but it is how it is managed that matters. Where there are different expectations between stakeholders, you will need to understand:

- What each party wants.
- Why they want it.
- What is each party's priority?
- Any assumptions a stakeholder may have made (I.e., analyse needs).
- The scope for compromise.

7.3.7. Once these are understood, you can try to look at ways of providing mutual gain for any conflicting sides through reaching a mutual agreement. Acknowledging and understanding the different stakeholder expectations and needs allows for the development of an action plans and risk register, as part of the early engagement strategy to be used when different expectations and issues arise. However, it is also important to recognise that conflicts can occur later down the policy or

development cycle. Hence the need to build a strong and resilient stakeholder network with on-going communication.

Meeting the Principle

7.3.8.   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

7.3.9.   Profile your Stakeholders - Identify the stakeholders who typically interact with or may do so (including any funders). Map out stakeholder interests and links and priority for engagement. Develop a plan on how to engage and communicate. Agree on the best ways of working together.

7.3.10.   Identify a champion, someone with energy for change or interests, that will help engage and connect to wider stakeholders, that you may not have been able to engage.

7.3.11.   As part of the development of a consultation and engagement strategy or Statement of Community Involvement (as mentioned in Principle 4: Early Engagement), it includes.

- an action plan that creates a partnership approach with community users at the heart, understanding needs, concerns, and expectations.

7.3.12.   Identify the stakeholders' preferred method of communications.

- Keep stakeholders engaged throughout the process with timely updates.
- Regular communication throughout planning, design, delivery and management with meaningful long-term community engagement.

7.3.13.   Give stakeholders time, particularly those who are not formally organised, to develop their collective perspective.

7.3.14.   Accurately map expectations. Be crystal clear on the expectations from the stakeholder's point of view. Ask them how they will measure success One way to come to a mutual agreement would be to facilitate a meeting will all stakeholders (where practical).

7.3.15.   Invest in Relationships - Effective teamwork is vital for working together towards a common goal. These are ideas on how to build a relationship with your stakeholder:

- Find out what personality type each stakeholder are through conversation and observing how they like to work.

- Hold regular meetings to discuss progress, blockers and next steps.
- Give and receive feedback. This is essential, without knowing what to improve and what's going well, we can't adjust and progress.
- Engage the stakeholders in decision making, ensuring all stakeholders have equal access and capacity to participate.

Measures of Success

7.3.16. If these statements are true for your policy/ strategic document /project, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

7.3.17. Demonstration that the governance model/ process is enabling and flexible that enhances the opportunities for engagement and community input. Through an action and management plan logging all expectations, actions, resolutions and accountability.

7.3.18. The creation of a collective vision that both sets down the priorities and reveals the possibilities for a shared future.

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7.4. Further Guidance and Information

Case Study Examples

7.4.1. Annex A includes a selection of illustrative examples and best practice case studies that illustrate the application of the GI Standards. In regard to managing different expectations, please see:

- Thurrock Stronger Together Partnership using Asset-Based Community Development

External Resources

7.4.2. Practical Approaches to Participation by C. Richards et al, Socio-Economic Research Group (SERG) Policy Brief No1, 2007, Pages 15 - 22: https://macaulay.webarchive.hutton.ac.uk/ruralsustainability/SERG%20PB1%20final.pdf

7.4.3. Seeds for Change: Consensus decision making; Seeds for Change, 2020 (the whole documents useful for engagement, but regarding managing expectations Page 37, 43 - 47): https://www.seedsforchange.org.uk/consensus.pdf

7.4.4. Asset-Based Community Development training; Nurture Development, 2018: https://www.nurturedevelopment.org/about-abcd/

8. PRINCIPLE 6: HEALTH, WELLBEING AND SOCIAL EQUITY.

8.1. Standard

GI Is designed to meet different people's needs (including physical and mental health), providing accessibility to GI, green spaces and local amenities, while ensuring GI is inclusive to all.

8.2. Guidance for Development Management

Why does it matter?

8.2.1.   Access to nature rich environments and green spaces can have a positive impact on health and wellbeing.

8.2.2.   Access to good quality GI can encourage more active lifestyles, and there is a clear association between psychological health, mental wellbeing, and physical activity.

8.2.3.   In Essex between 2013 and 2015, two-thirds (66%) of adults aged 16+ and 21% of children in reception and 31.8% of children in year 6 are obese (Public Health Outcomes Framework: Wider Determinants of Health Tool).

8.2.4.   The total cost of physical inactivity in Essex to NHS was £58,213,764 per year (Sports & Physical Activity Profile: Greater Essex, 2017).

8.2.5.   Recent studies during the Covid pandemic have highlighted the key role that green spaces play for people's health and wellbeing. But the current distribution and access to those spaces are not equitable. New developments might have access to green spaces, but existing developments in many deprived urban areas may not and urgently need reinvestment.

How to Achieve and/or Improve this Principle?

8.2.6.   You will need to ensure access to good quality parks and green spaces is fully accessible to all and located near to where people live. Provision is made to delivery GI and green spaces at all scales. That is made to support a wide range of healthy activities. For example:

- Improving the connectivity to ensure there are good accessible links for all throughout neighbourhoods and urban and rural areas to green spaces widening the GI network where possible
- Public parks, playing fields, pathways, Public Rights of Way, multi-user routes (including bridleways), cycle paths and jogging tracks that encourage outdoor activity and promote good physical health.
- Urban vegetation, i.e.
  - allotments, community gardens and orchards promoting healthy eating,
  - trees, green roofs and private gardens that regulate air quality and reduce the 'urban heat island' effect.
- Wetlands, grassed areas and urban forests reduce the risk of flooding, sewage overflow and clean water contamination.

- Communal parks, village greens and town squares that enhance community attachment, social cohesion and a sense of environmental responsibility.
- Green spaces in a residential community attract tourism and investment and improve employment and income potential.

8.2.7.   You can apply existing standards such as:

- the 20-minute neighbourhood (where most of people's daily needs can be met within a short walk or cycle),
- Accessible Natural Green Space Standards (ensuring that adequate provision of green spaces in terms of size is accessible, based on distance from residents home),
- local provision standards set within the Local Planning Authorities allotment, green and open space, Sport and GI strategy; or

8.2.8.   Livewell Development Accreditation for the provision of (i.e. quality and quantity), access to and distances between accessible GI features by using active travel (cycling, walking and horse riding.

8.2.9.   Where GI such as new cycle and pedestrian paths and green spaces are developed, care should be taken to ensure that safety is maintained. This will include amenities such as lighting, play equipment, benches, level paths, good signposting, and clear sightlines to be of good quality and well maintained, without becoming potential areas for anti-social activity.

8.2.10.   A Health Impact Assessment will help to assess if the GI provision meets the diversity of user groups, whose needs may vary according to age, abilities, interest, or cultural beliefs. This includes access to natural play for younger and older children. You will need to ensure that areas with higher deprivation levels and lower access to green space are given the required attention.

8.2.11.   Other potential physical barriers to use or has an impact on health to consider and will need addressing. For example, vandalism, lighting, dog fouling, fly tipping, graffiti and how green spaces are linked to food outlets selling unhealthy food. Perhaps, there will need to be an awareness that attractiveness of certain areas may inadvertently improve access to fast food outlets. Efforts will need to be taken to mitigate such consequences.

8.2.12.   For that additional layer of quality assurance for a policy, strategic document, project or development, you could use Building with Nature, a UK wide benchmark for GI, launched in 2018. Building with Nature offer a set of green infrastructure Standards, which can be downloaded for free from their website, plus a formal Accreditation scheme to help accredit policy and physical development. The Standards define high-

quality green infrastructure at each stage of the green infrastructure lifecycle, from planning and development, through to long-term management and maintenance. They are organised around a set of 'Core' Standards which distinguish a GI approach from a conventional approach to provision for green and open space, and the themes of Wellbeing, Water and Wildlife.

Case study 12 provides an example of a regeneration scheme which achieved a BwN Design Award. Barne Barton in Plymouth was recognised in particular for its exemplary approach to integrating Wellbeing considerations into the green infrastructure design and community engagement. The BwN Wellbeing Standards promote the design and proximity of GI to be accessible, usable and enjoyable for all. The Standards ask development to: design in GI features which integrate the needs and strengths of vulnerable and excluded groups; support local priorities for reducing and/or preventing health inequalities; consider how GI can promote socially sustainable communities and community cohesion; and ensure GI is integral to the creating a sense of place. The BwN Standards support Local Planning Authorities in strengthening statutory plans, planning policy and industry/local guidance and ensures that all development is as good as it needs to be to secure the functions and benefits of GI.

Meeting the Principle

8.2.13.   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

8.2.14.   The following check list provides guidance on what needs to be considered.

8.2.15.   Health and Wellbeing

- Ensure that GI maximises health and wellbeing outcomes for all.
- Therefore, the quantity, accessibility (distance from households and location of entrances) and quality (type, design, inclusivity and management) of GI should be informed by the appropriate national and local standards. This includes the Accessible Natural Greenspace Standard from Natural England and local provision standards set within the Local Planning Authorities allotment provision, Green Space and GI strategy for their administrative area.
- Work with providers of green space, health professionals, communities and Active Essex to establish a link into existing green care programmes.
- Support active and healthy lifestyles through improving accessibility to amenity GI assets, including improved walking, cycling and horse riding connections and the delivery of multi-user routes. For

example, identify a priority walking, cycling and horse riding route between green spaces and the town centres etc. as part of a public realm scheme.

8.2.16.   Recreation for all ages and abilities

- Ensure GI is addressing issues of inequality in access to natural green space; - Considering all user groups, social groups and abilities to provide accessibility and inclusivity.
- Ensure GI considers the needs of different user, age and socio-economic groups.
- The needs of a wide range of users will be considered when planning improvements to greenways, green wedges, green fingers, sustainable travel routes, green spaces and public realm to encourage more people to connect with nature and foster a sense of place. Assessing if there are enough benches, level paths, good signposting, clear sightlines and good management and maintenance all will help to make areas more attractive.
- Ensure there is inclusive and safe access to green/ recreational spaces.
- Socially cohesive greenspaces should be publicly accessible, perceived as welcoming and provide room for encounters and self-regulation. It is important to consider the equality of access to GI and the fostering of different user interests for more equal distributions of GI related benefits. Take into considerations the lessons learnt from the Active Essex Local Delivery pilots.

Measures of Success

If any of these statements are true for your policy/ planning application/ strategic document /project, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

8.2.17.   Development proposals and projects demonstrate how access and enjoyment of all users are integral to GI at each stage of delivery (design, implementation, management, and maintenance).

8.2.18.   How a wide range of user needs, and strengths of existing and future communities will be addressed through the protection and enhancement of existing GI features, and creation of new features, within and near to the built environment.

8.2.19.   Contributing to community cohesion and wellbeing by providing a wide range of GI features that promote community-led activity to enable inclusive use of GI, that will provide health and wellbeing benefits.

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8.3. Guidance for Policy

Why does it matter?

8.3.1.   Access to nature rich environments and green spaces can have a positive impact on health and wellbeing.

8.3.2.   Access to good quality GI can encourage more active lifestyles, and there is a clear association between psychological health, mental wellbeing, and physical activity.

8.3.3.   In Essex between 2013 and 2015, two-thirds (66%) of adults aged 16+ and 21% of children in reception and 31.8% of children in year 6 are obese (Public Health Outcomes Framework: Wider Determinants of Health Tool).

8.3.4.   The total cost of physical inactivity in Essex to NHS was £58,213,764 per year (Sports & Physical Activity Profile: Greater Essex, 2017).

8.3.5.   Recent studies during the Covid pandemic have highlighted the key role that green spaces play for people's health and wellbeing. But the current distribution and access to those spaces are not equitable. New developments might have access to green spaces, but existing developments in many deprived urban areas may not and urgently need reinvestment.

How to Achieve and/or Improve this Principle?

8.3.6.   You will need to ensure that the policy requires new developments to provide the provision of and access to good quality parks and green spaces, that is accessible to all and located near to where people live.

8.3.7.   Policy ensures that provision is made to delivering GI and green spaces at all scales. That is made to support a wide range of healthy activities. For example (but not limited to):

8.3.8.   Visual and auditory access (I.e. Sensory gardens, wayfinding and landmarks) can benefit vulnerable and excluded groups, for example people living with dementia or other conditions that reduce their mobility.

8.3.9.   Improvements to the public realm to provide safe and attractive green routes to ensure there are good accessible links for all throughout neighbourhoods and urban and rural areas to green spaces, widening the GI network, that encourages active travel.

8.3.10.   Public parks, playing fields, pathways, Public Rights of Way, multi-user routes (including bridleways), cycle paths and jogging tracks that encourage outdoor activity and promote good physical health.

8.3.11.   Food production and urban vegetation, i.e.

- o Allotments, community gardens and orchards promoting healthy eating.
- o Trees, green roofs and private gardens that regulate air quality and reduce the 'urban heat island' effect.
- o Wetlands, grassed areas and urban forests reduce the risk of flooding, sewage overflow and clean water contamination.
- o Communal parks, village greens, town squares spaces for outdoor sports, natural play and cultural events, and areas for tranquillity and quiet contemplation that enhance community attachment, social cohesion and a sense of environmental responsibility.

8.3.12.   Policy requires connectivity between green infrastructure features and where people live and work, to optimise use and enjoyment. Key considerations include:

8.3.13.   For your policy to apply existing standards outlined in good practice guidelines for distances between accessible green infrastructure features by means of active travel (cycling, walking and horse riding), such as.

- • the 20-minute neighbourhood (where most of people's daily needs can be met within a short walk or cycle),
- • Accessible Natural Green Space Standards (ensuring that adequate provision of green spaces in terms of size is accessible, based on distance from residents home),
- • local provision standards set within the Local Planning Authorities allotment, green and open space, sport and GI strategy; or
- • Livewell Development Accreditation for the provision of (i.e. quality and quantity), access to and distances between accessible GI features by using active travel (cycling, walking and horse riding).

8.3.14.   Policy recognises that to maximise the benefits delivered through GI, features need to be designed to optimise use, safety and enjoyment at all times of year This will include amenities such as lighting, play equipment, benches, level paths, good signposting, and clear sightlines to be of good quality and well maintained, and be adaptable to changing weather conditions, without becoming potential areas for anti-social activity. For example, vandalism, lighting, dog fouling, fly tipping, graffiti.

8.3.15.   Policy supports targeted approaches in new development, or changes to existing settlements, to enhance areas that are GI deficient that also have health inequalities and a high level of deprivation (measured using the Index of Multiple Deprivation) through requiring developments to complete a Health Impact Assessment (HIA). HIA will help to assess if the GI provision meets the diversity of user groups, whose needs may vary according to age, abilities, interest, or cultural beliefs. This includes access to natural play for younger and older children and how green spaces are linked to food outlets selling unhealthy food.

8.3.16.   Policy requires new development to deliver GI features that incorporate existing landscape and historic features, protects or create features that enhance valuable views of the policy area, for example those highlighted by a Landscape and Visual Impact Assessment (LVIA); and for GI to be utilised as a priority edge treatment to enhance integration with the surrounding area.

8.3.17.   For that additional layer of quality assurance that policy and strategic documents (I.e. Local Plans, neighbourhood Plans and Strategies), you could use Building with Nature, a UK wide benchmark for GI, launched in 2018. Building with Nature offer a set of green infrastructure Standards, which can be downloaded for free from their website, plus a formal Accreditation scheme to help accredit policy. Applying the standards to policy and the standards themselves include illustrative examples of how you can shape policy to secure the benefits and long-term stewardship of high-quality GI within developments, and decision-making. Building with Nature offers clear examples of how policy and strategy writing can create a framework of principles, clear parameters, within which development applications should come forward. Also certify support and credibility for your commitment to delivering and sustaining a flourishing place for people and wildlife.

- They are organised around a set of 'Core' Standards which distinguish a GI approach from a conventional approach to provision for green and open space, and the themes of Wellbeing, Water and Wildlife. Case study 2, in appendix provides an example of Essex GI Strategy which achieved a BwN Excellent accreditation. The Essex GI strategy was for its vision to deliver benefits to people and wildlife through the retention, enhancement and creation of multi-functional green and blue features, operating at a range of different scales, from the neighbourhood up to the landscape scale.

Meeting the Principle

8.3.18.   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

8.3.19. The following check list provides guidance on what needs to be considered.

8.3.20. In regards to Health and Wellbeing, statutory plans, planning policy and industry/local guidance is expected to promote the use of the Livewell Development Accreditation and/ or Building with Nature for new developments recognises developers' contributions to the health and wellbeing agenda.

8.3.21. In regards to recreation for all ages and abilities, statutory plans, planning and industry/local guidance is expected to encourage developments to review and implement Building with Nature Standards and accreditations scheme to ensure the delivery of high-quality, accessible GI.

Measures of Success

8.3.22. If any of these statements are true for your policy/ planning application/ strategic document /project, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

8.3.23. Statutory plans, planning policy and industry/local guidance, demonstrate how access and enjoyment of all users are integral to GI at each stage of delivery (design, implementation, management, and maintenance).

8.3.24. Statutory plans, planning policy and industry/local guidance supports the delivery of a wide range of GI features that promote community-led activity to enable inclusive use of GI, that will provide health and wellbeing benefits.

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8.4. Further Guidance and Information

Case Study Examples

8.4.1. Annex A includes a selection of illustrative examples and best practice case studies that illustrate the application of the GI Standards. In regard to health, wellbeing and social equity, please see:

- Development at Barne Barton, Plymouth
- Planning Policy Wales

External Resources

8.4.2. Enabling Healthy Placemaking - overcoming barriers and learning from best practices, RTPI, 2020 (Pages 24-33): https://www.rtpi.org.uk/media/5777/enabling-healthy-placemaking.pdf

8.4.3. A rapid scoping review of health and wellbeing evidence for the Framework of Green Infrastructure Standards; Natural England, 2020 (Page 27-28): http://publications.naturalengland.org.uk/publication/4799558023643136

8.4.4. Active Design Principles; Essex Design Guide (2018): https://www.essexdesignguide.co.uk/overarching-themes/active-design-principles/

8.4.5. Healthy Urban Planning Checklist; NHS London Health Urban Development Unit, Second Edition, 2014: https://www.healthyurbandevelopment.nhs.uk/wp-content/uploads/2014/04/Healthy-Urban-Planning-Checklist-March-2014.pdf

9. PRINCIPLE 7: CONNECTIVITY.

9.1. Standard

GI interventions are designed, planned and delivered and connected across multiple scales; from the wider landscape scale network to more local and neighbourhood scales including green corridors habitat and nature recovery networks to enhance connectivity for people, wildlife and habitats.

9.2. Guidance for Development Management

Why does it matter?

9.2.1. The pressures of changing land use, development and population growth in Essex will have an impact on our environment and potentially cause habitat fragmentation and biodiversity loss. However, good GI design can demonstrate how developments and retrofitting can provide a positive contribution to mitigate these impacts.

9.2.2. Creating GI connectivity through developments proposals and GI Projects will help to reconnect existing and fragmented nature areas; for instance, through green corridors and/or green bridges, as well as improving the general ecological quality of the wider environment.

9.2.3. Good GI should make connections between our urban, rural and coastal areas, from our towns and cities to our villages.

9.2.4. Good GI connectivity should enable the movement of people and wildlife through green networks and corridors.

9.2.5. Good strategic planning can guide infrastructure developments away from sensitive sites, thereby reducing the risk of further habitat fragmentation.

9.2.6. Good GI connectivity connects people to nature and encourages active lifestyle is vital to improve health and wellbeing outcomes and a reduce health inequalities. For more details regarding this, please see Principle 6: Health, Wellbeing And Social Equity.

9.2.7. The protection, enhancement, creation and connectivity of our GI to wider GI network will maximise the delivery of the multiple functions and benefits from GI.

How to Achieve and/or Improve this Principle?

9.2.8. The provision of GI is an important solution to delivering the Lawton principles of more, bigger, better and joined. It advocates a landscape-scale approach to conservation and enhancing connections between sites, either through physical corridors or through 'stepping stones'.

The Lawton Report

- Bigger
- Better
- Connected

Put the
Right Habitat
in the
Right Place

Restoration area
Landscape corridor
Stepping stone corridor
Core area
Linear corridor
Buffer zone
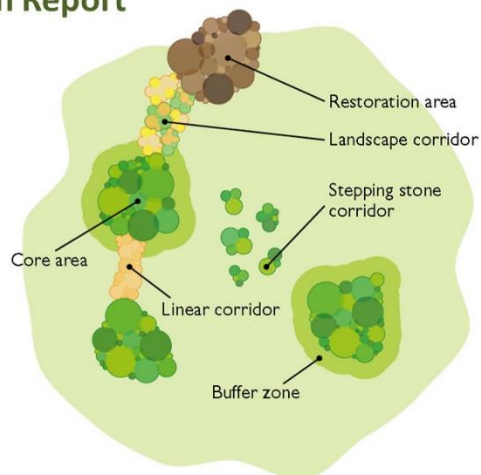
Making Space for Nature: a review of England's wildlife sites and ecological networks: defra 2010

9.2.9.   To ensure that access to green spaces is as easy as possible for all, enhances biodiversity and to improve the character and sense of place, it is essential that greater connection with public realm, developments and transport planning is established. Therefore, GI is best achieved through an integrated approach to land management and careful strategic spatial planning. Strategic planning will enable you to identify spatial interactions between different land uses that will need to be investigated over a local or regional geographical area. Strategic planning will also allow you the means to bringing different sectors together in order for them to decide collectively on local land use priorities in a transparent, integrated and cooperative way.

9.2.10.   Your GI Strategy will also provide you with the foundation for good planning and design for GI. A GI strategy can cover different spatial aspects from regional, to county to local district to neighbourhood level. At smaller scales, you may wish to consider a neighbourhood plan that embeds GI thinking or a community-engaging masterplanning or concept statement exercise. Where GI has not been integrated into the strategic documents or elements need strengthening then the Essex Green Infrastructure Strategy, 2020 or the South Essex Strategic Green and Blue Infrastructure Study, 2020 can be used as a basis for policy at a local level and will ensure a consistent approach.

Meeting the Principle

9.2.11.   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

9.2.12 The following check list provides guidance on what needs to be considered. Design GI to recover nature and inform such design by local landscape

(including historic landscape) character. Design GI design to enhance the wider landscape-scale network of GI:

- Check the Landscape Character Assessment (LCA) for the county or district. Consider if the GI takes account of the area's character. Most National Parks and Areas of Outstanding Natural Beauty (AONBs) also have LCAs.
- For more contextual information, there are National Character Area profiles for Essex. These provide information on the character at the regional level that can be used in GI strategies and planning.
- A few places may have more local sources of information on character that complement the county or district LCA. Examples of this are a Neighbourhood Plan or a Local Landscape Character Assessment.
- If there is no Neighbourhood Plan or LLCN, you can consider the option of defining character locally.

9.2.13   In line with Principle 4: Early Engagement. opportunities and local needs should inform GI planning and design. Local need includes outcomes such as better health, improved air quality or addressing identified deficits in local GI supply.

- Good design is fundamental to the successful delivery of attractive, accessible environments to encourage active travel.
- For more information regarding these elements, please see: Principle 4: Early Engagement. and Principle 6: Health, Wellbeing And Social Equity.

9.2.14 Use the Green Essex StoryMap or National mapping to identify different existing GI assets. Show where the assets link together at a local and strategic scale.

- Includes opportunity mapping to show where GI can solve existing issues.

9.2.15 Create connectivity to ensure there are good accessible links for all between urban, rural areas and GI widening the GI network.

- Improving connectivity between existing natural areas to counter fragmentation and increase their ecological coherence e.g. by safeguarding hedgerows, wildlife strips along field margins, watercourses.
- Enhancing landscape permeability to aid species dispersal, migration and movement e.g. through the introduction of wildlife-friendly land uses or agri/forest environment schemes that support extensive farming practices.

- Identifying multifunctional areas, for example where farming, forestry, recreation and ecosystems conservation can all operate together in the same space, delivering deliver multiple benefits.
- Natural landscape features such as small water courses, forest patches and hedgerows can act as green corridors for wildlife.
- Restore habitat patches that have been created with specific species in mind e.g. to help expand the size of a protected area, increase foraging areas, breeding or resting for these species and assist in their migration/dispersal.
- Urban elements such as green parks, green walls and green roofs, host biodiversity and allowing for ecosystems to function and deliver their services by connecting urban, peri-urban and rural areas.

Measures of Success

If all or few of these statements are true, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

2.16   Development proposals ensure that the existing Greenways and Highways GI network is sustained or improved through working in collaboration with partners, whilst engaging and involving Parish Councils and communities.

2.17   New developments use appropriate GI design and its multi-functions that will enhance the quality, ease of accessibility, inclusivity and connectivity to green spaces, local amenities and across the development.

2.18   New developments are located where they can be linked to services and facilities through establishing green active travel routes (walking, cycling and bridleways) that is accessible for all are being created which minimise the need for motor vehicle movements as set out in Figure 3 (on page 93) of the User hierarchy for accessing green spaces and highways and green route design.

2.19   Development proposals and projects protect and enhance existing cycling, bridle, and walking routes.

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9.3 Guidance for Policy

Why does it matter?

9.3.14 The pressures of changing land use, development and population growth in Essex will have an impact on our environment and potentially cause habitat fragmentation and biodiversity loss. However, good GI design can demonstrate how developments and retrofitting can provide a positive contribution to mitigate these impacts.

9.3.15 Creating GI connectivity through strategic plans, developments and GI Projects will help to reconnect existing and fragmented nature areas; for instance, through green corridors and/or green bridges, as well as improving the general ecological quality of the wider environment.

9.3.16 Good GI should make connections between our urban, rural and coastal areas, from our towns and cities to our villages.

9.3.17 Good GI connectivity should enable the movement of people and wildlife through green networks and corridors.

9.3.18 Good strategic planning can guide infrastructure developments away from sensitive sites, thereby reducing the risk of further habitat fragmentation.

9.3.19 Good GI connectivity connects people to nature and encourages active lifestyle is vital to improve health and wellbeing outcomes and a reduce health inequalities. For more details regarding this, please see Principle 6: Health, Wellbeing And Social Equity.

9.3.20 The protection, enhancement, creation and connectivity of our GI to wider GI network will maximise the delivery of the multiple functions and benefits from GI.

How to Achieve and/or Improve this Principle?

3.21 The provision of GI is an important solution to delivering the Lawton principles of more, bigger, better and joined. It advocates a landscape-scale approach to conservation and enhancing connections between sites, either through physical corridors or through 'stepping stones'.

The Lawton Report

- Bigger
- Better
- Connected

Put the
Right Habitat
in the
Right Place

Restoration area
Landscape corridor
Stepping stone corridor
Core area
Linear corridor
Buffer zone

Making Space for Nature: a review of England's wildlife sites and ecological networks: defra 2010

9.3.22 To ensure that access to green spaces is as easy as possible for all, enhances biodiversity and to improve the character and sense of place, it is essential that greater connection with public realm, developments and transport planning is established. Therefore, GI is best achieved through an integrated approach to land management and careful strategic spatial planning. Strategic planning will enable you to identify spatial interactions between different land uses that will need to be investigated over a local or regional geographical area. Strategic planning will also allow you the means to bringing different sectors together in order for them to decide collectively on local land use priorities in a transparent, integrated and cooperative way.

9.3.23 By using the GI asset and Public Rights of Way (including Bridle ways) and Cycling routes maps within the Green Essex Storymap, for instance will help to identify potential opportunities for connectivity. For example:

- To identify new routes which provide multiple functions and benefits by improving accessibility for all user groups, including equestrians, and interconnecting paths between GI, new and existing developments, services and amenities.
- Manage existing and new paths/routes to benefit people and wildlife supporting active and healthy lifestyles and providing environment net gains.
- Connections for wildlife; integrate and enhance surrounding habitats.
- New GI should connect areas of biodiversity value to provide wildlife corridors and/or create larger areas of natural and semi-natural habitat.
- Improved signage, entrances and pathways to and within sites for multi-users by applying the principle of least restrictive access.
- Targeting physical improvements and restoration to routes that can also be promoted for local and visitor use, including the development of the coast path in Essex.

- Provide and promote circular routes around towns and villages.

9.3.24 Dissection of the linear network of cycleways, public rights of way, bridleways and ecological corridors such as ancient woodlands, hedgerows, ditches and water environments are avoided, where possible. Every effort needs to be made to ensure that connections between green spaces and developments are achieved to ensure that routes make sustainable connections. So that people will choose to use for local trips, over the car, with a move towards a user hierarchy as promoted thorough the Essex
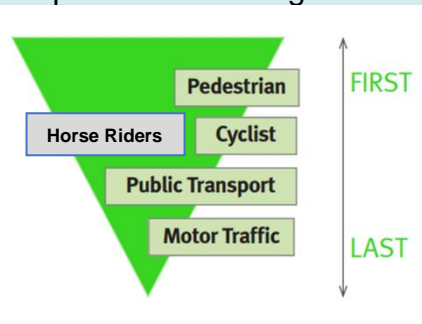
Walking Strategy as shown below.

3: User hierarchy for accessing green spaces and highways and green route design

Meeting the Principle

9.3.25 The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

9.3.26 The following check list provides guidance on what needs to be considered.

9.3.27 Statutory Plans, planning policy and additional guidance (such as SDPs, and IDPs) should call for GI to both be designed by the local landscape (including historic landscape) character and be designed to enhance the wider landscape-scale network of GI.

- For more contextual information, there are National Character Area profiles for Essex. These provide information on the character at the regional level that can be used in GI strategies and planning.

9.3.28 In line with Principle 4: Early Engagement. opportunities and local needs should inform GI planning, allocation and provision. Local need includes outcomes such as better health, improved air quality or addressing identified deficits in local GI supply.

- Good design is fundamental to the successful delivery of attractive, accessible environments to encourage active travel.

- For more information regarding these elements, please see: Principle 4: Early Engagement. and Principle 6: Health, Wellbeing And Social Equity.

9.3.29 Use the Green Essex StoryMap or National mapping to identify different existing GI assets. Show where the assets link together at a local and strategic scale.

- Includes opportunity mapping to show where GI can solve existing issues.

9.3.30 Using local plan to improve networks in urban and rural areas that could help create connectivity for all user groups, including equestrians and integration of developments e.g. using cycle paths, Rights of Way and bridle way network.

9.3.31 Create connectivity to ensure there are good accessible links for all between urban, rural areas and GI widening the GI network.

- Improving connectivity between existing natural areas to counter fragmentation and increase their ecological coherence e.g. by safeguarding hedgerows, wildlife strips along field margins, watercourses.
- Enhancing landscape permeability to aid species dispersal, migration and movement e.g. through the introduction of wildlife-friendly land uses or agri/forest environment schemes that support extensive farming practices.
- Identifying multifunctional areas, for example where farming, forestry, recreation and ecosystems conservation can all operate together in the same space, delivering deliver multiple benefits.
- Natural landscape features such as small water courses, forest patches and hedgerows can act as green corridors for wildlife.
- Restore habitat patches that have been created with specific species in mind e.g. to help expand the size of a protected area, increase foraging areas, breeding or resting for these species and assist in their migration/dispersal.
- Urban elements such as green parks, green walls and green roofs, host biodiversity and allowing for ecosystems to function and deliver their services by connecting urban, peri-urban and rural areas.

Measures of Success

9.3.32 If all or few of these statements are true, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

9.3.33 Statutory plans are expected to ensure that the existing Greenways and Highways GI network is sustained or improved through working in

collaboration with partners, whilst engaging and involving Parish Councils and communities.

9.3.34 Statutory plans and planning policy is expected to ensure that new developments use appropriate GI design and its multi-functions that will enhance the quality, ease of accessibility, inclusivity and connectivity to green spaces, local amenities and across the development.

9.3.35 Statutory plans and planning policy is expected to ensure that new developments are located where they can be linked to services and facilities through establishing green active travel routes (walking, cycling and bridleways) that is accessible for all, are being created which minimise the need for motor vehicle movements as set out in Figure 3 (on page 93) of the User hierarchy for accessing green spaces and highways and green route design.

9.3.36 Statutory plans, planning policy and industry/local guidance protect and enhance existing cycling, bridle, and walking routes.

9.4   Further Guidance and Information

9.4.14   Annex A includes a selection of illustrative examples and best practice case studies that illustrate the application of the GI Standards. In regards to connectivity, please see:

- Oakwood Pond, Harlow
- Essex Walking Strategy

External Resources

9.4.15   Design Guide - How to achieve quality in development for people, wildlife & the environment (draft), Cornwall Council, 2020 Section 6 from page 38): https://indd.adobe.com/view/0369a2c8-eeb7-42eb-b9dc-15c85a8fd066

9.4.16   The Planning for Walking Toolkit; Transport for London, 2020 (Pages 274-283): http://content.tfl.gov.uk/streetscape-guidance-.pdf

9.4.17   National Design Guide - Planning practice guidance for beautiful, enduring and successful places; Ministry of Housing, Communities & Local Government, 2019 (Pages 22-33): https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/843468/National_Design_Guide.pdf

10 PRINCIPLE 8: STRONG POLICY WORDING AND COMMITMENT.

10.2 Standard

Policy for GI is strongly worded with a commitment to positive action(s) as reflected in statutory plans and industry/local guidance and supported by incentives and clear guidance about what success looks like.

10.3 Guidance for Development Management

Why does it matter?

.3.14   Development proposals need to make strongly worded commitments to the protection and provision of GI on site. Applications are expected to recognise and reference GI as a positive economic, social, and environmental asset, serving as critical infrastructure, throughout.

.3.15   The Natural Capital Committee, an independent advisory committee to the UK Government, has stated that: "Building GI into long-term development plans will not only ensure its benefits from the outset, but will also avoid costly retrofitting in the future.

How to Achieve and/or Improve this Principle?

.3.16   The type and strength of wording used when referring to GI provision, protection, management, and maintenance is critical. GI commitments made using terms such as 'should' 'consider' or 'might' are considered weak as they can potentially be voided or trumped by commitments for the delivery of other infrastructure and/or services.

.3.17   Green Infrastructure needs to be integral design component at the earliest pre-application and masterplanning stages of development to illustrate a strong commitment to the protection and provision of GI on site. A design-led approach can help with planning GI for multiple benefits. For more information regarding this, please see: Principle 1: Mainstreaming and Integration

.3.18   Early engagement with stakeholders regarding GI is expected to be an 'inclusive and participatory process' to allow placemaking/ placekeeping discussions where GI functions and benefits can be identified and designed into development proposals. Strongly worded GI commitments will be supported when design and provision is informed by effective engagement via participatory processes. For more information regarding this, please see: Principle 4: Early Engagement. and Principle 5: Managing Different Expectations.

.3.19   A GI audit (or equivalent) needs to be completed to outline and access the existing site GI. Where possible, existing GI is to be incorporated as part of the design with strongly worded commitments for this made. Where the removal of high value GI is unavoidable then suitable location will need to be identified and replaced to equal or enhanced quality. Again, strongly worded commitments for the mitigation of GI lose are expected.

.3.20   Strong commitments must be made to the delivery of GI as outlined at the planning application stage. Where possible, there should be no variation between what is proposed and what is physically delivered on site.

.3.21   GI must align with statutory plans, planning policy and local guidance including: the Essex Green Infrastructure Strategy (2020) and the Essex GI Standards.

Meeting the Principle

.3.22   It is important for the GI designs in development proposals to be supported with the commitment to deliver on the ground. Site GI principles and standards should be embedded and referenced across application documents to ensure its multifunctionality and multiple benefits are not overlooked. This integration will clearly demonstrate the contributions of GI to natural capital, ecosystem services, biodiversity net-gain, climate change, flooding, health and wellbeing, sustainable transport and placemaking.

.3.23   [Principle 1: Integration and Mainstreaming](), Guidance for DM lists key documentation that will need to integrate strongly worded commitments for GI provision, protection, management and maintenance.

Indicators

.3.24   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

.3.25   The following check list provides guidance on what needs to be considered. Use the [Green Infrastructure Policy Assessment tool]() (Northumbria University 2019) to assess the Strength of wording.

.3.26   Design an inclusive and participatory process that involves all relevant development proposal stakeholders (including a GI expert whether external or internal) in GI discussions. For more information on this, please see: Principle 4: Early Engagement.

.3.27   Strong wording such as 'must', 'required' or 'expected' have been used to commitment to the provision, protection, management, and maintenance of GI.

Measures of Success

If these statements are true, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

.3.28   GI needs to be integral design component at the earliest pre-application and masterplanning stages of development to illustrate a strong commitment to the protection and provision of GI on site. It is expected that the indicative location of GI should be known at early stages, even if the precise location is

not known. For more information regarding this, please see Principle 1: Mainstreaming and Integration.

.3.29   There should be loss of GI as the development proposal moves through the planning process. This is to ensure there is no variation from the GI provision outlined in planning application and the GI delivered on site.

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10.4 Guidance for Policy

Why does it matter?

.4.14 Policy wording needs to recognise GI as a positive economic, social, and environmental asset serving as critical infrastructure and, as such, needs strong action-orientated policy interventions to enhance its delivery.

.4.15 Policy wording should cover all of the standards identified here but research has shown that whilst coverage may be good the strength of policy wording (must, should, where appropriate, where possible) often falls into the weaker categories. This creates vulnerability to being trumped other interests.

.4.16 The National Planning Policy Framework does contain policies for GI which provide key hooks for strategic and local development plans, but they are handicapped by the use of "should" suggesting the need for stronger local policy responses, where possible e.g. paragraphs 20d, 92c, 154a, 175, 186.

.4.17 The Natural Capital Committee, an independent advisory committee to the UK Government, has stated that: "Building GI into long-term development plans will not only ensure its benefits from the outset, but will also avoid costly retrofitting in the future".

How to Achieve and/or Improve on this Principle

.4.18 Make the context of your plan, policy, project or programme clear at the outset. Policy wording in a development plan or within an industry/local guidance (that is non-statutory) may carry less weight compared to the policy wording within Local Plans and other statutory plans, due to their statutory status, unless they are adopted as a Supplementary Planning Document to a Local Plan. By not having strong policy wording within any of these documents will increase the vulnerability of GI when confronted with other competing policy priorities. Strong policies will be supported when the multiple benefits of GI are realised through effective engagement and participatory processes (Principle 4: Early Engagement and Principle 5: Managing different expectations) and effective mainstreaming (Principle 1: Integration and mainstreaming).

.4.19 You will need to design an inclusive and participatory process that involves all relevant policy sector participants (including a GI expert whether external or internal) in placemaking/ placekeeping discussions where GI functions and benefits can be identified and designed into plans, programmes, projects or policies. See Principle 4: Early Engagement to help strengthen the narrative and maximize the opportunities to secure the best outcomes through planning and design. It is helpful here to identify the key political hooks such as climate emergency and, biodiversity net-gain and duty to corporate across the key criteria from the NPPF will aid discussions and

secure political traction within a breadth of policies. This will build upon Principle 1: Integration and mainstreaming to embedded GI across several thematic chapters.

.4.20   To ensure that the integration of GI within Statutory plans, planning policy and industry/local guidance is strengthened, you will need to consider the types and strength of wording to be used. For example, using the words 'should' or 'consider' weakens the policy because it can be trumped by other policies expressed as 'must', 'required' or 'expected'. This will deliver a good, comprehensive, strong and consistent GI policy.

.4.21   Scott and Hislop have developed a GI Planning Policy Assessment Tool, that assesses the efficacy and quality of both GI policy coverage and wording, as shown in case study 15. We encourage you to use the GI planning Policy Assessment tool to ensure your policy has GI embedded across a broad range of policy areas in your Local Plan.

Meeting the Principle

.4.22   It is important for the delivery of GI in development proposals to be supported with the commitment within policy. GI principles and standards should be embedded and referenced throughout the local plan and other strategic documents to ensure its multifunctionality and multiple benefits are not overlooked. This integration will clearly demonstrate the contributions of GI to natural capital, ecosystem services, biodiversity net-gain, climate change, flooding, health and wellbeing, sustainable transport and placemaking.

Indicators

.4.23   The following checklist will help you with the understanding of how to deliver principle 9 and meet the standard.

- Use the Green Infrastructure Policy Assessment tool (Northumbria University 2019) to assess the Strength of wording.
- Design an inclusive and participatory process that involves all relevant policy sector participants (including a GI expert whether external or internal) in GI discussions. See Principle 4: Early Engagement. Sections 6.2.5-6.3.10 Indicators.
- Use key political hooks such as climate emergency and, biodiversity net-gain, Local Nature Recovery Strategy and duty to corporate to aid discussions and integrate GI within a breadth of policies. See Principle 1: Mainstreaming and Integration sections 3.3.9 – 3.310 Indicators
- When reviewing statutory plans, planning policy and industry/local guidance opportunities have been taken to merge and or refine policy wording.

- Strong wording such as 'must', 'required' or 'expected' have been used to produce comprehensive, strong and consistent GI policy when writing statutory plans, planning policy and industry/local guidance.

Measure of Success

.4.24   If these statements are true for your policy/ planning application/ strategic document /project, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

.4.25   Statutory plans, planning policy and industry/local guidance demonstrate a strong commitment to delivering multifunctional GI through strong and positive (policy) wording.

.4.26   The indicative locations of GI are outlined in policy at an early stage, even if the precise location is unknown.

.4.27   There is strong and joined-up leadership, engaging with a wide range of stakeholders and partners through inclusive and accountable partnerships.

.4.28   Key political hooks have been identified and GI has been used as a measure to address several challenges and opportunities coming forward.

.4.29   No GI is lost as an application for an allocate site passes through the planning process.

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10.5 Further Guidance and Information

Case Studies/ Illustrative Examples

10.5.14 Annex A includes a selection of illustrative examples and best practice case studies that illustrate the application of the GI Standards. In regards to strong policy wording and commitment, please see:

- GI Planning Policy Assessment Matrix

External Resources.

10.5.15 Mainstreaming Green Infrastructure; Natural Environment Research Council, 2019: https://mainstreaminggreeninfrastructure.com/index.php

10.5.16 GI Policy Assessment Tool; Natural Environment Research Council, 2019: https://mainstreaminggreeninfrastructure.com/project-page.php?green-infrastructure-planning-policy-assessment-tool

10.5.17 Mainstreaming the Concept - Understanding and applying the principles of Green Infrastructure; Natural England, 2012 (Chapter 3, Page 16): http://publications.naturalengland.org.uk/publication/46011

10.5.18 Perfect Expert Paper 3: What does good green infrastructure policy look like?, 2020: https://www.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1592825117.pdf

11 PRINCIPLE 9: STEWARDSHIP AND MAINTENANCE

11.2 Standard
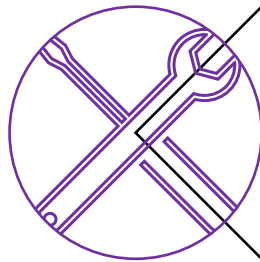
The long-term management and stewardship plans are identified at the early stage with the necessary funding and monitoring components in place.

11.3 Guidance for Development Management

Why does it matter?

.3.14   Stewardship for the management and maintenance of GI is vital to ensure the functions and benefits of individual GI features are delivered and sustained for the long term.

.3.15   This standard should provide for adequate provision for how GI in the public and private domain will be managed and maintained, including the governance and responsibility for these activities, their funding, monitoring and evaluation.

.3.16   People are more likely to use green spaces if they are well maintained. If sites are easier to access, more visible and better used, they will contribute to local people's sense of civic pride, encourage ongoing involvement (i.e. volunteering and formation of 'Friends Of' groups).

.3.17   In line with Principle 4: Early Engagement. it is important that steward, management, and maintenance provisions for development proposals are considered during the early engagement with stakeholders. This could create opportunities for community participation and volunteering regarding GI management and maintenance, creating a sense of ownership ensuring that GI is looked after in the long term. It needs both early engagement and collaboration liaising with the Country Parks teams, Outdoor Pursuits Centres, landowners, Parishes, the community, and Wildlife Trusts.

.3.18   Long-term management and maintenance often take a community effort. In some cases, it may take volunteers and/or donated labour and materials. In others, it may take an initiative that encourages the community, or even the local authority to make changes.

.3.19   In line with Principle 2: Evidence-Led. it is important that stewardship, management, and maintenance provisions for development proposals are evidence-led, built from recent and reliable data. This is to ensure that the management and maintenance plans outlined are correctly aligned with both the protection and management of retained GI and establishment and maintenance of new GI features.

.3.20   Future GI investment decisions should be built on the value that GI creates, as part of place making and not just on how much GI assets cost to maintain. Every £1 spent on parks in England generates an estimated £7 in additional value for health and wellbeing and the environment (The Parks Alliance, 2020).

How to Achieve and/or Improve this Principle?

.3.21   GI must be designed to be appropriate to the local character and needs of the community and a wide range of users to be accessible to all and usable all year round. You will need to ensure the stewardship/governance bodies provide the ability for the relevant stakeholders and representatives of local communities, users and other beneficiaries to get involved in the management of their GI and green spaces. As the end-users are tremendously important and should be engaged and represented not only in the planning for GI, but its stewardship, so their needs are integrated and creates a sense of ownership. This will ensure that the GI is responsive to local needs and is looked after in the long-term. There is, also, a need to continue to create opportunities for community participation and volunteering that can also actively engage and benefit people, especially those that ordinarily face barriers to visiting green spaces.

.3.22   You may need to consider a compensatory provision to be made for the loss of existing GI from a proposal to provide for the provision of new and/or enhancement of GI on-site or off-site. A progression from Biodiversity Net Gain to a broader environmental net gain approach. Where appropriate, the local planning authority will seek to secure via planning obligation provision for the future management and/or maintenance of GI.

.3.23   Long-term management and maintenance of GI need to be considered at an early stage in planning for developments to ensure it is considered in the viability assessment of the site. This includes consideration by the Local Planning Authority and the developers during the planning process on how the GI will be funded, managed and maintained in perpetuity. It is important through masterplanning that the design for specific spaces within a site incorporates multifunctional GI and the likely management and maintenance costs to be identified at the outset. This will potentially provide an opportunity to identify designing solutions to suit the budget early on. Site management plans and funding for any development proposals will need to incorporate the long-term management and maintenance of GI. That these arrangements are agreed and secured alongside planning permissions to ensure that assets maintain their functions and benefits. This will include ensuring landscapes, planting and species are selected as part of the GI design to allow for effective for long-term low-cost management and maintenance. As well as delivering other GI multiple functions and benefits. For example:

- In public green spaces use low growing grasses, wildflower strips/meadows which can support biodiversity.
- Street trees are of a suitable species and specification. Enough space to grow or planted in tree pits to avoid future conflicts with services and hard surfaces in the long-term.

Meeting the Principle

.3.24   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

.3.25   The following check list provides guidance on what needs to be considered for planning long-term management and maintenance of GI:

.3.26   Establish an agreement on the proposed long-term maintenance of the GI early on, for example:

- Masterplans for larger development sites can provide designs for specific spaces within a site and seek multifunctional GI benefits. This will help to identify likely management and maintenance costs from the outset and potential identify designing solutions with GI that will suit the budget.

.3.27   Ensure sound legal and financial arrangements are in place. This will enable collaboration with communities, landowners, land managers, trusts, foundations, and others in local governance. This will secure the long-term management and maintenance of GI. It will also future proof for changes such as to land ownership

.3.28   Design for low maintenance GI.

.3.29   Explore blended finance models including public income and private or voluntary sector contributions, For example:

- Maintenance of some of the GI assets through voluntary stewardship, e.g. verges, can be done by local residents, increasing the sense of ownership among the community and reducing maintenance costs for the councils.

- Consider the distribution of funding within Local Authorities for cross-sector flows; - Looking at funding from a multi-disciplinary, cross-sectoral perspective can release a range of sources. For example, such as from transport, infrastructure, climate change resilience, health, air quality, water quality, flood prevention, community cohesion, and economic regeneration (rather than just parks and greenspace funding).

.3.30   Explore opportunities for income generation through innovative approaches. These include crowd funding, contactless donation technology, energy

generation (e.g. biomass or other renewables), habitat and carbon banking, prescribed health activities.

.3.31 Look for opportunities to support improved long-term conservation, enhancement, and improvement of Natural Capital assets. This may include opportunities through appropriate ownership and management including embedded assets, income streams or endowments. Endowments can provide long-term revenue-generating assets, For example:

- Explore effective management and maintenance regimes of verges and hedgerows to enhance Biodiversity Net Gain.

Measures of Success

.3.32 If all or some of these statements are true, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

.3.33 The ongoing management and maintenance for existing and new GI have been arranged from the outset of a development or project to protect the deliverability of multifunctional benefits over time.

.3.34 Development proposals outline the details of the long-term maintenance and management of site GI in application documentation. This should include how GI will be designed, managed, and maintained sustainably, for example through a GI, Landscape and Ecology Management Plan.

.3.35 Development proposals are expected to outline how retained GI, such as existing trees, hedges and vegetation will be protected during construction via documentation such as a Construction Environment Management Plan (CEMP).

.3.36 Local communities and other stakeholders have been engaged early to encourage local people to take an active role in the management and maintenance of their local GI. For more information regarding this matter, please see Principle 4: Early Engagement.

11.4 Guidance for Policy

Why does it matter?

.4.14 Stewardship for the management and maintenance of GI is vital to ensure the functions and benefits of individual GI features are delivered and sustained for the long term. Hence the use of placemaking and placekeeping functions throughout this document.

.4.15 Also, this standard expects positive public engagement in the ongoing management and maintenance of GI features. By involving people at an early stage, the GI features within the development are more likely to be used, enjoyed and local people are more likely to play an active role in their management and maintenance themselves.

.4.16 People are more likely to use green spaces if they are well maintained. If sites are easier to access, more visible and better used, they will contribute to local people's sense of civic pride, encourage ongoing involvement (i.e. volunteering and formation of 'Friends Of' groups).

.4.17 Long-term management and maintenance often take a community effort. In some cases, it may take volunteers and/or donated labour and materials. In others, it may take an initiative that encourages the community, or even the local authority to make changes.

.4.18 It needs both early engagement and collaboration liaising with the Country Parks teams, Outdoor Pursuits Centres, landowners, Parishes, the community, and Wildlife Trusts. See Principle 4: Early Engagement. to effectively use stakeholder insight and engagement to understand the place and people and to co-produce projects and activities.

.4.19 Build future GI investment decisions on the value that GI creates, as part of place making and not just on how much GI assets cost to maintain. Every £1 spent on parks in England generates an estimated £7 in additional value for health and wellbeing and the environment (The Parks Alliance, 2020).

How to Achieve and/or Improve this Principle?

.4.20 It is important that you identify the long-term management and maintenance within Statutory plans, planning policy, industry/local guidance, development proposals and/or projects from the outset. To achieve this standard, you will need to look at different ways of using revenue funding to secure long-term maintenance. It is important to consider a range of options and diversify income streams to maximise resilience. Use a more blended approach, whether through developers' and landowners' contributions (i.e.S106, CIL,

Biodiversity Net Gain credits), community groups via volunteer stewardship and managing companies.

Meeting the Principle

.4.21   The indicators below provide examples of what you can do and describes what doing well on this principle looks like.

Indicators

.4.22   The following check list provides guidance on what needs to be considered for planning long-term management and maintenance of GI:

.4.23   Make GI essential infrastructure. Work to promote the perception that GI delivers across policy objectives and is funded long-term.

.4.24   Ensure GI Plans include funding, governance, ongoing management, monitoring and action plan.

.4.25   Provide evidence as to why to invest in GI.

- Gather local and national evidence on the benefits and economic returns of investing in GI to make your business case for investing in GI.
- Make the case for investment in GI across a broad range of sectors. Present the economic benefits and financial and policy returns of investing in GI.

Measures of Success

.4.26   If all or some of these statements are true for your policy and strategic documents /project, this indicates you have succeeded in applying this principle to the appropriate level (or standard):

.4.27   Statutory plans, planning policy and industry/local guidance are expected to set out the requirement for details of the long-term maintenance and management of GI. This should include how GI will be designed, managed and maintained sustainably.

.4.28   Local communities and other stakeholders have been engaged early to encourage local people to take an active role in the management and maintenance of their local GI. For more information regarding this, please see Principle 4: Early Engagement.

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11.5 Further Guidance and Information

Case Studies/ Illustrative Examples

11.5.14 1.1.1.1.1.1.1.1Annex A includes a section of illustrative examples and best practise case studies that illustrate the application of the GI Standards. In regards to stewardship, please see:

- City of Edinburgh SPG Developer Contributions and Infrastructure Delivery
- Green Space Stewardship – Land Trust, Beaulieu, Chelmsford.

External Resources

11.5.15 Report on the feasibility study into landscape-style community land stewardship in the south Wales valleys; SKYLINE, 2019 (Page 23-33): https://skyline.wales/sites/default/files/attachments/2019-11/skyline-final_1.pdf

11.5.16 Garden City Standards for the 21st Century - Practical Guides for Creating Successful New Communities guide 9: long-term stewardship; Town and Country Planning Association, 2017 (Pages 11-18): https://www.tcpa.org.uk/Handlers/Download.ashx?IDMF=6326f215-8260-47d6-998d-f0e76aef09fd

11.5.17 National Design Guide - Planning practice guidance for beautiful, enduring and successful places; Ministry of Housing, Communities & Local Government, 2019 (pages 47 – 49): https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/843468/National_Design_Guide.pdf

11.5.18 Built Today, Treasured Tomorrow - a good practice guide to long-term stewardship - creating garden cities and suburbs today; Town and Country Planning Association, 2014 (Pages 8 – 29, 48): https://www.tcpa.org.uk/Handlers/Download.ashx?IDMF=e72ebaf7-d4b2-4f6c-9e02-283edb5a0660

12 CONCLUSION

12.2 What does good look like?

12.2.14 It is the intention of the Essex GI Standards Framework to embed GI within new developments, retrofitting into our towns, cities and villages and for GI to become an integral part of the day-to-day considerations and decision making in other key sectors and services (i.e. health and wellbeing, highways etc.) to ensure that future planning, design, management and maintenance is coherent, structured and focused. We need to move away from looking at GI in isolation, but towards a more joined-up, partnership approach which uses the resources we have to secure the greatest gains for the environment and the sustainable economy, as well as the health and wellbeing of its communities. In delivering the nine principles and standards together will ensure the delivery of high-quality multifunctional GI and the multiple benefits they provide. The order of nine principles and standards reflect the sequence and timescales for successfully planning, delivering and maintaining GI. In that the strategic decisions we make over the long-term will advance the case for GI investment and its importance in placemaking and place-keeping across Essex.

Case Study - Temple Farm, Chelmsford

through attractive and sustainable building and landscape design. A core belief of Watch Tower is to respect and care for the environment. Incorporating sustainable design measures that are 'beyond' normal industry practice publicly demonstrates this to visitors, residents and the community.

What is this case study about?

The Temple Farm development is situated on 34 hectares of land which was previously a large scrapyard. It has been remediated and developed to become the Watch Tower Bible and Tract Society of Britain's new headquarters for Jehovah's Witness Organisation. The live/work campus complements its rural surroundings

What is the value of this approach?

Temple Farm was a hybrid application. This means it included an outline application and a detailed application, which both was approved in 2015. The detailed application for the Temple Farm development related to all infrastructure works, including a power supply and access. A number of

reserved matter applications, which confirm the specifications of different aspects of the development was submitted. These improved the quality of the final design, making the development a better place for residents and visitors. There are many innovative features that make this development an exceptionally dynamic and pioneering one in all aspects of sustainability.

What has happened?

Activity/Outcomes
The access road alone was awarded the Susdrain New Build Small Scale award in 2018. The development has been awarded First ever BREEAM Communities innovation credit is claimed by Temple Farm Development. It is also the second BREEAM Communities project to have received an Outstanding rating.

How does it demonstrate the principle?
The development consists of a myriad of different features that demonstrates all the principles through to its early engagement, evidence, design and commitment - integrating many aspects of sustainability. The landscaping and built environment design actively promote Biodiversity Net Gain, amenity, health and wellbeing connectivity and a range of other multifunctional benefits. Through the improvements to local pedestrian and cycle routes, nature-based solutions SuDs, planting of trees, native hedgerow and woodland. The inclusive design and operation strategy developed at the outset ensures that the needs of all users are met. Before construction work even started, the long-term maintenance and operation of the development including GI was in place.

What are the lessons learnt?
The process of incorporating standards like BREEAM raises the awareness of the project design team in matters of sustainability when it comes to building layouts and material specification. As a result of using BREEAM, consideration was given to issues of ecology, energy, water, waste and pollution much earlier in the design process.

Other Principles Met

12.3 Assessment and Evaluation

12.3.14   Details on the assessment and evaluation approach will be governed by the feedback from the April 2021 consultation. There are four possible options for assessing and evaluating whether the principles and standards have been adequately achieved.

- Option 1: The framework becomes a supporting guidance only.
- Option 2: A self-assessment, through using an Essex adapted version of the GI planning Policy Assessment matrix tool to assess.
- Option 3: Full assessment via external assessors, or potential external verification through Building with Nature where appropriate.
- Option 4: A combination all three, to be applied where appropriate.

12.4 Next Steps for the Essex GI Standards

12.4.14   This technical Essex GI standards guidance contains information on each of the nine key Essex GI Principles and Standards, with content focusing of the application of these to planning policy and development management. This section will outline the next steps that will be taken to advance and update this document.

Local Nature Partnership (LNP)

12.4.15   The Essex GI Infrastructure standards framework and guidance will support Local Nature Partnership (LNP). LNPs are partnerships of a broad range of local organisations, businesses and people who aim to help bring about improvements in their local natural environment. It is anticipated that the LNP will explore opportunity mapping that will identify natural habitats sites to protect and enhance in Essex. This will provide further guidance for the delivery of offsite strategic GI in Essex.

Natural England GI Standards

12.4.16   The Natural England National GI Standards Framework are expected to be published in Summer 2022. These standards aim to result in the incorporation of green infrastructure into development planning across the country.

12.4.17   The Essex GI Principles were identified across the three 'Making Better Planning for Better Placemaking and Place Keeping' workshops that were a part of the Essex project for trialling the Natural England National GI Standards Framework during September 2020 to February 2021 (for further information, please see 1.1.1.1.1.1.1.1Annex D).

12.4.18   Essex's GI team are working closely with Natural England ensure that our local standards are broadly in line with their national standards. More information on these will be added to this document following the publication of the Natural England Standards. In addition, a table will be made to illustrate the links between the Essex and Natural England GI Standards.

Document Reviews and Updates

12.4.19   This technical Essex GI Principles and Standards document will be reviewed annually and, depending upon this review, updates were necessary to ensure it is kept in line with national guidance, policy, and emerging

documents. Additional best practise case studies and illustrative examples that meet Essex GI standards will also be incorporated.

13 FURTHER GUIDANCE AND INFORMATION

13.2.14 Building with Nature User Guide for Developments and Policy Makers, 2017 (Will need to request a free copy via info@buildingwithnature.org.uk): https://www.buildingwithnature.org.uk/

13.2.15 Understanding our growing environmental vocabulary in England Connecting Green Infrastructure, Natural Capital, Ecosystem Services and Net Gains within the English Planning System, Natural Environment Research Council, 2020: https://mainstreaminggreeninfrastructure.com/project-page.php?understanding-our-growing-environmental-vocabulary-in-england

13.2.16 For information on where to access further specialist advice, please refer to the table below

Table 2: Further Information and Contact Details

Subject Area and/or Organisation	Further Information	Contact Information
Arboriculture (Place Services)	https://www.placeservices.co.uk/what-we-do/natural-environment/arboriculture/	0333 013 6840 enquiries@placeservices.co.uk
Countryside Management (Place Services)	https://www.placeservices.co.uk/what-we-do/natural-environment/countryside-management/	0333 013 6840 enquiries@placeservices.co.uk
Ecology	https://www.placeservices.co.uk/what-we-do/natural-environment/ecology/	0333 013 6840 enquiries@placeservices.co.uk
Basildon Borough Council	https://www.basildon.gov.uk/	01268 533333 planning@basildon.gov.uk
Braintree District Council	https://www.braintree.gov.uk/	01376 552525 planning@braintree.gov.uk
Brentwood Borough Council	https://www.brentwood.gov.uk/	01277 312500 planning@brentwood.gov.uk

Castle Point Borough Council	https://www.castlepoint.gov.uk/	01268 882200 info@castlepoint.gov.uk
Chelmsford City Council	https://www.chelmsford.gov.uk/	01245 606826 Online enquiry form at www.chelmsford.gov.uk
Colchester Borough Council	https://www.colchester.gov.uk/	01206 282424 Planning.services@colchester.gov.uk
Epping Forest District Council	https://www.eppingforestdc.gov.uk/	01992 564000 contactplanning@eppingforestdc.gov.uk
Harlow District Council	https://www.harlow.gov.uk/	01279 446655 planning.services@harlow.gov.uk
Maldon District Council	https://www.maldon.gov.uk/	01621 854477 contact@maldon.gov.uk
Rochford District Council	https://www.rochford.gov.uk/	01702 318191 Planning.applications@rochford.gov.uk
Southend-on-Sea Borough Council	https://www.southend.gov.uk/	council@southend.gov.uk
Tendring District Council	https://www.tendringdc.gov.uk/	01255 686868 Planning.services@tendringdc.gov.uk
Thurrock Council	https://www.thurrock.gov.uk	general.enquiries@thurrock.gov.uk
Uttlesford District Council	https://www.uttlesford.gov.uk/	01799 510510 planning@uttlesford.gov.uk
Essex Climate Action Commission	https://www.essexclimate.org.uk/	Online enquiry form at: https://www.essexclimate.org.uk/contact-us
Green Infrastructure (Essex County Council)	https://www.essex.gov.uk/protecting-environment	greeninfrastructure@essex.gov.uk
Minerals and Waste (Essex County Council)	https://www.essex.gov.uk/topic/planning-development	mineralsandwastepolicy@essex.gov.uk
Highways Planning and Community Infrastructure (Essex County Council)	https://www.essex.gov.uk/planning-advice-guidance/highways-planning-advice	Development.Enquiries@essex.gov.uk
Sustainable Drainage (Essex County Council)	https://flood.essex.gov.uk/new-development-advice/	suds@essex.gov.uk
Sustainable Travel (Essex County Council)	https://www.essex.gov.uk/sustainable-travel	travelplanteam@essex.gov.uk
Essex Design Guide	https://www.essexdesignguide.co.uk/	0333 013 6840 essexdesignguide@essex.gov.uk

Infrastructure Planning and Developer Contributions (Essex County Council)	https://assets.ctfassets.net/knkzaf64jx5x/5aKhke88Ey5zkdMvSQj44w/0d71817cad70b9394d76e7a490ac7bd7/developers-guide-infrastructure-contributions.pdf	0345 743 0430 development.enquiries@essex.gov.uk
Natural England	https://www.gov.uk/government/organisations/natural-england	0300 060 3900 enquiries@naturalengland.org.uk
Building with Nature	https://www.buildingwithnature.org.uk/	01452 383 333 info@buildingwithnature.org.uk
Essex Wildlife Trust	https://www.essexwt.org.uk/	Online enquiry form at: https://www.essexwt.org.uk/contact-us
Transport Planning and Active Travel	Sustainable travel - Essex County Council	travelplanteam@essex.gov.uk
Essex Forestry	The Essex Forest Initiative - Essex County Council	https://www.facebook.com/EssexForest
Low Carbon and Energy	Reducing carbon emissions - Essex County Council	lowcarbon@essex.gov.uk
Health and Wellbeing (Livewell)	Home - Livewell (livewellcampaign.co.uk)	livewell@braintree.gov.uk
Environment Agency	Environment Agency - GOV.UK (www.gov.uk)	enquiries@environment-agency.gov.uk
RSPB	https://www.rspb.org.uk/	01767 680551
Woodland Trust	https://www.woodlandtrust.org.uk/	0330 333 3300 enquiries@woodlandtrust.org.uk.
Forestry Commission	https://www.gov.uk/government/organisations/forestry-commission	nationalenquiries@forestrycommission.gov.uk

14 GLOSSARY

Key Term/ Phrase	Definition
Accessible Natural Greenspace Standard (ANGSt)	Tool developed by Natural England based on the minimum distances people would travel to green spaces.
AONB Area of Outstanding Natural Beauty	An area of countryside considered to have nationally significant landscape value.
Amenity	The desirability of an area as a place to live
Ancient Woodlands and Ancient Semi Natural Woodlands	Ancient woodland is a woodland that has existed continuously since 1600, There are two types of ancient woodlands - Ancient Semi Natural Woodland are woods that have developed naturally with native tree species (not plantations) and Plantations on ancient woodland sites that were felled and planted with non-native trees.
Biodiversity	The total variety of all living things. This includes all plants and animals, as well as the places and spaces in which they live.
Biodiversity Offsetting	Conservation activities that are designed to give biodiversity gain to compensate for residual losses.
Biodiversity Net-Gain	Biodiversity net gain is an approach which aims to leave the natural environment in a measurably better state than beforehand
Blue Infrastructure	Known as water infrastructure, is a network of water assets such as rivers, canals, ponds and ditches. Blue infrastructure is concerned with use, quantity and quality of water and other water-related issues including flood risk.
Built Environment	All forms of human-made environment from housing, industrial and commercial property, to hospitals and schools, streets, sidewalks, and even open spaces.
Climate Change	Climate change is a large-scale, long-term shift in the planet's weather patterns and average temperatures. Climate change in Intergovernmental Panel on Climate Change (IPCC) usage refers to a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity.
Community Forestry	Community forestry is a set of practices, techniques and methods to manage the forest and its natural resources. It is

	regulated by a specific legal framework that organises local communities' participation.
Designated Sites	Nature sites and areas of countryside can be 'designated', which means they have special status as protected areas because of their natural and cultural importance.
Development Management	Development management is the process of pro-actively managing development in a local area to achieve the local planning vision and objectives.
Ecosystem	A dynamic self-sustaining community comprised of interdependent organisms (plants, insects, and animals), their natural environment and their non-living environment interacting as a functional unit. It's all the living things in an area and the way they affect each other and the environment. It provides the food chain through which energy flows, and the biological cycles that recycle essential nutrients and wastes.
Ecosystem Services	Ecosystem services are the benefits provided by ecosystems in the form of goods and services that underpins our economy by producing value for people. These goods/services are classified along four functional categories: • Cultural services - the non-material benefits such as recreation, aesthetic and spiritual enrichment • Provisioning services – products obtained such as fresh water, food, energy, timber and wood fuel. • Supporting services – such as wildlife, nutrient cycle, water cycle, photosynthesis • Regulating services – protection from hazards such as the regulation of air quality, climate, flooding and erosion; water purification; disease and pest control and pollination.
Essex Climate Action Commission	The Essex Climate Action Commission (ECAC) is an independent, voluntary, and cross-party body, bringing together groups from the public and private sector, as well as individuals from organisations, to promote and guide climate action in the county. As a Commission, our purpose is to provide expert advice and up-to-date recommendations to move Essex to net zero by 2050.
Essex Design Guide	This is a reference guide that was established in 1973 by Essex County Council to help create high quality places with an identity specific to its Essex context. There was a 2005 publication and a 2018 edition which seeks to address the evolution of socioeconomic impacts on place-making.
Essex Green Infrastructure Strategy	A 2020 strategy that champions for high quality green space and green infrastructure in Essex. The purpose of this strategy is to take a positive approach to enhance, protect and create an inclusive and integrated network of high-quality green infrastructure in Greater Essex. This will help to create a county-wide understanding of green

	infrastructure, its functions and values, and to identify opportunities for delivering green infrastructure.
Green Belt	A policy and land use designation used in land use planning to retain areas of largely undeveloped or agricultural land surrounding or neighbouring urban areas. The main aim of Green Belt policy is to prevent urban sprawl by maintaining land permanently open.
Green Corridor	Green corridors can include railway embankments, river banks, heritage and cultural assets and roadside grass verges. Green corridors are linear routes offering recreational and travel opportunities, whilst facilitating wildlife migration.
Green Infrastructure	A strategically planned and delivered network of green spaces in an area which conserves wildlife, natural ecosystem values and functions, sustains clean water and air, and provides a wide array of benefits to people and wildlife. This includes parks, open spaces, woodlands, rivers, and allotments.
Green Roof and Walls	A green roof or wall (also known as a living roof or wall) is where vegetation is intentionally grown and/or habitats for wildlife are established. Green roofs and walls provide different types of biodiversity habitats, water storage capacity, flood alleviation and energy saving potential.
Green Space	Green Spaces are any vegetated areas of land and or water within or adjoining an urban area. Green Infrastructure is the network of different types of green spaces and assets.
Greenways	(Public Rights of Way, footpaths, cycleways and tracks, byways, bridleways), protected lanes, ancient roads, tracks and footpaths, all of which provide an invaluable resource for walking, riding and cycling.
Grey Infrastructure	Traditional utilities infrastructure, e.g. roads, rail, sewers, pipes, etc.
Habitat Fragmentation	The process during which a large expanse of habitat is transformed into a number of smaller patches of smaller total area isolated from each other by a matrix of habitats unlike the original.
Health Impact Assessment (HIA)	HIA has the potential to be a useful tool to assess and address the impacts of development proposals. 'HIA is a means of assessing the health impacts of policies, plans and projects in diverse economic sectors using quantitative, qualitative and participatory techniques.' World Health Organisation - http://www.who.int/hia/en/
Lawton Principles	To make our network of sites bigger, better, and more joined up. This means: • Protecting what we have while improving its quality with better management; • Increasing the size of wildlife sites;

	• Enhancing connection by creating new wildlife corridors or stepping stones; • Creating new sites; • Reducing pressure on wildlife by improving the wider environment including through buffering wildlife sites
Local Plans	A plan prepared by a local planning authority which sets the rules for how the local area will develop over time. The Local Plan, along with any Neighbourhood Plans, forms the overall development plan for the local area. Planning decisions must normally be taken in accordance with the development plan.
Local Nature Partnerships (LNP)	LNPs are partnerships of a broad range of local organisations, businesses and people who aim to help bring about improvements in their local natural environment
Local Wildlife Sites	Local Wildlife Sites are areas of land that are locally important for their wildlife.
Master-planning	A master plan is an overarching planning document and spatial layout which is used to structure land use and development. 'Master plan' is an all-encompassing term. Its scope can range from 10-year implementation at the regional scale, to an illustrative plan of small-scale groups of building There is no formal process for master planning and every design team will have their own individual approach.
National Planning Policy Framework (NPPF)	The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.
National Nature Reserves	NNR are areas of land set aside for nature, to promote their conservation and enjoyment.
Natural Capital	It is our 'stock' of waters, land, air, species, minerals and oceans. It underpins our economy by producing value for people in the form of goods and services often called ecosystem services. These goods/services include clean air & water, food, energy, wildlife, recreation and protection from hazards and is the foundation on which our economy, society and prosperity is built.
Natural Corridors (also Wildlife or Habitat Corridors)	Wildlife areas in the landscape designed to keep connected local wildlife populations which would otherwise be fragmented by human activities.
Natural & Semi-Natural Open Spaces	This type of open space includes woodlands (e.g. broadleaved, mixed, coniferous, ancient), urban forestry, scrubland, grasslands (e.g. commons, meadows), heathland, wetlands, nature reserves and wastelands (e.g. abandoned and derelict land and disused quarry) with a primary purpose of wildlife conservation and biodiversity within settlement boundaries. Land, water and geological

	features which have been naturally colonised by plants and animals and which are accessible on foot to large numbers of residents.
Nature Recovery Networks	A joined-up system of places important for wild plants and animals, on land and at sea. It allows plants, animals, seeds, nutrients, and water to move from place to place and enables the natural world to adapt to change. It provides plants and animals with places to live, feed and breed.
Neighbourhood Plans	Neighbourhood plans are prepared by a Parish Council or Neighbourhood Forum for a neighbourhood area to establish general planning policies for the development and use of land in a neighbourhood. A way for communities to decide the future of the places where they live and work.
Net-Zero Carbon (Net-Zero)	The state where there is a balance between the amount of greenhouse gases released into the atmosphere by a human activity, and the amount which is removed. A commitment to net zero carbon is associated with a commitment to reduce greenhouse gas emissions in order to achieve this balance.
Open Space	Open Spaces is any open piece of land that is underdeveloped (has no built structures) and is accessible to the public and can include: green space, playground, public seating area, school grounds.
Planning Policy	Planning policy is the development framework under which decisions on planning applications are made
Planning System (Planning Process)	The planning system is the management, control and regulation of development, balancing public and private development needs with the protection of amenity, and the environment in the wider public interest.
Public Rights of Way (PRoW)	All rights of way are legally highways, and anyone may use them at any time. There are different types, such as paths, byways and bridleways. The permanence of a PRoW is guided by the principle "once a highway, always a highway", so it remains a highway until there is a legal event to close, divert or extinguish it as a PRoW. A PRoW can be established in one of three ways: • Express dedication - where the landowner has given the public a right of use over their land; • Presumed dedication - where the public have used a right of way for a longer time than anyone can remember; or • Deemed dedication - where a right of way has been in use for 20 years or more.
Ramsar Site	Ramsar sites are wetlands of international importance designated under the Ramsar Convention.
Retrofitting	The addition of new components, technology, or features to a product or a system, to reduce carbon emissions and increase its efficiency.

Self-Sustaining	The ability for the green infrastructure to maintain and continue in a health state independently, without (or very little) outside assistance – through a source of revenue and maintenance cycle.
Social Cohesion	Social cohesion refers to the strength of relationships and the sense of solidarity among members of a community.
Statutory Consultee	Statutory consultees are those organisations and bodies, defined by statute, which local planning authorities are legally required to consult before reaching a decision on relevant planning applications.
Sites of Special Scientific Interest (SSSI)	SSSIs are those areas of land and water that are considered to best represent the natural heritage in terms of their: flora – i.e. plants; fauna – i.e. animals; geology – i.e. rocks; geomorphology – i.e. landforms etc.
Sustainable Drainage (SuDS)	A sequence of water management practices and facilities designed to drain surface water in a manner that will provide a more sustainable approach than the conventional practice of routing run-off through a pipe to a watercourse.
Supplementary Planning Documents (SPDs)	Provide additional information on planning policies in a development plan.
Sustainable development	Sustainable development means encouraging economic growth while protecting the environment and improving people's quality of life - all without affecting the ability of future generations to do the same.
UK Habitat Classification	The UK Habitat Classification is a new, free-to-use, unified and comprehensive approach to classifying habitats that is fully compatible with existing classifications
Unitary Authorities	Unitary authorities provide all local government services in their area. In Essex, Southend-on-Sea Borough Council and Thurrock Council are unitary authorities.
Urban Greening	Urban greening refers to public landscaping and urban forestry that create mutually beneficial relationships between people and their environments. Urban greening refers to all forms of vegetation such as street trees, open parks and gardens, shrubs, green walls, green roofs, lawn and pervious soils.
'Urban heat island' effect	This effect occurs when an urban area is significantly warmer than its nearby rural areas due to human activities. This is related to how well the surfaces in each environment absorb and retain heat. UHI is most noticeable during the summer and winter.
Viability Assessment	The role for viability assessment is primarily at the plan making stage. Viability assessment should not compromise sustainable development but should be used to ensure that policies are realistic, and that the total cumulative cost of all relevant policies will not undermine deliverability of the plan.

15 APPENDIX

ANNEX A CASE STUDIES AND ILLUSTRATIVE EXAMPLES

Examples of Policy Wording

i.   The following policy from the adopted Local Plan for [South Downs National Park 2014-2033](#) gives a good example of mainstreaming services using GI as the principal delivery vehicle.

1. South Downs National Park 2014-2033

What is this case study about?

This is in the adopted Local Plan for [South Downs National Park 2014-2033](#). It is one of four core policies which ALL development must satisfy. The following is an extract policy from the Local Plan: It is important to recognise that the policy is one of four core policies that all development has to meet so it sits outside the environmental chapter policies.

How does it demonstrate the principle?

It is positively framed and also action orientated. There is also a householder and developer guidance to maximise the opportunities arising for the delivery of this policy. It shows developers and householders how they can achieve these environmental benefits which is most welcome.

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Core Policy SD2: Ecosystem Services

1.   Development proposals will be permitted where they have an overall positive impact on the ability pf the natural environment to contribute goods and services. This will be achieved through the use of high quality design, and by delivering all opportunities to:

  a.   Sustainably managed land and water environments;
  b.   Protect and provide more, better and joined up natural habitats;
  c.   Conserve water resources and improve water quality;
  d.   Manage and mitigate the risk of flooding;
  e.   Improve the National Park's resilience to, and mitigation of, climate change;
  f.   Increase the ability to store carbon through new planting or other means;
  g.   Conserve and enhance soils, use soils sustainably and protect the best and most versatile agricultural land;
  h.   Support the sustainable production and use of food, forestry and raw materials;
  i.   Reduce levels of pollution;
  j.   Improve opportunities for people's health and wellbeing; and
  k.   Provide opportunities for access to the natural and cultural resources which contribute to the special qualities.

Development proposals must be supported by a statement that sets out how the development proposal impacts, both positively and negatively, on ecosystem services

Other Principles Met
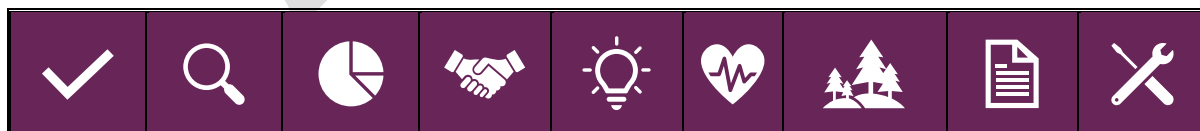
ii.   The three case studies provide examples of the strategic documents, where GI is a core component.

2. Essex Green Infrastructure Strategy

and green spaces in our towns, cities and villages, especially close to areas of deprivation.

What is the value in this approach?

The Strategy was awarded a Building with Nature 'Policy Award – Excellent' on 4 December 2020 in recognition of its approach to supporting the design, implementation, and long-term management of high-quality green infrastructure. Building with Nature (BwN) is a set of GI Standards that define quality and having a BwN Award verifies that the strategy is a driver of quality. It demonstrates a commitment to the principles of high-quality GI which underpin the BwN benchmark. Dr Gemma Jerome FLI, Director of BwN, suggested: *"This strategic policy document represents a national exemplar in the design, delivery and maintenance of high-quality GI for the benefit of people and wildlife, now and long into the future."*

What is this case study about?

The GI Strategy aims to enhance the urban and rural environment, through creating connected multifunctional GI that delivers multiple benefits to people and wildlife. It meets the Council's aspirations to improve GI

What has happened?

Activity / Outcome

The Strategy creates a framework of principles, setting clear parameters, for developments and other GI related projects. It secures the functions and benefits associated with high-quality GI and demonstrates our commitment to delivering and sustaining places for people and wildlife.

How does it demonstrate the principle?

Where GI has not been integrated into a strategic document, or elements of it need strengthening, then you can use the Essex Green Infrastructure Strategy (2020) as a basis for policy at a local level. This will ensure a consistent approach across Essex.

What are the lessons learnt?

Developing a strategy requires a robust evidence base supported by GI mapping. As well as collaboration and expertise from a range of partners. BwN provides an external verification of its efficacy as an effective strategy, as well as credibility and a positive impact on stakeholder engagement to help secure the functions and benefits associated with a high-quality GI.

Other Principles Met

3. Essex Design Guide

Design Guide has collated over 45 years' experience of delivering successful development in Essex.

What is this case study about?

The Essex Design Guide helps to establish a more positive perception of development. The

What is the value in this approach?

It has always been about more than architecture. It is about creating distinctive places that people want to live in. It is about building communities and making sure that the infrastructure and facilities are in place at the right time.

What has happened?

Activity / Outcome

The Design Guide was the winner of Design Excellence in planning and placemaking at the 2019 Planning Awards. 2019.

How does it demonstrate the principle?

It demonstrates the social and economic benefits that a development can bring and also how to enhance GI, ecology and other infrastructure of development for the benefit of communities.

What are the lessons learnt?

GI can help address a number of needs? challenges? these issues through active design principles and the importance of having access to outdoor spaces on your doorstep.

Other Principles Met

4. Maldon District Design Guide
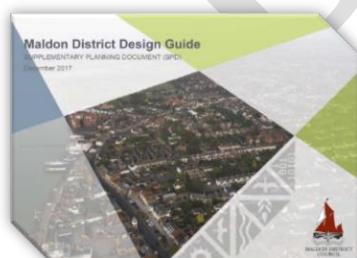
use this Design Guide in the future determination of planning applications.

What is the value in this approach?

The Design Guide will help to understand and analyse the context development is proposed and to work up a considered design. Along with the Local Plan, it will be the key mechanism to deliver design quality in the District.

What is this case study about?

Maldon District Design Guide is a Supplementary Planning Document, adopted in 2017. It promotes best practice in the initial stages of the design process. The Council will

⚙️ **Activity / Outcome**

In 2018, the Design Guide won a Planning Award for Design Excellence, chosen for its 'ambition, clarity and usability' by the judges.

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✓ **How does it demonstrate the principle?**

This Design Guide will assist landowners, developers, applicants, agents, designers and planners in the process of developing and accessing design quality. It recognises GI as key component for its sustainability objective as part of the wider landscape.

📊 **What are the lessons learnt?**

The Design Guide has been developed using evidence-based studies and strategies and relevant stakeholder engagement, culminating in a public consultation in May and June 2017

Other Principles Met

✓	🔍	🥧	🤝		❤️	🌲		🛠️

5. Green Essex StoryMap
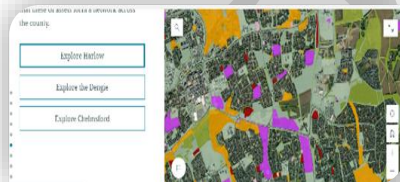
What is this case study about?

The **Green Essex StoryMap** was created as a result of the GI spatial database for Essex. University of East Anglia (UEA) created a robust evidence base to support the Essex GI strategy (2020). This was undertaken as part of their work within the Economic and Social Research Council (ESRC) funded Business and Local Government Data Research Centre.

What is the value in this approach?

UEA have been testing out an approach of blending several publicly available spatial data sources within Geographical Information System (GIS) Software. Based on open-source Open Street Map land cover mapping and combined with 20 other assets include types of nature reserves, trials and OS data. To overlay data to produce a broad definition of GI.

What has happened?

Activity / Outcome

The StoryMap uses Esri ArcGIS web-based application. Where mapping and location intelligence, through GIS creates inspiring, stories, combining text, images, interactive maps, and other multimedia content. It illustrates spatial relationships and provides a narrative for each of the maps.

How does it demonstrate the principle?

The mapping is intended to help provide evidence, identify needs and opportunities to enhance GI across the county and inform strategic planning and decision-making in Essex. It provides a real visual aid.

What are the lessons learnt?

There is a wealth of data available open to different interpretations. The UEA's approach of overlaying data, produces a broader definition of GI, not simply publicly accessible sites. GI can take many form and is multifunctional, so need to combine a variety of data sources to identify all the different types of GI Assets.

Other Principles Met

Example of Partnership Working

6. Forth Valley Royal Hospital & Larbert Woods, Scotland

What is this case study about?

This scheme is a hospital development of 860 inpatient beds, 25 wards, and 16 operating theatres. At the point of completion in 2010, it was Scotland's largest ever NHS construction project.

Winner of the Building with Nature 'National Award' at the 2020 Landscape Institute Awards, Forth Valley Royal Hospital and Larbert Woods is a modern hospital development that represents an exemplar in the design, delivery and maintenance of high-quality GI, capturing the preventative health benefits of GI now and long into the future.

What is the value in this approach?

The approach to GI and landscape design was multifunctional in its essence – the green spaces throughout the site needed to perform for different stakeholders and justify their existence in a complex development, with pressures on land use. GI is used in innovative ways across the site, for example:

• Larbert Woods offers patients, staff and community residents alike a tranquil space to connect with nature, and recover from bad news or learn new skills such as Forest School or Tai Chi.

6. Forth Valley Royal Hospital & Larbert Woods, Scotland

- The hospital building is designed to look out onto internal green courtyards, improving natural light within the building, helping with orientation, and allowing patients and staff a moment of nature connection.
- GI is used throughout the grounds, for example in car parks and at entrance ways, for both aesthetic reasons, softening the context of the hospital; to improve legibility and permeability of the site to minimise the stressful experience of visiting hospital; and for infrastructure such as Sustainable Drainage

What has happened?

	Activity / Outcome		How does it demonstrate the principle?		What are the lessons learnt?
	The partnership between NHS Forth Valley, Forestry and Land Scotland, and Scottish Natural Heritage, and the commitment to quality from Raeburn Farquhar Bowen landscape architects at each stage of design and implementation, has resulted in the delivery of an exceptional medical facility in a high-quality landscape setting.		Through the fusion of the built and the natural features on site, from the garden courtyards that run through the building and visitor gardens welcoming people at the entrance, to the restored sanctuary of Larbert Woods and Larbert Loch, and a demonstrable commitment to sustainable management of the estate, it is clear that those responsible for designing, constructing and maintaining the landscape at Forth Valley Royal Hospital and Larbert Woods fully understand the value of creating access to high-quality GI, for both the recipients of care, and as a preventative measure for those at risk of mental and physical health conditions, including staff and visitors to the facility		The commitment from Forestry and Land Scotland to resource a Ranger on site has proven critical to the long-term management, maintenance, monitoring and remediation of GI features on site. This is turn has resulted in more accessible and usable GI for patients, visitors, staff, and community residents from the neighbouring settlement.

Other Principles Met

Multifunctionality in Practice

7. Rain Garden Retrofitted as Basildon Hospital, Essex

	What is this case study about?

Basildon University Hospital is located in a Critical Drainage Area within South Essex, an area within the top 10 at risk from pluvial flooding nationally. To increase the resilience to surface water flooding Basildon and Thurrock University Hospital worked with Essex County Council and other stakeholders to retrofit Sustainable Drainage Systems (SuDS) in the hospital as part of the EU Interreg 2 Seas project Sponge 2020. This project is part-financed by the European Regional Development Fund.

What is the value in this approach?

The installation of SuDS allows areas to be adapted to slow down the rate of water entering conventional drainage systems and reducing the flood risk. However, incorporating more natural flood management techniques through the use of GI within the design and delivery of SuDS enabled the creation of a rain garden on the grounds of the hospital. This rain garden provides multiple functions and benefits of not only alleviating flooding, but a place for staff, visitors and patients to enjoy and relax, improve recovery rates, promote nature and adapting to climate change.

What has happened?

	Activity / Outcome		How does it demonstrate the principle?		What are the lessons learnt?
	The creation of a rain garden at the hospital demonstrates how GI can be retrofitted in to existing urban areas. By adapting our critical infrastructure to utilise existing space to improve the overall sustainability and performance of a place to provide a wider range of uses with multiple benefits for people and wildlife.		The rain garden delivers multiple benefits, including flood and water management, enhancing biodiversity, providing aesthetic value and providing a place to relax and recoup.		. The project demonstrates: - That size doesn't matter – GI can be introduced on any site to alleviate flooding and encourage biodiversity. Co-benefits and duel functionality of SuDs.

Other Principles Met

8. West Dunbartonshire Council, 'Our Green Network' Supplementary Guidance

What is this case study about?	How does it demonstrate the principle?	**Pre-Application Discussion**
The extract was taken from West Dunbartonshire Council, 'Our Green Network' Supplementary Guidance' 2015.This document complements Chapter 8 of the West Dunbartonshire Local Development Plan. It provides further detail on the Integrating GI approach referred to in Policy GN2 and sets out the standards that will be expected of different types of new development in terms of open space provision. The guidance is split into three parts: 1. Identifying Assets and Opportunities 2. Enhancing and Expanding Our Green Network Design Guidance	The guidance was assessed using the GIPAT Tool. Against the criteria for 'Early design and engagement' it identified the following: Comment: This policy guidance fully covers the criterion with a combination of early engagement. As this statement is within adopted Supplementary Guidance it is therefore considered part of the statutory Local Development Plan policy.	Development Management encourages pre-application meetings with developers to discuss what would be appropriate for that site in terms of green network provision, based on the requirements set out in Part 2 of this guidance. This discussion may include input from the Council's Greenspace and some of our other partners such as GCV Green Network, SNH and Forestry Commission, Furthermore, some of the most successful places involve the input of the local community from the outset and developers should look at ways to engage people early in this process, including the use of charrettes or similar methods of community engagement.

Other Principles Met

9. Swansea Central Area

Swansea Central Area - Regenerating Our City for Wellbeing and Wildlife

August 2019

CONSULTATION DRAFT

Swansea Central Area - Regenerating Our City for Wellbeing and Wildlife

What is this case study about?

Swansea has developed (2019) an innovative GI strategy for Central Swansea involving extensive public and stakeholder consultation. The strategy is designed to support the Local Development Plan and emerging Supplementary Planning Guidance on GI.

What is the value of this approach?

It contributes to Natural Resources Wales and Swansea Council's duties under the Welsh Well-being of Future Generations Act 2015 and the Environment Act 2016 and supports the delivery of the Statutory SuDS Standard 2019 and the Swansea Public Service Board's 'Working with Nature' Objective.

What has happened?

Activity/Outcomes
The GI strategy helped reframe the central area of Swansea as a "sponge" city. It provides an exemplar of cross disciplinary working and agency partnership.

How does it demonstrate the principle?
Core to the work was an initial series of public and stakeholder events and meetings. This included:-
- Workshops with professionals
- Sessions with politicians in Town Hall
- Meeting with officials in Town Hall
- High Street meet and greet with public
- School visits
- Allotments and community group visits

What are the lessons learnt?
The approach was deliberately low tech with chalkboards and notes with these results informing the concept of sponge city with the ability to shape the strategy from the outset.

Public engagement (High Street) Word cloud: What does nature in the city mean to you?

Public engagement (High Street) Word cloud: Opportunities ?

Other principles met

Public engagement (Castle Square) Word cloud:Thoughts?

School engagement: What does nature in the city mean to you?

10. Thurrock Stronger Together Partnership using Asset-Based Community Development
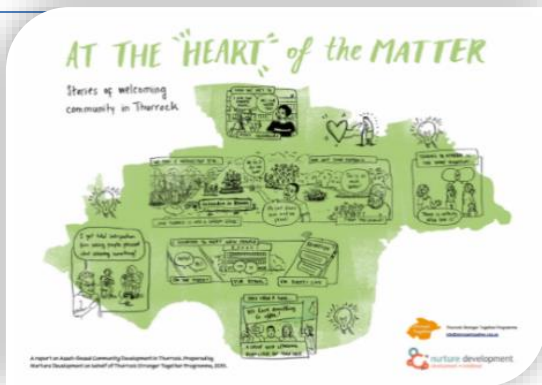
At the "Heart' of the Matter: Thurrock Stronger Together Partnership

What is this case study about?

The Thurrock Stronger Together Partnership promotes local, community activities that strengthen the connections between people. Stronger Together also encourages local people to have a greater say in what happens in their neighbourhood and to take control over where they live and the decisions that affect them.

What is the value of this approach?

To support all citizens across Thurrock in these civic actions, the Partnership commissioned a range of catalytic supports including Asset-Based Community Development (ABCD). ABCD is a description of how local residents grow collective efficacy and what they use to do so. It involves paying attention to what is in a local place; not what we think should be there, or what isn't there?

What has happened?

Activity/Outcomes
In July 2019, 19 people came together and shared their own personal stories of what they felt was important in building a welcoming community. Over time, it was hoped that these stories could inspire others to become involved and help make a positive difference to local lives.

How does it demonstrate the principle?
Through using a range of support such as ABCD, it builds relationships, considering everyone has irreplaceable skills and strengths. Mobilising cohesiveness to produce sustainable and satisfying change.

What are the lessons learnt?
The Partnership recognise the root causes of the vast majority of socio-economic and political issues are disconnection and inequality. Research shows that one of the ways to address this is to be as close to people's doorsteps as possible, since people will engage and connect around the things they care about.

Other principles met

Example of Policy Wording.

11. Planning Policy Wales

3- Strategic and Spatial Choices

Promoting Healthier Places

3.23 Green Infrastructure can be an effective means of enhancing health and well-being, through linking dwellings, workplaces and community facilities and providing high-quality, accessible green spaces. In all development and in public spaces especially, there should be sensitive management of light, and exposure to airborne pollution should be kept as low as reasonably practicable.

What is this case study about?	How does it demonstrate the principle
The extract was taken from Planning Policy Wales 10, 2018. Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It recognised that the built and natural environment is a key determinant of health and well-being. The way places work and operate can have an impact on the choices people make in their everyday lives, including their travel and recreational choices and how easy it may be to socialise with others	The guidance was assessed using the GIPAT Tool. Against the criteria under Access Networks and Greenspace, it identified the following: Comment: The health benefits of GI are explicitly stated in the health policy section of the plan.

Other Principles Met

✓	🔍	◔	🤝		♥	🌲	📄	

Inclusivity, Health and Wellbeing in Practice.

12. Development at Barne Barton, Plymouth

	What is this case study about?
	Barne Barton used to be Britain's largest naval estate and now is being transformed into a sustainable and vibrant community by our extensive redevelopment Clarion Housing identified GI as a key component for placemaking, in relation to providing good quality open spaces and linear corridors for use by people, wildlife and as part of the surface water drainage scheme. The existing residents were actively involved in the design process. Their views were taken forward into the regeneration scheme design for the site. The Masterplan makes the most of its proximity to two designated sites and woods. Through designing in views of the designated sites and creating access and wildlife links to the accessible woods

What is the value in this approach?

The scheme will be incorporating a wide range of new multifunctional and connected GI features, that will contribute to a broad range of wellbeing-focused outcomes. This includes the creation of open spaces which are welcoming and encourage community interaction, providing views and seating for over 55's housing, providing a range of play spaces to provide spaces for different age groups of children and increasing natural surveillance to

avoid problems with anti-social behaviour. The scheme was awarded a Building with Nature 'Design Award' for its outline planning application in 2018

What has happened?					
⚙	**Activity / Outcome**	✓	**How does it demonstrate the principle?**	🧑‍🏫	**What are the lessons learnt?**
The GI has been designed to be accessible year round, by including hard as well as soft landscaping, and planting that has been designed with species that are appropriate to the conditions on site and to provide year round interest, for example carefully selecting foliage colour, and including evergreen as well as deciduous plants		This is an example where a Housing Association has engaged the local community to identify their needs and incorporated in the masterplanning. Using GI as a resource, delivering health and wellbeing benefits, as well as contributing to other environmental benefits.		. There is a need to promote community-led engagement to enable inclusive use of GI, that will provide health and wellbeing benefits. It should be possible for people to participate in therapeutic nature-based activities, wherever they live and give people a greater choice of ways to get active in the outdoors	

Other Principles Met							
			🤝		💓	🌲	

Example of Strategic Documents

13. Essex Walking Strategy

	What is this case study about?
Essex Walking Strategy	The Essex Walking Strategy, 2021 promotes the improvement to the connectivity and accessibility of existing GI. Walking is now recognised as an important part of enabling local journeys to work, local shops, leisure and community and public services. And as an inexpensive, convenient and natural choice for short journeys (defined as under 2km or about 10 mins); and as a key component of more complex journeys and; as a way of maintaining and improving general health
What is the value in this approach?	

It considers a user hierarchy of how people access green spaces to encourage modal shift from cars to more sustainable and active travel options. This is a well-established concept that places the most vulnerable road users at the top, pedestrians and people with disabilities, followed by cyclists, public transport and motorised transport. The objective is not to give priority for pedestrians, horse riders and cyclists in every situation, but to ensure that the needs of vulnerable road users are considered first. The creation of new GI can be highly influenced by Highways

What has happened?					
	Activity / Outcome		**How does it demonstrate the principle?**		**What are the lessons learnt?**
	The strategy aims to provide better safety, mobility and streets. Places are designed for people of all abilities and ages, so they can choose to walk or cycle with ease; a wider network of green routes and links to opens spaces and a better public realm		The strategy recognises our GI is not just an attraction or key destination, but also as an attractive through route that links places and communities. Nature is an excellent motivator to walking		Biophilic design should be incorporated into streetscapes to create diverse living nature which enhance the character, biodiversity value and attractiveness of our streets. Good design is key, it must be designed in to spaces to ensure that it is consistent with active design principles

Other Principles Met

Improving Access and Connectivity at Existing Sites

iii.   For some, the issue is that adequate parks and green spaces facilities simply don't exist and need to be created. Others might find themselves with community facilities and green spaces that are not adequate and need to be revitalised as in Oakwood Pond, Harlow.

14. Oakwood Pond, Harlow

	What is this case study about?

	Oakwood Pond and the surrounding wooded area in Harlow lie to the west of Princess Alexandra Hospital. The pond and surrounding area have a rich history, dating back as far as the 1100s as a stew pond for the Canons Brook monastery and later forming part of the grounds of Upper House in the 1700s. Unfortunately, over recent years, the area had been neglected, had fallen into a state of disrepair, led to flooding and was plagued with problems from unsociable behaviour

What is the value in this approach?

The pond and the surrounding area were transformed by a combination of efforts by Essex County Council, Harlow District Council and local volunteers have helped to unearth this beautiful area once again. This included the clearing of silt and reinstating entirely lost areas of the pond for local flood prevention for homes downhill from the site. Installation of a new accessible fishing platform, paths, boardwalk, benches and interpretation panels around the pond. Creation of disabled access points and circular routes.

What has happened?

	Activity / Outcome	✓	How does it demonstrate the principle?		What are the lessons learnt?
	This project has revitalised a forgotten and dilapidated area of Harlow. It is now a much improved and loved amenity for the local community. Providing flood alleviation, educational and recreational benefits to the local area and has enhanced the biodiversity of the site		All improved access for the local community to and through the site to the town centre and the hospital and the general environment for both wildlife and local people.		The pond and surrounding areas have become more inclusive by ensuring disabled access and providing a safe space for the local community to use to walk, sit and reflect, fish and observe wildlife. Therefore, creating an identify for the area and fostering a sense of place.

Other Principles Met

🔍	◕	🤝		💓	🌲		

15. GI Planning Policy Assessment Matrix

	What is this case study about?

This is a policy tool to assess the efficacy and quality of GI mainstreaming in plans and policies across multiple scales. The tool can also be used to help revise Local Plan policies or develop new strategic plans or Neighbourhood Plans.

What is the value in this approach?

The tool compiles a matrix of policies across all the criteria that have scored strong (what good policy wording looks like) medium (satisfactory policy wording) and weak (what poor policy wording looks like) components. Figure 4 gives an example of the scoring for coverage of and strength of wording for GI taken from a review of several policies manly from Central Scotland Local Authorities This can be used to help shape policy responses across the whole suite of GI functions

GI Planning Policy Assessment Tool (mainstreaminggreeninfrastructure.com)

What has happened?

	Activity / Outcome		How does it demonstrate the principle?		What are the lessons learnt?
	The tool is a process driven tool that enables participants to discuss and negotiate what good GI policy looks like, which then provides a platform for local decision-making.		The focus of the tool is on improving the GI commitment and strength of wording within strategic and local plans. Also supporting green infrastructure strategies as these are the primary determinants used for planning decisions.		The important lessons from the tool is on how to use the results to bring about positive change, rather than as an evaluation to simply criticise. To not see weakness or gaps, but opportunity to improve and use as a dialogue with partners

Other Principles Met

16. City of Edinburgh SPG Developer Contributions and Infrastructure Delivery

Open Space – Ongoing Maintenance

As a condition of the planning consent, the developer will be required to provide details of the proposed management and maintenance arrangements to the Council, and receive approval before construction starts on site.

What is the value in this approach?

The extract was taken from the City of Edinburgh Council, Supplementary Guidance 'Developer Contribution and Infrastructure Delivery' that provides a strong policy on the long-term management and maintenance of GI. The guidance sets out the Council's approach to infrastructure provision and improvements associated with development. It ensures that developers make a fair and realistic contribution to the delivery of necessary infrastructure (including GI) provision and improvement associated with development.

How does it demonstrate the principle?

The guidance was assessed using the GIPAT Tool. Against the criteria under Access Networks and Greenspace, it identified the following:

Comment:

The phrases used in this policy: "As a condition of the planning consent, the developer will be required to…", and "…and receive approval, before construction starts on site." Are very clear and strong direction to the applicant that planning permission will not be approved if the policy isn't met

Other Principles Met

						📄	🛠

17. Green Space Stewardship – Land Trust, Beaulieu, Chelmsford.

What is this case study about?

At the Beaulieu development, on the outskirts of Chelmsford,

The developers recognise it is vital that green spaces are maintained after a new place is built. They chose the Land Trust to take on the long-term ownership and management of the GI on the site. This ranges from formal parks, village greens and children's play areas to orchards, community gardens and natural meadows.

What is the value in this approach?
Currently, the Land Trust is engaging with residents of 185 homes, with this increasing to over 3,000 by the time development is complete. The Land Trust will take care of the estate parkland indefinitely on behalf of, and in partnership with, the Beaulieu residents and the wider local community through the collection and administration of a service charge.

What has happened?					
	Activity / Outcome		How does it demonstrate the principle?		What are the lessons learnt?
	By the end of the build, the Land Trust will manage the 72 hectares of parks and open spaces incorporated into the original masterplan, with engagement from the local community		The Land Trust encourages residents to engage, provide feedback and views, establish a 'friends' group, participate and run community events, and help shape how green spaces are maintained and used early in the process.		The Land Trust believes that development is not just about buildings or cutting the grass around buildings – it is about creating communities; creating places in which people will want to live, work and play. By incorporating the set-up costs and a sustainable funding structure aims to secure the long-term sustainability of the green spaces.

Other Principles Met
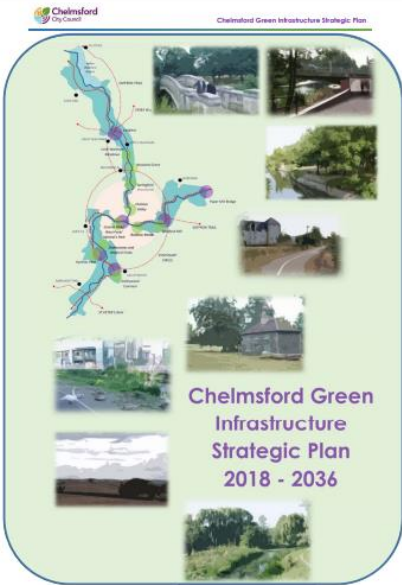
18. Hadleigh Farm and Country Park

Location and boundary of the Hadleigh mountain bike venue for the London 2012 Olympic Games

What is this case study about?

The creation of an elite mountain biking venue at Hadleigh Farm in Essex for the London 2012 Olympic Games provided an opportunity to expand investment in the long-term sporting and recreational facilities within the area. A partnership between landowners, councils and Natural England has capitalised on this opportunity to enhance green infrastructure and improve the quality and accessibility of the natural environment for the benefit of local communities and visitors.

What is the value in this approach?

- Integrated elite sport within an ecologically diverse landscape
- Improved landscape stewardship by grazing with rare breed cattle and the developments of an Entry Level Stewardship (ELS) and Higher Level Stewardship (HLS) agreements.
- Legacy benefits for the local community secured through London 2012 Olympic Investment

What has happened?

	Activity / Outcome		How does it demonstrate the principles?		What are the lessons learnt?
	- Selection as an Olympic venue provided the catalyst for short and long-term investment - Elite and general mountain biking facilities integrated with nature conservation objectives - Legacy facilities for sport and recreation are projected to increase the number and mix of visitors - Improved accessibility to local green infrastructure has		- Mainstreaming and Integration of GI and environmental management in design and planning applications. - Multifunctionality – sport, recreation, and education facilities. - Managing Different Expectations- the mountain bike facilities have been developed in two phases, first for the Games and then for the long-term legacy - Health, Wellbeing and Social Equity – A key objective was to increase, diversify and balance the offer to a wider variety of visitors. This included opportunities for both active sports and		Establishing a partnership across the Olympic and Legacy programmes between LOCOG, Essex County Council, The Salvation Army, local communities, Natural England, Castle Point Borough Council and other organisations has ensured the delivery of a joint vision. Setting up a number of internal working groups provided a key mechanism to coordinate management and

promoted healthy and active communities	recreation for individuals, families, and schools along with further and assisted education for a variety of organisations and groups.	consultation arrangements.
	▪ Connectivity – The legacy planning application included additional mountain bike trails to improve and enhance the network of existing paths and trails across Hadleigh Country Park and Hadleigh Farm, providing better access for walkers, cyclists, mountain biking, runners and horse riders.	▪ Collaboration allowed the expertise of a range of professionals to be pooled effectively and ensured a consistent approach. Early and extensive pre-planning application negotiations for the legacy facilities together with extensive local consultation has been key to establishing confidence, openness and trust between all parties.
	▪ Stewardship – High level stewardship (HLS) agreement has been set up with ECC and an Entry Level Stewardship (ELS) with Hadleigh Farm to improve the condition of the SSSI downs habitat	

Additional Information

For further information regarding Hadleigh Farm and County Park, please see:
- http://publications.naturalengland.org.uk/publication/5265868

Principles Met

19. Chelmsford Green Infrastructure Strategic Plan 2018-2036

	What is this case study about?

The Green Infrastructure Strategic Plan provides a framework for the planning and management of Chelmsford's Green Infrastructure resources both in terms of the protection of its integrity and enhancement to the benefit of residents, workers and visitors in light of the significant scale of growth to be accommodated over the next 25 years and beyond.

What is the value in this approach?
▪ The Green Infrastructure Strategic Plan sets out the character of, and key issues associated with, Chelmsford's Green Infrastructure, aspirations and objectives for its planning and management, and an associated Action Plan.

What has happened?					
	Activity / Outcome		How does it demonstrate the principles?		What are the lessons learnt?
▪ Development of a City-wide strategy for GI planning and management with areas for protection, enhancement and creation identified. ▪ Information provided on existing GI, including the key characteristics of features, and the identification of the limitations of existing GI. ▪ Guidance for the delivery of GI in new development including, but not limited to- organisational		▪ Mainstreaming and Integration of GI in strategic planning for Chelmsford ▪ Evidence-led – GI Strategic Plan informed by existing GI and landscape character		▪ The development of a city-wide strategy for GI planning and management allows for the mainstreaming of GI in development planning. The approach provides an evidence basis can be used to underpin the design and integration of GI in future development proposals. In addition, a county-wide planning approach ensures that existing GI features are	

requirements, partnership working, policy, design and monitoring and evaluation.		

Additional Information
For further information, please see: - file:///C:/Users/Beth.Harris/Downloads/Green%20Infrastructure%20Strategic%20Plan.pdf
Other Principles Met

ANNEX B GI CHECKLIST

Scoping Opinion	Outline	Reserved matters	Full	Discharge of Conditions	Documents expected
	✔				GI Assessment
		✔	✔	✔	Biodiversity Enhancement Strategy
✔					Landscape and Visual Impact Assessment
	✔				Preliminary Landscape/ GI proposal/plan
		✔			Green Infrastructure Strategy/ or part of Landscape and Ecology strategy
	✔	✔	✔		Design and Access Statement
		✔	✔	✔	Landscape and Ecology Management Plan
		✔	✔	✔	Construction Environmental Management Plan
✔					Environment Impact Assessment

ANNEX C WHY IS GI ESSENTIAL TO OUR SOCIAL, ECONOMIC AND ENVIRONMENTAL WELLBEING?

Society faces critical challenges such as biodiversity loss and, inequalities in health and wellbeing. Combined with the projected impacts of Climate Change, this will have a significant effect on our lives, environment and economy.

The population in Greater Essex is expected to increase to 2.1 million by 2041. The greatest increases are currently projected in Colchester, Basildon and Chelmsford (OSN, 2016). The Greater Essex Growth Infrastructure Framework, 2017 predicted that 180,000 homes are needed across Greater Essex by 2036 with potential further increases under the new planning reforms proposal. With that the pressure on the health service increases to meet the demand of a growing population. In Essex in 2014, 58% of people had the recommended amount of physical activity (2.5 hours a week). It is projected that there will be an annual increase in the obesity rate of 2% in adults and 0.5% in children. Over 150,000 Essex residents are expected to be living with a mental health illness. Almost 50% of them have developed this condition in their early teens (Joint Strategic Needs Assessment, 2016 & Joint Health & Wellbeing Strategy for Essex). In 2017, nearly 14,000 people of the Greater Essex population live in Air Quality Management Areas and the mortality rate of Greater Essex attributable to particulate air pollution was 1,009 people (Public Health Profile & ONS 2018 Deaths registered by area of usual residence, UK).

GI is a key delivery mechanism for addressing challenges associated with climate change and biodiversity emergencies, health and well-being and green recovery; collectively championing nature-based solutions. Key to its success is the securing of environmental, social and economic benefits across multiple scales (Table 2). Table 2 below provides examples of the benefits GI provides.

Table 2: The Benefits from Green Infrastructure

Environment Benefits	Economic Benefits	Social Benefits
• Maintains/Restores habitat • Improves watershed health/water quality • Improves air quality • Enhances biodiversity • Flood alleviation and water management mitigates storm water/flooding • Regulates climate i.e. reduce heat in urban areas • Sequesters carbon	• Generates revenue • Provides access to local businesses • Increases land and property values • Lowers energy costs through helping to maintain internal building temperatures • Lowers health care costs • Promotes sustainable renewable energy, through	• Enhances the sense of the place • Enables recreation and leisure – relaxation/ play benefits • Improves public health • Promotes equity and access • Fosters stronger communities: social interaction, inclusion and cohesion

Environment Benefits	Economic Benefits	Social Benefits
• Improves more sustainable modes of transport and transport links • Increasing environmental quality and aesthetics • Heritage preservation • Increasing habitat area • Increasing populations of some protected species • Increasing species movement • Landscape Intrinsic character and beauty	bio products and bio-solar farms. • Increases local food production & other products from land i.e. biofuel, timber, chip board and sources of raw materials such as lignin and cellulose. • Increased tourism • Attracts inward investment • Promotes local economic regeneration • Enables regeneration of previously developed land • Noise/visual screening • Passive benefits to building (e.g. shading) • Sustainable travel opportunities	• Connects people with nature, heritage, culture and landscape • Educates people about nature's role and the heritage, culture and landscape of a place. • Climate change mitigation and adaptation – community resilience • Increasing life expectancy and reducing health inequality • Improving levels of physical activity and health • Improving psychological health and mental well-being - eco therapy • Boosts educational abilities

ANNEX D HOW THE GI STANDARDS FOR ESSEX WERE DEVELOPED.

The Essex GI Standards have been developed by planners, policy and decision makers, other practitioners (from both public and third sectors) across Essex and academic experts from University of Northumbria and University of East Anglia. Over 30 of these professional practitioners attended each of the three engagement workshops held between September and November 2020 called Making Better Planning for Better Placemaking and Place-Keeping.

These workshops were part of the Essex project for trialling the Natural England National GI Standards Framework during September 2020 to February 2021. The purpose of the workshops as shown in figure 5 was to identify the key elements or ingredients for good placemaking and place keeping. To demonstrate the Green Essex Geographic Information System (GIS) StoryMap. That the StoryMap was created building on the [Essex GI Strategy](#) evidence mapping produced by the University of East Anglia[6]. The workshops also introduced the Natural Environment Research Council (NERC) GI Planning Policy Assessment Tool to explore how the concept of GI could be best embedded/ integrated into other policy areas. To explore how such tools could be applied in practice. As a result of these workshops GI principles for Essex were identified and the associated standards produced.

The standards - similar to the National Framework of GI Standards - have 9 Principles of Good GI, as well as target measures and indicators to achieve quality and consistency in the provision, management and stewardship of GI as an essential part of place-making and place-keeping for the benefit of people and wildlife. This includes supporting standards, such as Building with Nature, Livewell Development Accreditation, Accessible Natural Greenspace Standard.

These standards have supporting tools, such as the Green Essex GIS StoryMap and the NERC GI Planning Policy Assessment tool. They will help to strengthen GI policies, Local Plans and other strategic documents and embed GI into the Essex planning system and decision making.

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[6] As part of UEA work within the Economic and Social Research Council (ESRC) funded Business and Local Government Data Research Centre

Figure 4: Diagram of the GI Principles and Standards Process Development
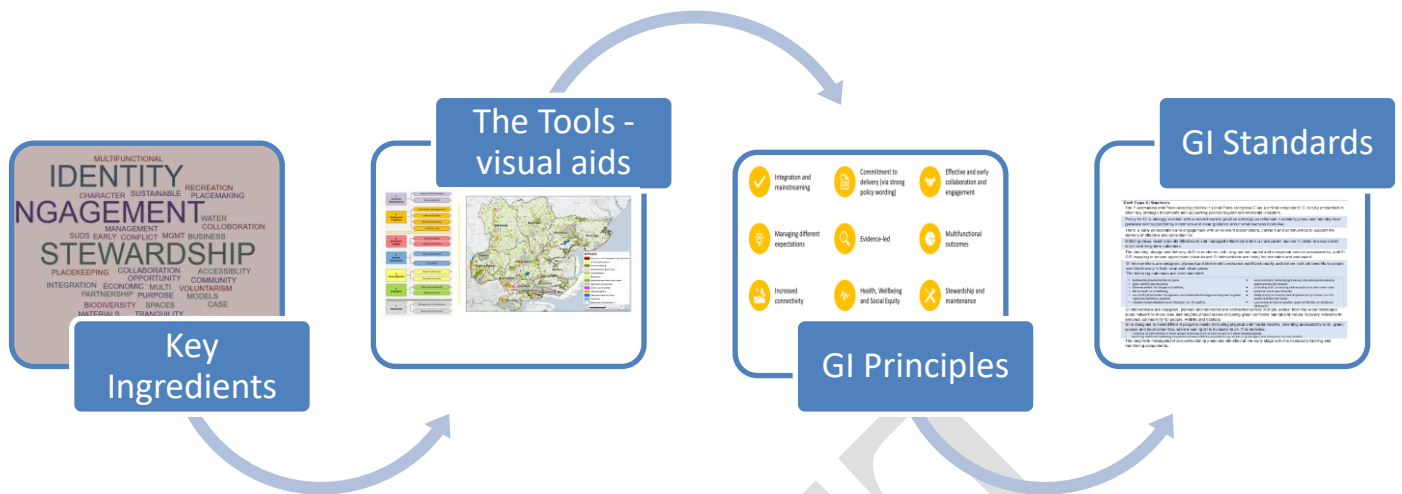
ANNEX E ADDITIONAL RESOURCES

Sources of Evidence on the benefits of GI

- Manual of Green Infrastructure Functionality Assessment; MaGICLandscapes, 2020: https://www.interreg-central.eu/Content.Node/MaGICLandscapes-Manual-of-GI-Functionality-Assessment.pdf

- A rapid scoping review of health and wellbeing evidence for the Framework of Green Infrastructure Standards; Natural England, 2020: http://publications.naturalengland.org.uk/publication/4799558023643136

- A rapid evidence review of the benefits of parks and green spaces for people and communities; HLF: Space to thrive, 2019: https://www.greenspacescotland.org.uk/Handlers/Download.ashx?IDMF=f93b0397-3a68-486d-ac33-cf46f06e20fa

- Putting economic values on green infrastructure improvements; Natural England,2016: http://publications.naturalengland.org.uk/publication/5493770651435008

- Microeconomic Evidence for the Benefits of Investment in the Environment 2; Natural England 2014: http://publications.naturalengland.org.uk/publication/6692039286587392

- Revaluing Parks and Green Spaces ~Measuring their economic and wellbeing value to individuals; Fields in Trust, 2018: http://www.fieldsintrust.org/Upload/file/research/Revaluing-Parks-and-Green-Spaces-Report.pdf

- Health and the natural environment: A review of evidence, policy, practice and opportunities for the future; University of Exeter; European Centre for Environment & Human Health 2018: https://beyondgreenspace.files.wordpress.com/2018/09/health-and-the-natural-environment_full-report.pdf

- A healthier future, with a little help from our nature - Green Infrastructure integration into the health sector; CEEweb, 2016: http://www.ceeweb.org/wp-content/uploads/2011/12/Resilient-Modern-Cities-with-a-little-help-from-our-nature.pdf

- Developing and Implementing a Green Infrastructure Strategy; UK Green Building Council, 2016:

https://www.ukgbc.org/sites/default/files/How%20to%20Develop%20a%20green%20infrastructure%20strategy.pdf

- Resilient Modern Cities, With a Little Help from Our Nature - Green infrastructure integration into urban spatial planning; CEEWeb, 2017: http://www.ceeweb.org/wp-content/uploads/2016/12/GI_1st_factsheet_v5.pdf

- Climate Change Adaptation Manual; Natural England, 2020 (Pages 275, 485, 491-3. 501 – 511, 575): http://publications.naturalengland.org.uk/publication/5679197848862720

- Net Zero: Making Essex Carbon Neutral, Essex Climate Action Commission, 2021 - https://www.essexclimate.org.uk/sites/default/files/DS21_7178%20ECAC_Commission_Report-Final.pdf

- Using Green Infrastructure to Protect People from Air Pollution; Greater London Authority, 2019: https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/using-green-infrastructure-protect-people-air-pollution

- PowerPark; Greenspace Scotland, 2020: Publications and Dashboard | Greenspace Scotland

Useful Tools to help provide information on needs and opportunity mapping for delivery of GI.
- Green Essex StoryMap: https://arcg.is/09eiaC
- National Oceanic and Atmospheric Administration: Green Infrastructure Mapping Guide https://coast.noaa.gov/digitalcoast/training/gi-mapping.html
- Green Infrastructure Valuation Toolkit: https://www.merseyforest.org.uk/services/gi-val/
- ORVal (Outdoor Recreation Valuation Tool): https://www.leep.exeter.ac.uk/orval/
- Cambridgeshire Developing with Nature Toolkit: https://naturalcambridgeshire.org.uk/projects/developing-with-nature-toolkit/
- City health Check: https://ecosystemsknowledge.net/sites/default/files/wp-content/uploads/2014/2/RIBA%20City%20Health%20Check-1.pdf
- Local Action toolkit enables local communities to discover the vision for where they live: http://urbanwater-eco.services/project/local-action-toolkit/

- EcoServ-GIS - EcoServ-GIS is a Geographic Information System (GIS) toolkit for mapping ecosystem services at a county or regional scale: https://ecosystemsknowledge.net/ecoserv-gis

Value of Trees
- I-Trees ECO: https://www.itreetools.org/
- CAVAT: https://www.ltoa.org.uk/resources/cavat

Water/ Natural Flood Management
- Urban Environmental Toolbox, Local Action: http://urbanwater-eco.services/toolbox/
- B£ST (Benefits of SuDS Tool; Susdrain, 2019: https://www.susdrain.org/resources/best.html
- Working with natural processes to reduce flood risk – evidence directory, literature review, mapping user guide and case studies; Environment Agency 2017: https://www.gov.uk/government/publications/working-with-natural-processes-to-reduce-flood-risk
- Designing Blue Green Infrastructure (BGI) for water management, human health, and wellbeing: summary of evidence and principles for design; The University of Sheffield, 2020 (Section 9 and Section 11): https://figshare.shef.ac.uk/articles/report/Designing_Blue_Green_Infrastructure_BGI_for_water_management_human_health_and_wellbeing_summary_of_evidence_and_principles_for_design/13049510?file=24971858

Natural Capital
- Enabling a Natural Capital Approach - Defra provides the Enabling a Natural Capital Approach (ENCA) resource. It contains guidance, data, tools and case studies help you understand natural capital and know how to take natural capital into account: https://www.gov.uk/guidance/enabling-a-natural-capital-approach-enca
- Natural Capital Planning Tool: http://ncptool.com/
- Natural Capital Protocol – Guide on how to perform an assessment of natural capital and ecosystem services: https://naturalcapitalcoalition.org/natural-capital-protocol/
- Eco-Serv – GIS: https://ecosystemsknowledge.net/ecoserv-gis

<u>Biodiversity</u>

- Biodiversity Metric 2.0:

  http://publications.naturalengland.org.uk/publication/5850908674228224,

  subject to ongoing consultation

- Neighbourhood for Nature article on Kingsbrook, RSPB:2018:

  https://www.rspb.org.uk/globalassets/downloads/documents/conservation-

  projects/nature-home-kingsbrook.pdf