Harlow and Gilston Garden Town

Green Infrastructure Framework
Appendices

Final report
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Harlow and Gilston Garden Town

Green Infrastructure Framework
Appendices

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Contents

Appendix A
Glossary

Table A.1: Glossary

Term	Description
Adaptive management	"*Modification of activities in light of experience form rigorous monitoring*" (CIEEM, 2018[1]).
Agri-environment schemes	Voluntary agreements that provide annual payments to farmers and land managers to ensure they manage their land in an environmentally sensitive way that goes beyond the minimum required of them by regulation. Within Hounslow, these are of relevance to the management of some greenspaces by the Council. Under the Agricultural Bill, ELMS (see below) is proposed to provide a results-based payment scheme, anticipated to be in place in 2024.
ANGSt (Accessible Natural Green Space Standards)	Published by Natural England, ANGSt recognises the value of greenspaces, principally in relation to the 'cultural' ecosystem services of health, wellbeing, etc. ANGSt recommends that everyone, wherever they live, should have access to natural greenspace.: • Doorstep standard: at least 0.5ha within 200m • Local standard: at least 2ha within 300m • Wider neighbourhood standard: at least 20ha within 2km; • District standard: at least 100ha within 5km; • Sub-regional standard: at least 500ha within 10km.
Biodiversity	The variability among all living organisms - terrestrial and aquatic - and the ecosystems that they are part of. Biodiversity includes the diversity within species, between species and of ecosystems.
Biodiversity Action Plan (BAP)	The UK BAP was drawn up to reflect the UKs commitment to the Rio Convention 1992. Habitat and species to be prioritised for conservation were described, with actions and typically delivery partners identified. Local BAPs reflect local priorities. Hounslow's 2011-2016 BAP is currently undergoing review; Edition 3 is due to be published in 2021. The UKs commitment is now embedded in legislation through the NERC Act 2006. Section 41 (s42 in Wales) lists the habitats and species of Principal Importance. However, local BAPs remain of value in the identification of actions and delivery partners, and to enable monitoring of progress.
Biodiversity metric	A proxy measure or index of biodiversity to allow comparison over time or space. Metrics are used in recognition that it is not possible to finitely inventory the state of all biodiversity present. In relation to development, the metric is used as a measure of predicted impact(s) on habitats and how much new or restored habitat, and of what type, is required to deliver sufficient net gain. Use of metrics does not replace the need for a detailed biodiversity assessment (as would accompany any individual planning application) or monitoring.
Biodiversity Net Gain (BNG)	Increase in the quality and/or quantity of habitats in comparison to the original condition or baseline i.e. enhancement over and above the level required to mitigate or compensate for detrimental impact, or which is otherwise prescribed or committed to happen (e.g. as part of pre-existing planning consent).

[1] CIEEM (2018) Guidelines for Ecological Impact Assessments in the UK & Northern Ireland, 3rd Ed. CIEEM Winchester, UK

Term	Description
Biodiversity off-set	Compensation for the unavoidable and immitigable loss, fragmentation or other detrimental effect on an ecological receptor. Off-setting seeks to ensure that no net loss in ecological value is achieved.
Biodiversity unit	A unit as measured by the biodiversity metric which represents a combined measure of habitat distinctiveness, area and condition. The production of a biodiversity unit in the habitat market refers to an increase in the biodiversity value of land by one unit.
Blue infrastructure	Green infrastructure relating to aquatic habitats such as rivers and canals.
Compensation	The protection of biodiversity assets should be achieved through avoidance and mitigation wherever possible. Compensation, the next step in the hierarchy, should only be used in exceptional circumstances and as a last resort, after all options for avoidance and mitigation have been fully considered. Compensatory measures should, therefore, only be used to address any residual impact that cannot be avoided or mitigated.
Conservation covenants	Voluntary but legally binding agreements under the Environment Bill between a landowner and a designated "responsible body" such as a conservation charity, public body or for-profit body to conserve the natural or heritage features of the land.
Ecological network	"*An ecological network can be understood as a number of core, well connected, high quality areas of well-functioning ecosystems, together with those parts of the intervening landscape that are 'wildlife-friendly' and which, collectively, allow wildlife to thrive*" (NERR082, 2020[2]). An ecological network typically includes core biodiversity areas, buffer zones, corridors, stepping stones and opportunity areas. "*Local ecological networks can make a significant contribution to developing the* [national] *Nature Recovery Network. Local ecological networks can be identified and mapped as a part of the plan-making process, with policies identifying appropriate levels of protection and opportunities to create, restore or enhance habitats or improve connectivity*" (MHCLG, 2019[3]). NB: Contrast the term 'nature network' which serves both nature and people as interdependent functions.
Ecosystem	A dynamic complex of plant, animal and micro-organism communities, and their non-living environment interacting as a functional unit (CIEEM, 2018).
Ecosystem services	Benefits provided to people by natural capital (ecosystems and the biodiversity they contain). Services broadly comprise: • Provisioning services e.g. food, fibre, fuel and clean water; • Regulating services e.g. climate control, flood regulation, carbon storage, pest control and pollination; • Cultural services e.g. recreation, spiritual, educational, intrinsic and aesthetic value. • Supporting services (e.g. soil formation, photosynthesis, biodiversity) originally distinguished are now typically seen as functions or processes associated with natural capital 'stocks'. Ecosystem services may be described as 'flow'.

[2] NE (2020) Natural England Research Report NERR082: Nature Networks: A Summary for Practitioners
http://publications.naturalengland.org.uk/publication/5144804831002624
[3] MHCLG (2019) Planning Practice Guidance: Natural Environment – How do local ecological networks relate to the Nature Recovery Network?
www.gov.uk/government/collections/planning-practice-guidance

Term	Description
Effect	The effect (e.g. population decline) of a given impact (e.g. habitat loss) on an ecological receptor. Effects may be beneficial or detrimental.
Environmental Land Management Scheme (ELMS)	Founded on the principle of "public money for public goods", ELMS will be the cornerstone of agricultural policy now the UK has left the EU. The Agriculture Bill will provide the underpinning legislative framework for the ELMS. ELMS will provide farmers, foresters and other land managers with an opportunity to secure financial reward in return for delivering environmental benefits. ELMS is currently undergoing testing but is anticipated to be in place in 2024.
Environmental Net Gain (ENG)	"*Environmental Net Gain is an approach for improving the condition of, and ecosystem services that flow from, our natural assets in the context of development*" (Environmental Industries Commission Natural Capital Taskforce, 2019). The Government's ambition for Environmental Net Gain (ENG) was set in the 25YEP but legislative drivers are yet to be established. To assess ENG, the Enabling a Natural Capital Approach (ENCA) was published in 2020[4]; a biodiversity-led tool which evaluates natural capital based on eight asset types –capturing urban and farmland, upland and lowland habitats, marine and freshwater.
Favourable conservation status	When "*Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats; and the natural range of the species is neither being reduced nor is likely to be reduced in the foreseeable future; and there is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long-term basis*" (Habitats Directive, Article 1(i)).
Fragility	One of the Ratcliffe criteria (Ratcliffe, 1977[5]) used to describe nature conservation value. *"Some habitats and geological features are more sensitive to change and are at greater risk of being lost or damaged due to the direct or indirect impacts of climate change, human activities or other influences"* (MHCLG, 2019[6]).
Geodiversity	The variability of rocks, minerals, fossils, landforms, geomorphological processes and soils which collectively underpin the habitats and species which develop thereon. Protection of geodiversity and biodiversity typically sit together, for example, protection of SSSI under the Wildlife & Countryside Act 1981 or protection of non-designated assets in the NPPF.
Green Infrastructure (GI)	"*Green infrastructure is the ecological framework for environmental, social, and economic health – in short, our natural life support system*" (Benedict & McMahon, 2006[7]). "*A network of multifunctional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities*" (NPPF, 2019[8]). Different types of GI will contrast in the functions they serve, such as the distinction between urban green space and wider GI. Some types will score very poorly or not at all, for select functions and this can be entirely acceptable. It is the range of functions that is important to capture in any analysis. Note that green infrastructure may include artificial features such as green roofs, green bridges, wildlife under/overpasses or fish ladders.

[4] https://www.gov.uk/guidance/enabling-a-natural-capital-approach-enca#enca-assessment-template
[5] Ratcliffe, D.A. (1977) A Nature Conservation Review. Cambridge University Press
[6] MHCLG (2019) Planning Practice Guidance: Natural Environment – Standard Criteria for LWS https://www.gov.uk/guidance/natural-environment
[7] Benedict, M.A. & McMahon, E. (2006) Green Infrastructure: Linking landscapes & communities. Island Press, Washington DC.
[8] MHCLG (2019) National Planning Policy Framework. Ministry of Housing, Communities & Local Government, London, UK https://www.gov.uk/government/publications/national-planning-policy-framework--2

Term	Description
	Green infrastructure is the tool by which ecosystem services can be planned and delivered through policy.
Green Finger	Within HGGT, a smaller, narrower green space to the Green Wedges, which provide local parks and play spaces within residential neighbourhoods and villages.
Green Wedge	Within HGGT, green space between neighbourhoods and villages that reinforces spatial separation and enables access links from the town to the wider countryside, embracing natural features such as valleys, woods and brooks
Habitat potential map	Identifies "*the potential for an area to support specific habitat creation. Shows areas of lost habitat that need to be restored*" (NERR082, 2020).
Impact	The impact (e.g. habitat loss) which causes an effect (e.g. population decline) on an ecological receptor. Impacts may be beneficial or detrimental.
Integrity	In relation to a designated site, 'integrity' refers to the "…*coherence of ecological structure and function…that enables it to sustain the habitat, complex of habitats and/or levels of populations of species for which it was classified*" (ODPM Circular 06/2005: Biodiversity and Geological Conservation[9]). In relation to species or habitats, 'integrity' refers to the maintenance of the conservation status of a habitat or species population at a specific location or geographical scale.
Landscape character area	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse[10]. Identified through a Landscape Character Assessment - the process of identifying and describing variation in the character of the landscape. It seeks to identify and explain the unique combination of elements and features (characteristics) that make landscapes distinctive.
Local Nature Partnerships (LNP)	LNP bring together local organisations, businesses and people who want to improve their local natural environment. The Government's 2011 'Natural Environment White Paper', established 47 LNP across England.
Local Nature Recovery Strategies (LNRS)	LNRS are a new system of spatial strategies for nature under the Environment Bill, with approx. 50 anticipated to cover England. Locally led by an appropriate "responsible authority", these will identify the opportunities and priorities for enhancing biodiversity and supporting wider objectives such as mitigating or adapting to climate change in an area.
Mitigation	Adverse effects that cannot be avoided should be adequately mitigated. Mitigation measures negate the adverse impact of a plan or project, during or after its completion. In respect to development, mitigation should form part of the development proposal, but additional measures can be imposed by the decision-maker. All mitigation measures should be secured through the use of planning conditions or planning obligations[11].
Mitigation hierarchy	The mitigation hierarchy underpins planning policy and decision making. It requires that potential adverse impacts be avoided or, where this is not possible, mitigated and, as a final resort, compensated (off-set).

[9] ODPM (2005) Government Circular: Biodiversity & Geological Conservation – Statutory Obligations & Their Impact within the Planning System. Office of the Deputy Prime Minister, London, UK www.gov.uk/government/publications/biodiversity-and-geological-conservation-circular-06-2005
[10] Natural England (2014) An Approach to Landscape Character Assessment. DEFRA
[11] BS 42020:2013: Biodiversity. Code of practice for planning and development

Term	Description
Natural capital	"*The elements* [assets or 'stocks'] *of nature that directly and indirectly produce value or benefit to people"* i.e. ecosystem services. Natural capital may include "*ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and fluctuations*" (NCC, 2016[12]).
Natural play	Natural play areas encourage physical and creative challenges such as climbing, rolling, hiding and den building. May include select equipment, such as tunnels and climbing structures connected by mounds of grass, bridges, boulders, logs, etc.
Naturalness	One of the Ratcliffe criteria (Ratcliffe, 1977) used to describe nature conservation value. "*The degree to which a site supports natural features, including rock exposures revealing underlying geology, or demonstrates active or past natural processes*" (MHCLG, 2019[13]).
Nature-based solutions	The role of natural (often reinstated, managed and protected) ecosystem processes to to address societal challenges—such as disaster risk, climate change, food security, water security or human health. Examples include forests and peatland that sequester carbon or upland mires, heaths, woodland and grasslands that retain stormwater, reducing flood peaks in downstream urban settlements and/or floodplains.
Nature network	A nature network may be distinguished from an 'ecological network' as, in addition to the primary role to support thriving wildlife, "*a nature network should also enhance natural beauty and conserve geodiversity and opportunities should be taken to deliver benefits for people, such as flood alleviation, recreational opportunities and climate change adaptation and mitigation. These joint aims… are at the heart of nature networks and they are inter-dependent: networks for wildlife that also deliver benefits to people also tend to be more valued by people*" (NERR082, 2020).
Nature Recovery Network (NRN)	The NRN, as identified in the 25 Year Plan (2018), is an expanded, enhanced and increasingly connected network of places that are richer in wildlife and more resilient to climate change, that is key to delivering the Government's Nature Strategy outside of designated sites. Delivered through Local Nature Recovery Strategies, the NRN "*comprises a core network of designated sites of importance for biodiversity and adjoining areas that function as stepping stones or wildlife corridors, areas identified for new habitat creation and up to 25 nature recovery areas* [at landscape or catchment scale] *for targeted action"* (MHCLG, 2019[14]). Benefitting wildlife and people, the NRN will provide an integrated approach to nature recovery.
Nature Strategy	Introduced under the 25 Year Plan (2018), the Nature Strategy sets out the Government's approach to deliver our commitments under the Convention on Biological Diversity. The strategy will set the overall ambition and specific goals for habitat and species recovery over ten years: • restoration of 75% protected sites to favourable condition by 2042, • create or restore 500,000ha of wildlife-rich habitat outside of protected sites as part of a Nature Recovery Network, • take action to recover threatened, iconic or ecologically important species,

[12] NCC (2016) Natural Capital Protocol. Natural Capital Coalition, London, UK www.naturalcapitalcoalition.og/protocol
[13] MHCLG (2019) Planning Practice Guidance: Natural Environment – Standard Criteria for LWS https://www.gov.uk/guidance/natural-environment
[14] MHCLG (2019) Planning Practice Guidance: Natural Environment – How do local ecological networks relate to the Nature Recovery Network? www.gov.uk/government/collections/planning-practice-guidance

Term	Description
	• increase woodland cover, • improve soil health and restore peatlands.
Offsetting	Biodiversity offsets are distinguished from other forms of ecological compensation by the formal requirements for measurable outcomes: the losses due to impact, and gains achievable through the offset, are measured in the same way, even if the habitats concerned are different[15].
Planning conditions	The Town and Country Planning Act enables the local planning authority to grant planning permission to impose "*such conditions as they think fit*" to ensure delivery as agreed. This power should be interpreted in light of material considerations such as the National Planning Policy Framework.
Planning obligations	Planning obligations are legal obligations under Section 106 of the Town and Country Planning Act entered into to mitigate the impacts of a development proposal by a person with an interest in the land and the local planning authority.
Position in the ecological mosaic	One of the Ratcliffe criteria (Ratcliffe, 1977) used to describe nature conservation value. The relationship or connectivity of a site or habitat parcel to adjacent areas of nature conservation value. This reflects not only contribution to a functional ecological resource but recognises the ecological character of the locality, county or region.
Potential value	Sites or habitat parcels which could, through appropriate management or natural progression, develop greater nature conservation value.
Priority habitats &/or species	These are of Principal Importance in England and are listed in the Natural Environment and Rural Communities (NERC) Act 2006 Section 41 (s42 in Wales). The list includes UK BAP habitats and species (identified in response to the 1992 Rio Convention during the interim period until legislation came into place). Of the s41/42 species, many are also protected under UK legislation.
Rarity	One of the Ratcliffe criteria (Ratcliffe, 1977) used to describe nature conservation value. Rarity relates to the frequency of occurrence, or abundance, of a habitat, species or community. Rarity may be considered at a range of scales – local, county or national, for example.
Recombinant ecology	Flora and fauna not directly representative of an 'original' assemblage at a given locale but are nevertheless locally-appropriate in the current context, or indeed as future target for management objectives.
Replacement	Creation of an acceptable substitute habitat for that which has or would be lost, fragmented or otherwise detrimentally affected.
Restoration	The process of assisting the recovery of an area or ecosystem that has been degraded, damaged or destroyed. The aim of ecological restoration is to re-establish the composition, structure and function to a close approximation of its pre-degraded state.
Rewilding	Large-scale reinstatement of nature and natural processes to enable ecosystems to become, again, self-sustaining in the long-term. May be coupled with reintroduction of native species, such as beaver or lynx to implement those processes.

[15] DEFRA (2012) Biodiversity Offsetting Pilots. Technical Paper: the metric for the biodiversity offsetting pilot in England

Term	Description
	Distinct from restoration, which may refer to parcels of land requiring on-going management to replicate natural processes. Distinct from natural colonisation, which may refer to scrub and woodland, for example, in green spaces as part of a diverse and locally-appropriate habitat mosaic.
Social prescribing	An holistic approach to healthcare that brings together the social and medical models of health and wellness. Provides a formal pathway for health providers to address the diverse determinants of health, using the familiar and trusted process of writing a prescription. Connects people to community groups and to statutory services for practical and emotional support. GI provides space within which this approach can be delivered.
Stewardship	New assets and facilities require well-organised management structures supported by consistent revenue streams to be sustained in the long-term. For community assets, putting local people at the heart of the process can help to generate increased local support e.g. Community Land Trusts. Principles and objectives for stewardship across HGGT is provided in the 2022 Gilston Area Appendix to Section106 Stewardship Key Principles & Objectives (Draft v2.0).
Super Greenways	Within HGGT, high quality cycling and walking routes located along the Sustainable Transport Corridors, and often within the Green Wedge network, which provide attractive and enjoyable transport choices which are accessible to all ages and abilities.
Sustainable Transport Corridor (STC)	Within HGGT, a series of strategic corridors in the Garden Town providing high quality public and active travel options, connecting neighbourhoods quickly with key destinations such as the town centre and rail station.
Sustainable drainage system (SuDS)	Natural surface-level SuDS can contribute to the reinstatement of natural processes and ecosystems. These should not however be provided in place of interventions to manage surface water within built development, such as porous pavements which can alleviate flood risk at source.
Typicalness	One of the Ratcliffe criteria (Ratcliffe, 1977) used to describe nature conservation value. "*Areas that exemplify a type of habitat, geological feature, or a population of a species, that is characteristic of the natural components of the landscape in which they are found*" (MHCLG, 2019[16]).
Zone of Influence (ZoI)	Area over which ecological features may be impacted by a given project or project activity.

[16] MHCLG (2019) Planning Practice Guidance: Natural Environment – Standard Criteria for LWS https://www.gov.uk/guidance/natural-environment

Appendix B

Schedule of Supporting Documents

	Hertfordshire	Essex	Harlow	Epping Forest	East Herts	HGGT
GI Strategies and Policy Framework						
GI Strategy / Framework	**Herfordshire GBI Strategy (awaited)** Awaiting publication of 2022 update	**Essex Green Infrastructure Strategy 2020** https://www.placeservices.co.uk/media/325323/EGIS_MainStrategy_09062020-LR.pdf **Essex GI Standards Guidance 2022** https://assets.ctfassets.net/knkzaf64jx5x/1I9C1yNuRqXan645yP3M5D/b490b69f6858750451fd5ebf00c88b57/Essex-Green-Infrastructure-Standards-Technical-Guidance.pdf	**HDC GI & Public Open Space Standards 2022 SPD** https://moderngov.harlow.gov.uk/documents/s19894/App%20A%20-%20Harlow%20GI%20Open%20Spaces%20SPD%20FINAL.pdf **A Green Infrastructure Plan for the Harlow Area 2013** https://www.harlow.gov.uk/sites/default/files/documents/HEBPS4A%20-%20Green%20Infrastructure%20Plan%20for%20the%20Harlow%20Area%202005.pdf	**Epping Forest District Green Infrastructure Strategy 2020** https://www.eppingforestdc.gov.uk/planning-and-building/planning-policy/green-infrastructure-strategy/#:~:text=Following%20consultation%20on%20the%20Draft%20Green%20Infrastructure%20Strategy,as%20a%20material%20planning%20consideration%20in%20April%202021	**East Hertfordshire Green Infrastructure Plan 2011** https://cdn-eastherts.onwebcurl.com/s3fs-public/documents/Green_infrastructure_plan_joined.pdf	
Local Plan evidence			**Harlow Local Plan examination submission documents** https://www.harlow.gov.uk/planning-and-building-control/planning-policy/new-local-plan/local-plan-examination/local-plan-2	**Epping Forest Local Plan evidence base** https://www.efdclocalplan.org/local-plan/evidence-base/	**East Herts Local Plan evidence base** https://www.eastherts.gov.uk/planning-building/planning-policy/evidence-base	
Proposed Growth						
Sustainable Growth	**Hertfordshire Fit for the Future 2020** https://www.hertfordshire.gov.uk/media-library/documents/environment-and-planning/planning/hertfordshire-fit-for-the-future.pdf **Sustainable Hertfordshire Strategy 2020** https://www.hertfordshire.gov.uk/microsites/sustainable-hertfordshire/media/sustainable-hertfordshire-strategy-2020-2.7mb.pdf	**Essex Sector Development Strategy 2022** https://assets.ctfassets.net/knkzaf64jx5x/5a66DM8wKwZ8Hn2zuUAQA0/00b3d7b1eea0e4971d8dc6ea2e4ee9b9/ECC-Essex-Sector-Development-Strategy-long-form.pdf				
Design Guidance	Relevant data captured within East Hertfordshire district references	**Essex Design Guide: Garden Communities (Updated 2019)**https://www.essexdesignguide.co.uk/overarching-themes/garden-communities/	**Harlow Design Guide SPD 2011 & Addendum (Draft) 2021** https://www.harlow.gov.uk/sites/default/files/documents/HEB3%20-%20Harlow%20Design%20Guide%20Supplementary%20Planning%20Document.pdf **Harlow Town Centre Masterplan Framework SPD 2022** https://www.harlow.gov.uk/sites/default/files/documents/Town%20Centre%20Masterplan%20Framework%20Supplementary%20Planning%20Document.pdf	**Water Lane Growth Area Design Concept 2018** No online link available **West Katherine's Concept Framework 2018 (extracts only)** http://planpub.eppingforestdc.gov.uk/nIM.websearch/Download.aspx?ID=601621 **Land at West Sumners Design Vision Document 2018** https://docslib.org/doc/1640362/land-at-west-sumners-harlow-design-vision-document **Latton Priory Illustrative Plan 2020** https://www.lattonpriory.co.uk/pdf/latton-priory-2020-update.pdf **Latton Priory Access Strategy Assessment Report 2020** https://hggt.co.uk/wp-content/uploads/2020/12/04777-R-02-D-Latton-Priory-Project-Report-REV-5.pdf **Latton Priory Pathfinder Design Code (awaited)** https://www.eppingforestdc.gov.uk/pathfinder-design-code/	**Gilston Area Concept Framework 2018** https://www.eastherts.gov.uk/about-east-herts-0/improvement-projects-east-herts/harlow-and-gilston-garden-town **Gilston Area Charter SPD 2020** https://www.eastherts.gov.uk/planning-building/planning-policy/supplementary-planning-documents-east-herts-district-plan-2018/gilston-area-charter-supplementary-planning-document **Gilston Parameters Plan 2020** No online link available **Gilston Area Neighbourhood Plan 2020-2033 (May 2021)** https://hegnp.org.uk/?mdocs-file=2725 **Gilston Park Estate Masterplan (Undated)** https://gilstonparkestate.com/get-involved/masterplan/ **Gilston Area Village 7 Masterplan (Undated)** https://static1.squarespace.com/static/5c52f8841aef1d72f93736fa/t/5c9cc6911571c400010477da/1553778335948/MasterplanA0Board_MAR19_LR.pdf	**HGGT Vision 2018** https://647.f4f.myftpupload.com/wp-content/uploads/2019/08/190128_Vision-document_HIGH-RES.pdf **HGGT Design Guide 2018** https://hggt.co.uk/wp-content/uploads/2021/10/HGGT-Design-guide-2018.pdf **HGGT Design Charter QRP Report 2018** https://www.eppingforestdc.gov.uk/wp-content/uploads/2019/06/180719_FR_Design-Charter_report_PUBLIC.pdf **HGGT Infrastructure Delivery Plan IDP 2019** https://647.f4f.myftpupload.com/wp-content/uploads/2019/08/20190417_FINAL_-IDP_REPORT.pdf **HGGT Sustainability Guidance & Checklist 2021** https://hggt.co.uk/wp-content/uploads/2021/10/HGGT-Sustainability-Guidance-and-Checklist-Mar-2021.pdf **HGGT 'How To Guide for Planning Contributions' (Undated)** http://secureservercdn.net/160.153.137.14/647.f4f.myftpupload.com/wp-content/uploads/2019/08/FINAL-How-To-Guide-for-Planning-Obs-Viability-01-2019.04.17.pdf
Stewardship					**Gilston Area Appendix to Section 106 Stewardship Key Principles & Objectives Draft v2 2022** No online link available	
Landscape						
Landscape	**Hertfordshire Landscape Character Assessment 2004** https://www.hertfordshire.gov.uk/services/recycling-waste-and-environment/landscape/landscape.aspx#:~:text=The%20distinctive%20character%20and%20special%20qualities%20of%20Hertfordshire%27s,minimises%20harm%20to%20the%20character%20of%20Hertfordshire%27s%20landscape.	**Essex Landscape Character Assessment 2003** https://www.essexdesignguide.co.uk/media/2277/lca_essex_2002.pdf	**Harlow Area Landscape and Environment Study 2010** No online link available **Harlow Area Landscape and Environment Study 2005** https://www.harlow.gov.uk/sites/default/files/documents/HEBPS5%20-%20Harlow%20Area%20Landscape%20and%20Environment%20Study%202005.pdf	**Epping Forest Landscape Character Assessment 2010** https://www.efdclocalplan.org/wp-content/uploads/2017/12/LC0F6C1.pdf		
Nature Recovery						
Biodiversity	**Hertfordshire's Ecological Networks Report 2014** https://www.hertswildlifetrust.org.uk/sites/default/files/2018-07/Hertfordshire%27s%20ecological%20networks%20report%20-%20Final%20Aug%202014.pdf **Hertfordshire's State of Nature Report 2020** https://www.hertswildlifetrust.org.uk/stateofnature **Hertfordshire Biodiversity Action Plan Undated** Summary available: https://www.hertfordshire.gov.uk/microsites/building-futures/a-sustainable-design-toolkit/technical-modules/landscape-and-biodiversity/basic-principles.aspx **Hertfordshire Climate Change and Sustainability Partnership Strategic Action Plan for Biodiversity 2021** https://cdn-eastherts.onwebcurl.com/s3fs-public/2021-10/HCCSP%20Strategic%20Action%20Plan%20for%20Biodiversity%20October%202021.pdf#:~:text=2.3.1%20The%20Hertfordshire%20Biodiversity%20Action%20Plan15%2C%20originally%20published,priority%20habitats%20and%20species%20within%20a%20local%20conte	**Essex Biodiversity Action Plan 1999** https://www.braintree.gov.uk/downloads/file/2436/e47-the-essex-biodiversity-action-plan-1999	**Public Open Space and Biodiversity SPD** https://www.harlow.gov.uk/sites/default/files/documents/Public%20Open%20Space%20Standards%20and%20Biodiversity%20Supplementary%20Planning%20Document.pdf	**Epping Forest District Biodiversity Action Plan 2008-2012** https://rds.eppingforestdc.gov.uk/documents/s11356/Biodiversity%20Action%20Plan%20PDF.pdf	District data captured within Hertfordshire county references	
Climate Change Resilience						
Climate Change and Carbon	**Sustainable Hertfordshire Strategy 2020** https://www.hertfordshire.gov.uk/microsites/sustainable-hertfordshire/media/sustainable-hertfordshire-strategy-2020-2.7mb.pdf **Sustainable Hertfordshire Action Plan 2020** https://www.hertfordshire.gov.uk/microsites/sustainable-hertfordshire/media/sustainable-hertfordshire-action-plan-as-01.pdf	**Essex Climate Action Commission: Land Use & Green Infrastructure 2021** https://assets.ctfassets.net/knkzaf64jx5x/3dW3CnB3EpMAgTXeqXGTuh/b76471e8b4b49ac2488ca7e67832df81/Climate-Action-Annex-Land-Use-and-Green-Infrastructure.pdf	**Next Steps to Net Zero Carbon Reduction Plan 2021–2026** https://www.harlow.gov.uk/sites/default/files/documents/Carbon%20reduction%20plan%2020221%20to%202026.pdf	**Epping Forest District Council Climate Change Action Plan 2021** https://www.eppingforestdc.gov.uk/environment/climate-change-action-plan-consultation/	**Climate Change Action Plan 2022** https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fcdn-eastherts.onwebcurl.com%2Fs3fs-public%2F2022-01%2FAction%2520Plan%2520Jan%25202022.xlsx&wdOrigin=BROWSELINK	**HGGT Sustainability Guidance and Checklist 2021** https://hggt.co.uk/wp-content/uploads/2021/06/FINAL_HGGT-Sustainability-Guidance-and-Checklist-Mar-2021-FINAL-02-1.pdf
Flood Risk	**Hertfordshire Local Flood Risk Management Plan 2019-2029** https://www.hertfordshire.gov.uk/media-library/documents/environment-and-planning/water/flood-risk-management/lfrms-for-hertfordshire-full-report.pdf	**Essex Local Flood Risk Management Strategy 2018** https://flood.essex.gov.uk/our-strategies-and-responsibilities/our-local-flood-risk-management-strategy/	**Level 1 Strategic Flood Risk Assessment 2016** https://www.harlow.gov.uk/sites/default/files/documents/HEBPS6A%20-%20Strategic%20Flood%20Risk%20Assessment%202016.pdf	**Level 1 Strategic Flood Risk Assessment Update 2015** https://www.efdclocalplan.org/wp-content/uploads/2018/02/EB909-Level-1-Strategic-Flood-Risk-Assessment-SFRA-Update-URS-2015.pdf	**East Hertfordshire District Council Level 1 and 2 Strategic Flood Risk Assessment Undated** https://cdn-eastherts.onwebcurl.com/s3fs-public/2019-09/East%20Hertfordshire%20Level%201%20and%202%20Strategic%20Flood%20Risk%20Assessment-	
Health and Wellbeing						
PROW	**Hertfordshire Rights of Way Improvement Plan 2017** https://www.hertfordshire.gov.uk/media-library/documents/environment-and-planning/countryside-access-and-management/rights-of-way/improvement-plans/rights-of-way-improvement-plan-201718-202728.pdf	**Essex Public Rights of Way Improvement Plan** https://www.essexhighways.org/uploads/files/final-rowip.pdf#:~:text=The%20Rights%20of%20Way%20Improvement%20Plan%20will%20assist,Public%20Rights%20of%20Way%20information%20more%20readily%20accessible.				
Sustainable Transport and Active Travel	**Hertfordshire Active Travel Strategy 2013** https://www.hertfordshire.gov.uk/media-library/documents/about-the-council/data-and-information/active-travel-strategy.pdf	**Essex Sustainable Modes of Travel Strategy 2020** https://assets.ctfassets.net/knkzaf64jx5x/5T3h7kDuqTwZg7tzYY21E0/12e40800673a6cd709be1b916b06edab/ECC_Sustainable_Modes_of_Travel_Strategy_2021.pdf	**Harlow & Gilsten Garden Town Transport Strategy 2021** https://moderngov.harlow.gov.uk/documents/s18759/Transport%20Strategy.pdf	**Essex Transport Strategy: The local transport plan for Essex 2011** https://www.efdclocalplan.org/wp-content/uploads/2018/02/EB500T1.pdf	**East Herts Community Transport Strategy 2018** https://www.eastherts.gov.uk/about-east-herts-0/community-transport-strategy	**HGGT Sustainable Transport Corridor Strategy Summary Report 2019** https://www.harlow.gov.uk/sites/default/files/documents/HEBGT4B%20-%20Harlow%20and%20Gilston%20Garden%20Town%20Sustainable%20Transport%20Corridor%20Strategy%20Summary%20Report.pdf **HGGT Local Cycling and Walking Infrastructure Plan 2021** https://democracy.eastherts.gov.uk/documents/s57230/Harlow%20and%20Gilson%20Garden%20Town%20Local%20Cycling%20and%20Walking%20Investment%20Plan%20-%20Final%20Report%20Appendix%20A.pdf
Recreation			**Playing Pitch Strategy 2017** https://www.harlow.gov.uk/sites/default/files/documents/HEBSL1C%20-%20Sports%20Facilities%20Study%202017%20Part%203%20Playing%20Pitch%20Strategy.pdf **Open Spaces, Sport and Recreation SPD 2007** https://www.harlow.gov.uk/sites/default/files/documents/HEB2A%20-%20Open%20Space%2C%20Sport%20and%20Recreation%20Supplementary%20Planning%20Document.pdf	**Playing Pitch Strategy 2018** https://www.efdclocalplan.org/wp-content/uploads/2018/03/EB714-Playing-Pitch-Strategy-Full-Analysis-4global-March-2018.pdf	**Playing Pitch Strategy 2020** https://cdn-eastherts.onwebcurl.com/s3fs-public/2021-06/East%20Herts%20Playing%20Pitch%20Strategy%20Action%20Plan%20Update%20May%202020%20280520.pdf	
Air Quality	**Sustainable Hertfordshire Strategy 2020** https://www.hertfordshire.gov.uk/microsites/sustainable-hertfordshire/media/sustainable-hertfordshire-strategy-2020-2.7mb.pdf	**Essex Air** https://essexair.org.uk/Default.aspx				
Health and Wellbeing	**Hertfordshire Health and Wellbeing Strategy 2016-2020** https://www.hertfordshire.gov.uk/media-library/documents/about-the-council/partnerships/health-and-wellbeing-board/hertfordshire-health-and-wellbeing-strategy-2016-%E2%80%93-2020.pdf	**The Essex Joint Health and Wellbeing Strategy 2018-2022** https://www.essexfuture.org.uk/delivering-our-vision/enjoy-life-long-into-old-age/essex-joint-health-and-wellbeing-strategy/#:~:text=The%20Joint%20Health%20and%20Wellbeing%20Strategy%20strategy%20articulates,obesity%2C%20improving%20diet%20and%20increasing%20physical%20activity%20	**Harlow Health and Wellbeing Partnership Strategy 2018-2028** https://www.harlow.gov.uk/sites/default/files/documents/HEB11%20-%20Harlow%20Health%20and%20Wellbeing%20Partnership%20Strategy%202018%20to%202028.pdf	**Epping Forest District Health & Wellbeing Strategy 2018-2028** https://www.eppingforestdc.gov.uk/wp-content/uploads/2022/05/13963-HealthWellbeing-WEB.pdf	**East Herts Health and Wellbeing Strategy 2019-2023** https://www.eastherts.gov.uk/about-east-herts-0/health-and-wellbeing-strategy-2019-23	**HGGT Quality of Life Project 2022** https://qolmap.commonplace.is/

Appendix C

Stakeholder Consultation

Harlow & Gilston Garden Town GI Framework: Stakeholder Engagement

Organisation	Role
Epping Forest District Council	
Epping Forest DC	HGGT Urban Design Officer
Epping Forest DC	EFDC SuDS and Green Infrastructure Officer
Epping Forest DC	Principal Planning Officer
Epping Forest DC	Principal Planning Officer
Epping Forest DC	HGGT Lead Officer, Epping Forest DC
Epping Forest DC	Independent Planning Consultant
Harlow District Council	
Harlow DC	HDC Senior Forward Planning Officer, Strategic Growth and Regeneration
Harlow DC	Planning Officer
Harlow DC	Senior Landscape Officer
Harlow DC	Senior Landscape Officer
East Hertfordshire District Council	
East Hertfordshire DC	Building Futures & Landscape Manager
East Hertfordshire DC	HGGT Lead Officer
East Hertfordshire DC	Planning Project Officer
East Hertfordshire DC	HGGT Stewardship & Community Development Officer
Hertfordshire County Council	
Hertfordshire CC	Director of Sustainability
Hertfordshire CC	Planning Consultant Garden Communities
Hertfordshire CC	Building Futures & Landscape Manager
Hertfordshire CC	Programme Manager - Biodiversity
Hertfordshire CC	Planning officer (Strategic Planning)
Essex County Council	
Essex CC	Environment Officer
Essex CC	Local Flood Authorities (ECC, HCC)
Essex CC	Principal Planning Officer (New Settlements)
Essex CC	Principal Transportation and Infrastructure Planner
Essex CC	Green Infrastructure Planning Officer
Statutory bodies	
Environment Agency	Planning Specialist, Hertfordshire & North London Sustainable Places
Environment Agency	Development Management/Policy Lead, Epping Forest and Harlow
Sport England	Planning Manager
Other external	
Hertfordshire & Middlesex Wildlife Trust	Planning and Biodiversity Manager
Hertfordshire & Middlesex Wildlife Trust	Upper River Lea Catchment Partnership Representation
Essex Wildlife Trust	Planning Coordinator
Essex Wildlife Trust	Director of Conservation
National Trust	Experience & Programming Manager, Essex & Suffolk Countryside Portfolio
Regional Planning Adviser to National Trust	Regional Planning Adviser (independent)
Canal & Rivers Trust	
Lea Valley Regional Park	Senior Conservation Officer

Appendix D

Proposed Garden Town Growth: Supporting Masterplanning and Design Code Information

Gilston Villages Strategic Growth Area

D.1 The seven villages located north of the River Stort in East Hertfordshire district will together deliver 10,000 dwellings, of which at least 3,000 will be delivered by 2033. The village boundaries within the growth area are mapped in Figure 3.1.

D.2 The vision set within the 2018 Gilston Area Concept Framework states that "*development will draw on the strategic thinking of the original 'Garden City' values of equality, good health, quality of life, a sense of community and access to employment, facilities and the countryside". Each village will be "of individual character… informed by the landscape, topographical and built features of the area*".

D.3 The Concept Framework objectives commit to "*a protected and enhanced landscape and network of green spaces*"[17]. Three characters of GI are identified: that of Stort Valley wetland, central parkland and woodland & plateau.

Inset 3.2: Extract of 2018 Gilston Area Concept Plan[18]

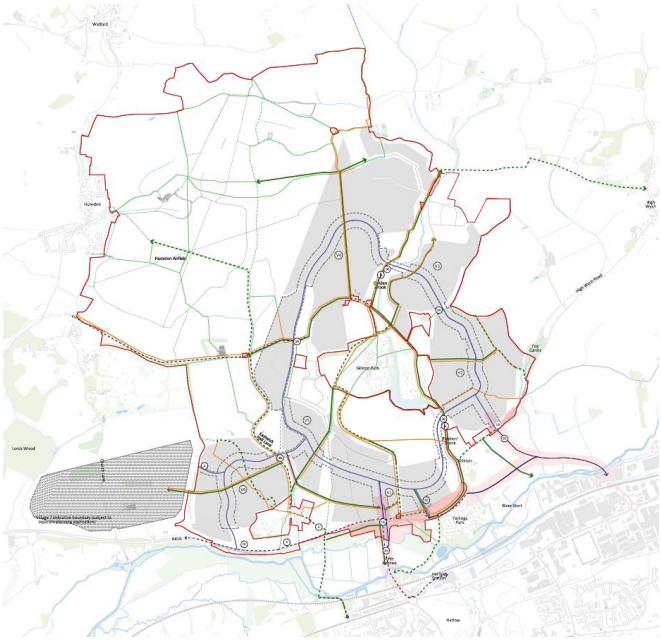
[17] Protection of green spaces is subsequently addressed in the 2022 Gilston Area Appendix to Section106 Stewardship Key Principles & Objectives on which the emerging HGGT Stewardship Charter is founded), Objective 5 commits to the 'special protection' of parkland, habitat corridors and other green spaces from future development through specific controls and/or requirements in S106 obligations or covenants.

[18] Provided as a visual reference. Please see source document for detail and key:.

D.4 In response to the need for undeveloped land to accommodate open space and access to nature, creation of two parks is accommodated within the 2020 Parameters Plans (see Chapter 5: Existing GI Strategies).

D.5 The 2020 Gilston Parameters Plan forms the basis for strategic masterplanning, from which individual village masterplans and design codes will form. Village boundaries and interconnecting access routes are illustrated below.

Inset 3.3: Extract of Gilston Parameters Plan 4: Access and Movement[19]



D.6 The 2020 Gilston Area Charter SPD sets out the planning process for the Strategic Masterplan, Village Masterplans, and the supporting Design Codes. Masterplans will be approved as a discharge of conditions to establish a framework against which detailed proposals should comply. Their production is to be developer-led, with stakeholder and inclusive community engagement as an integrated and ongoing part of the process, and the district council as the determining authority.

Water Lane Strategic Growth Area

D.7 Water Lane (Epping Forest district) comprises two development areas – West Katherines in the north and West Sumners in the south – that together will deliver a minimum of 2,100 dwellings. Established development parcels within the growth area are mapped in Figure 3.1.

D.8 The Water Lane area lies partially within the ZoI for Epping Forest Special Area of Conservation (SAC; see Chapter 4: Legislation and Policy) and, accordingly, includes Sustainable Alternative Natural Greenspace (SANGS) to meet the recreational needs of the future residents. "*Only part of the proposed Garden Town Communities within Epping Forest District falls within the ZoI however a strategic approach is to be taken to maximise the opportunities that exist to provide sufficient meaningful areas of open space with the necessary attributes to attract new residents, and some existing residents, to use that space*"[20].

D.9 The 2018 West Sumners Design Vision document envisages a Spatial Vision and Design Charter to set overarching code for the Strategic Masterplan and sets high level principles for both allocations. The overarching code would be supported by a Neighbourhood Design Code for each West Katherines and West Sumners.

Latton Priory Strategic Growth Area

D.10 Latton Priory, south of Harlow New Town, in Epping Forest District will deliver a minimum of 1,050 dwellings. Development parcels within the growth area are yet to be established; those included in Figure 3.1 reflect the Illustrative Masterplan (itself reflects the Strategic Masterplan Framework currently in development).

D.11 Similar to Water Lane, the Latton Priory area lies partially within the ZoI for Epping Forest SAC. Accordingly, the masterplan includes SANGS to meet the recreational needs of the future residents.

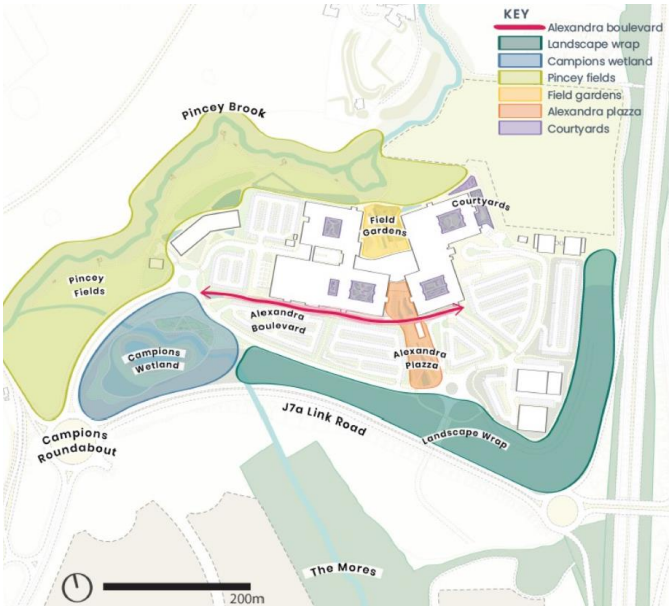
D.12 Design Coding for Latton Priory is in progress through the Pathfinder Programme led by the district council and funded by the Department for Levelling Up, Housing & Communities' (DLUHC).

East of Harlow Strategic Growth Area

D.13 East of Harlow will deliver a minimum of 3,350 dwellings. Land south of Pincey Brook includes potential healthcare uses as well as residential expansion. Early masterplanning for the proposed Princess Alexandra Hospital (PAH) site accommodates retention and enhancement of the Pincey Brook corridor, and incorporates substantial areas of peripheral landscaped greenspace that permeate through the built development as pockets and a corridor.

[19] Provided as a visual reference. Please see source document for detail and key.:
[20] 2019 Water Lane Statement of Common Ground https://rds.eppingforestdc.gov.uk/documents/s94932/C-021%20Appendix%20A%20-%20Masterplan%20Concept%20Frameworks.pdf

Inset 3.6: Proposed PAH site: Indicative Landscape Character Areas (extract)



Inset 3.7: Indicative Town Centre Masterplan (extract: 2022 Town Centre Masterplan Framework[21])

D.14 Land north of Pincey Brook will be retained as undeveloped and, as an opportunity for future delivery of biodiverse green space, may accommodate Biodiversity Net Gain (BNG) which is generated by development within the Garden Town, district or county. It is anticipated that future masterplanning of this area would be led by landscape, biodiversity and hydrology (flood attenuation) advice. Planning advice will be required to ensure protection of green space from future encroachment by development.

Harlow New Town Housing Allocations

D.15 21 sites, which together total 1,147 dwellings, are allocated in the draft Harlow Local Plan. For the town centre area, future planning and design guidance is set out in the 2022 Harlow Town Centre Masterplan Framework (adopted as an SPD). Under spatial principle 8 'connect to and draw in green spaces', the SPD envisages "*stronger connections to the green spaces that surround the town centre, as intended in the original plan* [of Gibberd] *and which will facilitate and promote better sustainable accessibility to and from the town centre*". The SPD proposes an urban forest for the town centre (see Chapter 5).

[21] Available : https://www.harlow.gov.uk/sites/default/files/documents/Town%20Centre%20Masterplan%20Framework%20Supplementary%20Planning%20Document.pdf

Appendix E

Legislation and Policy: Supporting Information

Table E.1: Summary of GI policies within the Local Plans of the three district councils

Title	Summary
East Herts District Council East Herts District Plan (Adopted 2018)[22]	
Policy NE4: Green Infrastructure	Establishes criteria for development proposals which include to avoid the loss or fragmentation of the GI network, maximise opportunities for improvements in the network or for urban greening, consider the integration of GI as an alternative or to complement 'grey' infrastructure, and to demonstrate how lighting will not adversely impact on nocturnal wildlife movement and foraging corridors. Contributions towards local GI projects will also be sought where appropriate.
Policy GA1: The Gilston Area	Establishes a development strategy for the Gilston Area. This includes a principle that ensures development enhances the natural environment and provides a comprehensive GI network and biodiversity net gain. Development is expected to provide quality local GI throughout the site including opportunities for preserving and enhancing on-site assets, maximising opportunities to link into existing assets and enhancing biodiversity. A variety of public green spaces across the site is also required alongside the provision of significant managed open space and parklands.
Gilston Area Charter SPD (Adopted July 2020)	The SPD is a material consideration in the determination of planning applications. It provides further guidance on the use of Masterplans and Design Codes in the Gilston Area, including how green corridors and other key GI features are established in the process of establishing Strategic Landscape Masterplans.
Epping Forest District Council Epping Forest District Local Plan (Submission Version 2017) (as amended July 2022[23])	
Policy SP4: Development and Delivery of Garden Communities in HGGT	Establishes principles for the design and delivery of development including provision of a multifunctional green and blue infrastructure network to support habitat protection and improve biodiversity.
Policy DM5: Green and Blue Infrastructure	Development must demonstrate that existing GI is retained and where possible enhanced. Sufficient evidence must be provided to ensure that, as a whole, the proposals for green and blue infrastructure are appropriate and adequate, taking into account the nature and scale of the development, its setting, context and intended use. In Garden Town Communities, a full concept plan of proposed green and blue infrastructure that incorporates existing features on the site and its links to the wider landscape and townscape will be required for submission with the application.

[22] https://www.eastherts.gov.uk/planning-building/planning-policy/east-herts-district-plan-2018

[23] Local Plan adoption expected after council responses to latest main modifications request, due September 2022.

Title	Summary
EFDC GI Strategy	Formerly adopted as a material consideration in April 2021 The Strategy focuses on future use of existing, and introduction of new open spaces in the district to form a network of multi-purpose spaces for both people and wildlife to thrive.
Harlow Council Harlow Local Development Plan (Adopted 2020) [24] [25]	
Policy WE1: Strategic Green Infrastructure	Includes the Green Belt, Green Wedges and Green Fingers which are identified on the Policies Map and will be protected and enhanced, alongside other Open Spaces, landscaping, trees and hedgerows. The new linear 'Stort Riverpark', connecting the Lea Valley Regional Park to Bishop's Stortford through Harlow, will be delivered by contributions from new development.
Policy PL8: Green Infrastructure and Landscaping	Establishes criteria for new development. This includes consideration the of future management and maintenance of green infrastructure, provision of appropriate footpaths, cycleways and bridleways, sympathetic integration of existing GI into new development and ensuring connections outside of the site where possible.
Green Infrastructure and Public Open Space Standards SPD (Adopted March 2022)	The SPD is a material consideration in the determination of planning applications. It provides further guidance in respect of four Local Plan policies, including Policy PL8, and protects and enhances the district's GI including trees, woodland and hedgerows. It ensures that biodiversity levels are improved through the town through BNG and also requires applicants to submit a supporting statement on the GI provision relevant to the scale and nature of their proposals, including management and maintenance.

[24] https://www.harlow.gov.uk/sites/default/files/documents/Harlow%20Local%20Development%20Plan.pdf
[25] https://www.harlow.gov.uk/sites/default/files/documents/Harlow%20Local%20Development%20Plan%20policies%20map_0.pdf

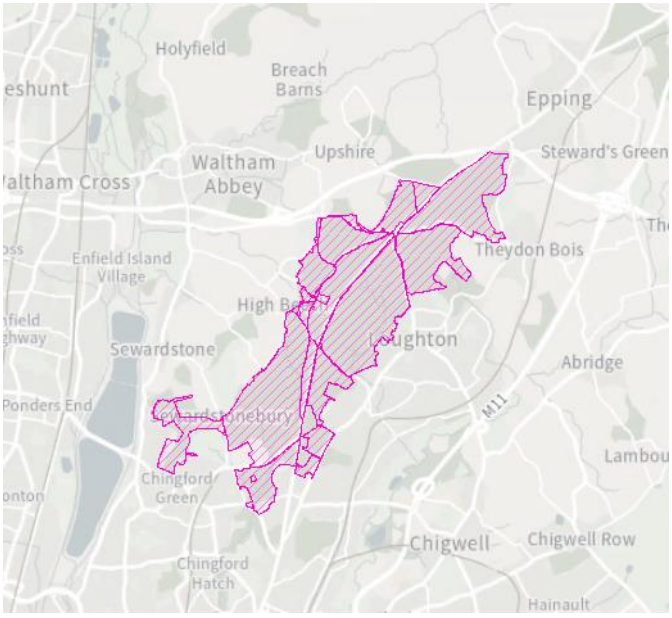
Designated site	Qualifying feature/s
Epping Forest SAC	Beech forests on acid soils with Ilex and sometime Taxus in the shrublayer. Wet heathland with cross-leaved heath; Dry heath Stag beetle *Lucanus cervus*
Lee Valley SPA and Ramsar site	Bittern *Botaurus stellaris* ; Gadwall *Anas strepera* ; Shoveler *Anas clypeata* . In addition, the site qualifies as a Ramsar under criterion 281, by supporting the nationally scarce plant species whorled water-milfoil *Myriophyllum verticillatum* and the rare or vulnerable invertebrate *Micronecta minutissima* (a water-boatman)
Wormley Hoddeson Park Woods SAC	Oak-hornbeam forests
Hatfield Forest NNR / SSSI	400ha of mixed ancient coppice woodland, scrub, unimproved grassland chases and plains with ancient pollards, and herb-rich marshland bordering a large lake.

Impact Pathway	Buffers	Data source
Physical Loss/Damage (incl. offsite FLL)	2km for functionally linked land of bird species	https://www.hertfordshire.gov.uk/media-library/documents/waste/mwlp/core-document-library/core-documents/cd-05-habitats-regulations-assessment-jun-2022.pdf
	2km for functionally linked land of stag beetles	
Non-physical disturbance (noise and vibration)	500m	https://www.greatercambridgeplanning.org/media/1404/gclp-strategic-spatial-options-assessment-habitats-regulations-assessment-nov2020.pdf
Non-toxic contamination	European sites with potential to be affected by non-toxic contamination are likely to be those sites that lie within close proximity, or those that are hydrologically connected to areas of development provided for by the plan	https://www.greatercambridgeplanning.org/media/1404/gclp-strategic-spatial-options-assessment-habitats-regulations-assessment-nov2020.pdf
Air pollution	200m of strategic roads	http://publications.naturalengland.org.uk/publication/4720542048845824
	10km	https://data.jncc.gov.uk/data/6cce4f2e-e481-4ec2-b369-2b4026c88447/JNCC-Report-696-Main-FINAL-WEB.pdf
Recreational pressure	6.2km Epping Forest	https://www.efdclocalplan.org/wp-content/uploads/2018/08/EB715-Epping-Forest-Visitor-Survey-Footprint-Ecology.pdf https://www.efdclocalplan.org/wp-content/uploads/2017/07/mou-impacts-of-growth.pdf
	10.4km Hatfied Forest	https://www.harlow.gov.uk/sites/default/files/documents/EX0057%20-%20Natural%20England%20Hatfield%20Forest%20SSSI%20NNR%20Updated%20Interim%20Advice%20Letter.pdf
	7km other sites	https://www.harlow.gov.uk/sites/default/files/documents/Habitats%20Regulations%20Assessment%202019.pdf
Water Quantity/Quality	Dependent on hydrological connections and particular vulnerabilities of the European sites	https://moderngov.harlow.gov.uk/documents/s19766/Appendix%20A%20-%20Habitats%20Regulations%20Assessment.pdf https://rds.eppingforestdc.gov.uk/documents/s81032/Appendix%205%20-%20Epping%20Forest%20District%20HRA%20November%202017%20Non-Technical%20Summary.pdf

Habitats Regulations Assessment of Harlow Local Development Plan https://www.harlow.gov.uk/sites/default/files/documents/Habitats%20Regulations%20Assessment%202019.pdf
Habitats Regulation of Epping Forest District Council Regulation 19 Local Plan: https://www.efdclocalplan.org/wp-content/uploads/2018/03/EB206-Habitats-Regulations-Assessment-AEC
Habitats Regulation of East Hertfordshire's Local Plan https://cdn-eastherts.onwebcurl.com/s3fs-public/documents/Habitats_Regulations_Assessment__2016.pdf

HGGT Growth Area	Designation	Distance from designation (closest point)	Potential HRA issues	Any specific mitigation measures - RAMS, SANGS, etc
Gilston Area	Epping Forest SAC	10.50km	N/a	Natural England and the National Trust are formulating a package of on-site Strategic Access Management Measures (SAMM) for the Hatfield Forest Site of Special Scientific Interest (SSSI) and National Nature Reserve (NNR). The SAMM will describe a range of mitigation measures available to address the recreational impacts from proposed new housing development within the Hatfield Forest Zones of Influence. Ahead of the SAMM being finalised, financial contributions may be sought towards mitigation measures on larger residential development proposals in consultation with Natural England and the National Trust If appropriate, and subject to there being no significant adverse impact upon a scheme's viability, any tariffs would be applied in a proportionate manner to reflect the fact that currently only 4% of visitors to Hatfield Forest originate from within Harlow District.
	Lee Valley SPA and Ramsar site	2.47km	Water quality / quantity Air pollution Recreational pressure	
	Wormley Hoddeson Park Woods SAC	6.35km	Air pollution Recreational pressure	
	Hatfield Forest SSSI	7.58km	Recreational pressure	
East of Harlow	Epping Forest SAC	9.63km	Air pollution	Natural England and the National Trust are formulating a package of on-site Strategic Access Management Measures (SAMM) for the Hatfield Forest Site of Special Scientific Interest (SSSI) and National Nature Reserve (NNR). The SAMM will describe a range of mitigation measures available to address the recreational impacts from proposed new housing development within the Hatfield Forest Zones of Influence. Ahead of the SAMM being finalised, financial contributions may be sought towards mitigation measures on larger residential development proposals in consultation with Natural England and the National Trust If appropriate, and subject to there being no significant adverse impact upon a scheme's viability, any tariffs would be applied in a proportionate manner to reflect the fact that currently only 4% of visitors to Hatfield Forest originate from within Harlow District.
	Lee Valley SPA and Ramsar site	9.08km	Water quality / quantity Air pollution	
	Wormley Hoddeson Park Woods SAC	12.77km	N/a	
	Hatfield Forest SSSI	4.15km	Recreational pressure	
Latton Priority	Epping Forest SAC	5.60km	Recreational pressure Air pollution	This site has an indicative capacity for 1050 homes. Based on this indicative c. 20ha of SANG would be required. Whilst part of the site lies outside of the current 6.2 km Zone of Influence the full quantum of development would need to be mitigated recognising the need to 'future-proof' the development in light of the potential for the Zone of Influence to increase (as is already indicated in the 2019 Epping Forest SAC Visitor survey) and to minimise the potential for the site to contribute to this increase. The preferred location of the SANG is on land on the southern side of the Masterplan area. The detailed form of the SANG provision will be determined once the final location of the access road has been resolved. The site promoter has control over land contiguous with the southern boundary of the site allocation. This could be brought forward for SANG provision as indicated at the Local Plan Examination hearing sessions this land could be brought forward SANG provision. The priority for its use will be as mitigation for the development arising from the Masterplan area. Any residual carrying capacity which is potentially able to mitigate the impacts of development elsewhere will be subject to commercial arrangements (Epping Forest GI Strategy, 2021). Natural England and the National Trust are formulating a package of on-site Strategic Access Management Measures (SAMM) for the Hatfield Forest Site of Special Scientific Interest (SSSI) and National Nature Reserve (NNR). The SAMM will describe a range of mitigation measures available to address the recreational impacts from proposed new housing development within the Hatfield Forest Zones of Influence. Ahead of the SAMM being finalised, financial contributions may be sought towards mitigation measures on larger residential development proposals in consultation with Natural England and the National Trust If appropriate, and subject to there being no significant adverse impact upon a scheme's viability, any tariffs would be applied in a proportionate manner to reflect the fact that currently only 4% of visitors to Hatfield Forest originate from within Harlow District.
	Lee Valley SPA and Ramsar site	6.30km	Recreational pressure Water quality / quantity Air pollution	
	Wormley Hoddeson Park Woods SAC	9.40km	Air pollution	
	Hatfield Forest SSSI	11.31km	N/a	
Water Lane Area	Epping Forest SAC	5.77km	Recreational pressure Air pollution	The Masterplan area provides for some 2,100 new homes. Based on the total number of homes proposed within the Masterplan area the provision of SANG would equate to 39.68ha. However, the Masterplan area comprises two distinct areas for development, the larger of which (West Katherine's) is located some distance from the current 6.2km Zone of Influence and a significant proportion of the smaller site (West Sumners) is also outside of the Zone of Influence. Nevertheless, as with Latton Priory, the Council considers that there is a need to 'future-proof' the development and to minimise the potential for the site to contribute to any extension to the Zone of Influence. The Council is therefore is seeking an element of SANG provision based on the total indicative residential capacity of the West Sumners site. Assuming a capacity of c.700 dwellings the size of SANG required would be c.13ha. The Masterplan should also identify greenspace connections to the Green Wedge and to the west towards Epping Long Green. GI beyond the provision of the SANG will also need to be developed as part of the emerging masterplan. (Epping Forest GI Strategy, 2021). Natural England and the National Trust are formulating a package of on-site Strategic Access Management Measures (SAMM) for the Hatfield Forest Site of Special Scientific Interest (SSSI) and National Nature Reserve (NNR). The SAMM will describe a range of mitigation measures available to address the recreational impacts from proposed new housing development within the Hatfield Forest Zones of Influence. Ahead of the SAMM being finalised, financial contributions may be sought towards mitigation measures on larger residential development proposals in consultation with Natural England and the National Trust If appropriate, and subject to there being no significant adverse impact upon a scheme's viability, any tariffs would be applied in a proportionate manner to reflect the fact that currently only 4% of visitors to Hatfield Forest originate from within Harlow District.
	Lee Valley SPA and Ramsar site	2.92km	Recreational pressure Water quality / quantity Air pollution	
	Wormley Hoddeson Park Woods SAC	6.32km	Recreational pressure Air pollution	
	Hatfield Forest SSSI	12.60km	N/a	

Epping Forest SAC

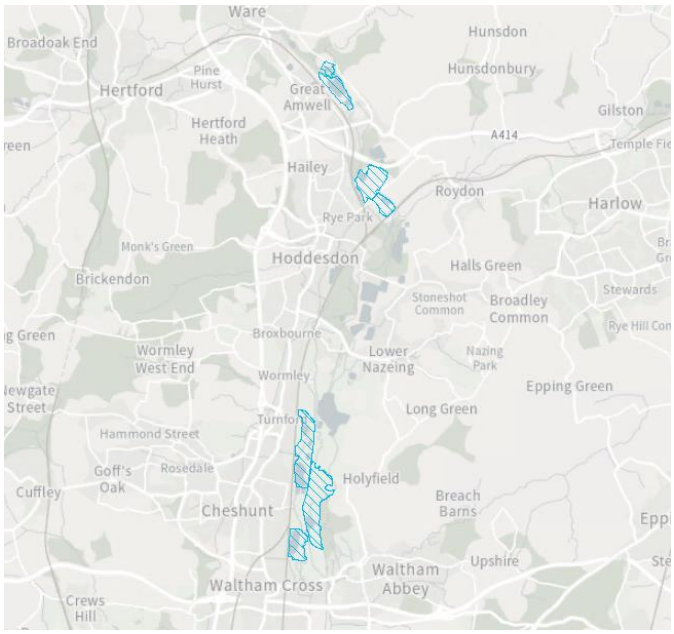


E.2 The SAC is designated for the beech forest, wet and dry heath habitats, and the population of stag beetle. It is included as a critical threshold site as a result of excessive recreational pressure.

E.3 All residential planning applications within a 6.2km ZoI must conduct a project level HRA to address recreational impacts both alone and in-combination with other plans or projects. This ZoI includes Latton Priory and Water Lane: West Sumners strategic growth areas on the southern edge of Harlow. Developments within the ZoI must seek to deliver or contribute to Sustainable Alternative Natural Green Space (SANGS) and/or provide sufficient GI to meet the recreational needs of new residents thereby avoiding further pressure on the SAC[26, 27].

E.4 Delivery of SANGS within the Latton Priory and Water Lane strategic growth areas must each deliver adequate capacity to accommodate future population. The Epping Forest GI Strategy, which has been adopted as a material consideration, sets out a series of recommendations for both the Latton Priory and Water Land strategic growth areas. At the time of writing, possible reliance of Water Lane on Latton Priory for SANGS capacity may incur recreational pressure on the woodlands located in between. These woodlands – Parndon Wood and Hospital/Risdens Wood, both within Harlow Woods SSSI – have as a precaution been included whilst recreational impact remains a possibility.

Lea Valley SPA / Ramsar



E.5 The SPA / Ramsar is designated for the populations of wintering bittern, shoveler, and gadwall supported. The 1966 Lea Valley Regional Park Act enacts long-term recreational access as well as protection and enhancement of the natural environment. The site is included as a critical threshold site to address the additional recreational demand of local housing growth.

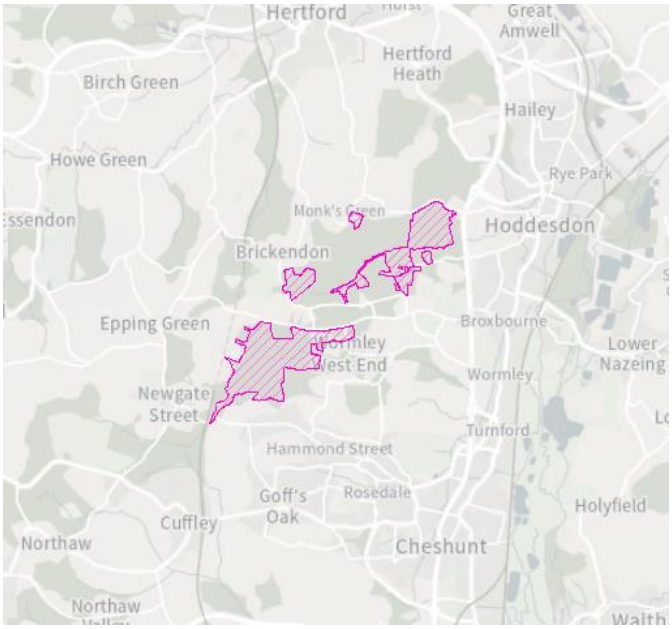
E.6 HRA is required of all planning applications within a 7km ZoI, which covers the entire Gilston area north of the Stort and the western half of the Harlow area south of the Stort (i.e. all strategic growth areas to some degree, except East of Harlow).

E.7 The Lea Valley requires careful consideration in the GI Framework to avoid generating excessive recreational pressure when seeking to alleviate existing levels experienced in the Stort; holistic consideration of these interconnected river systems is required.

[26] Natural England. 2021. Overarching Standard Advice for Development Applications within Epping Forest District https://www.eppingforestdc.gov.uk/wp-content/uploads/2021/09/Standard-advice.pdf

[27] The *Epping Forest SAC Memorandum of Understanding - Managing the impacts of growth within the West Essex/East Hertfordshire Housing Market Area on Epping Forest SAC* was signed by parties in 2017 to ensure that the named parties work in partnership to fulfil requirements including preparing a Joint Strategy that will address the requirements to (i) avoid, or effectively mitigate, adverse impacts on the integrity of the SAC from Local Plan-led development; (ii) prevent deterioration of the Epping Forest SAC features.

Wormley-Hoddesdonpark Woods SAC

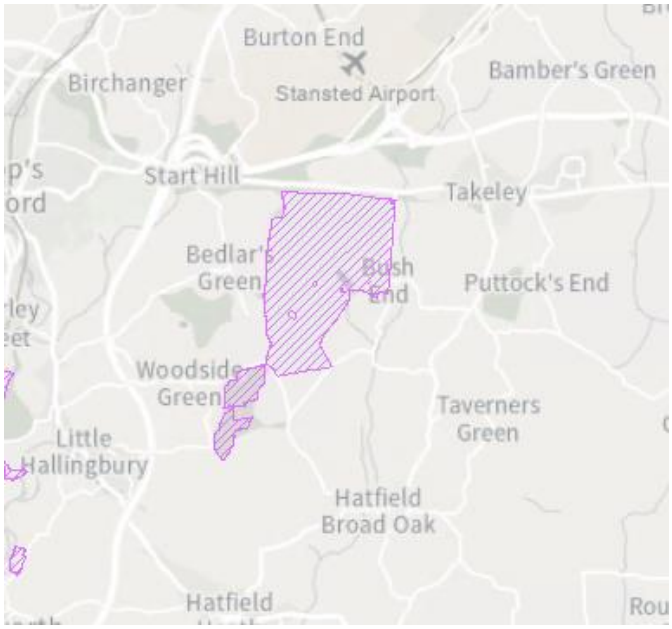


E.8 The SAC is designated for the oak and oak-hornbeam forests present. The site is included as a critical threshold site as a result of excessive recreational pressure.

E.9 HRA is required of all planning applications within a 7km ZoI, which includes the Water Lane: West Katherine's strategic growth area on the western edge of Harlow.

E.10 The GI network within this area can usefully provide alternative green space for recreational use, where possible, incorporating habitat elements (woodland, open grassland habitats with trees, etc) to reflect similar experience for visitors[28].

Hatfield Forest SSSI



E.11 The SSSI is designated as the last small medieval Royal forest to remain virtually intact in character and composition. The SSSI includes mixed ancient coppice scrub, unimproved grassland chases and plains with ancient pollards, herb-rich grassland and lake habitats, with associated rich flora and fauna. The site is included as a critical threshold site as a result of excessive recreational pressure.

E.12 A 10.4km ZoI was agreed by relevant local authorities in 2022[29]. The ZoI capture Gilson villages 1-6, the East of Harlow strategic growth area, and the eastern half of Harlow New Town.

E.13 The Strategic Access Management and Monitoring Strategy is in progress by Natural England. At the time of writing, this is not anticipated to include a SANGS approach; the application of which will be at the discretion of local authorities. The tariff on development within the ZoI is anticipated to apply to those of 50 dwellings or more.

E.14 Specifically regarding East of Harlow, Inspector comments from the Epping Forest Local Plan stated that separation should be maintained between Sheering and the new built form at East of Harlow. Accordingly, the north-most part of the allocation (within the flood zone) is set aside as 'strategic nature and semi-natural green space'. At the time of writing, the extent of public access (if any), remain under discussion.

[28] Visitor experience was, for example, captured for Hatfield Forest by the National Trust and Dialogue Matters in their 2019 study 'Hatfield Forest and New Nature Areas: What young people think'.

[29] Note that the southern part of the SSSI is omitted from the ZOI because there is no public access.

Appendix F

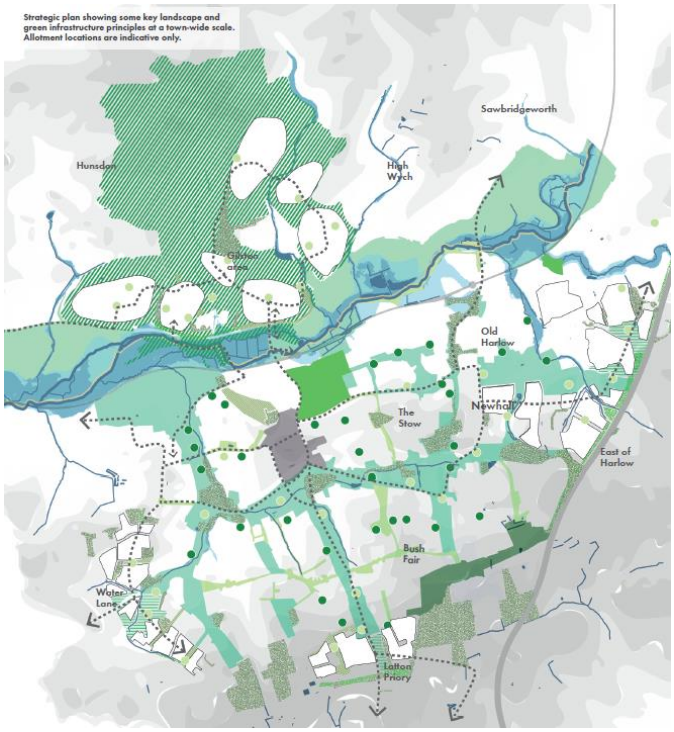
Existing GI Strategies: Supporting Local GI Information

2021 HGGT Design Guide

F.1 Four key principles are set within the theme of Landscape & GI; in turn, these are reflected in the principles of this Framework (Chapter 9).

F.2 The diagrammatic plan for GI provides 'indicative guidance' for the strategic growth areas and within Harlow New Town. It is *"not intended to represent specific locations for new green infrastructure, but to communicate the need and desire for this to be provided somewhere within the new neighbourhoods, and for investment to be made in existing assets*" which will then be detailed through landscape-led masterplanning.

Inset 5.2: Extract of HGGT Design Guide: Diagrammatic plan showing some key landscape and GI principles at a town-wide scale[30]



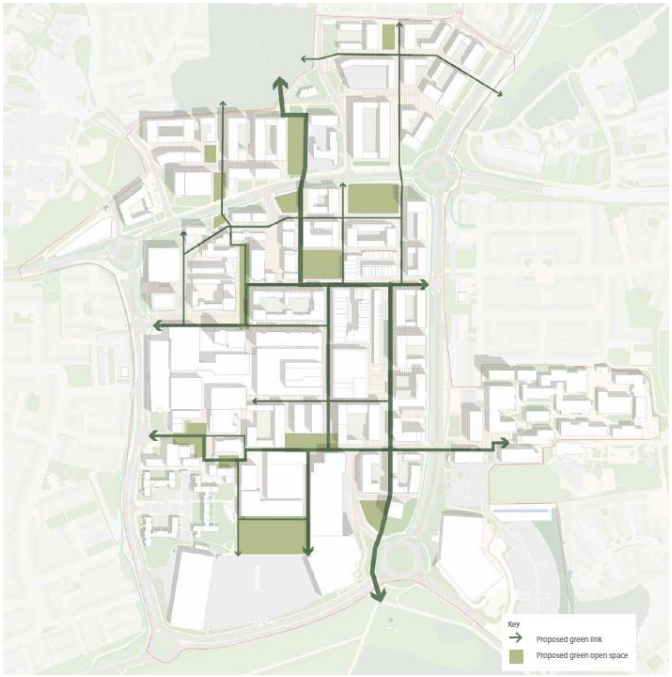
[30] Provided as a visual reference. Please see source document for detail and key: https://hggt.co.uk/wp-content/uploads/2021/10/HGGT-Design-guide-2018.pdf

2022 Harlow Town Centre SPD

F.3 The SPD focuses on the town centre, of which 17% is considered green space. Whilst recognising the presence of the Green Wedge network and other assets, the general paucity of green spaces, particularly those useable by residents, workers and visitors, is highlighted.

F.4 A key focus of the SPD, and indeed explicit recommendation for the GI Framework, is the public realm vision for an urban forest. The Miyawaki approach to planting prescribes dense planting of tiny forests using native plants and tree species to complement retention of all mature trees. Further information is explored in Chapter 7. The 2022 Green Infrastructure and Public Open Spaces Standards SPD sets out the expectations for green space across Harlow, including the town centre.

Inset 5.3: Extract of Harlow urban forest (public open spaces highlighted)[31]



2018 Gilston Area Concept Framework

F.5 The Concept Framework formed the foundation for the subsequent progression of the Gilston Villages and unbuilt land across the area (note that the redline boundary was subsequently been revised the 2020 Gilston Parameters Plan). It summarises how the East Hertfordshire and Harlow GI policies relate to the existing site and how landscape proposals of the Concept Framework responded to wider GI, including existing and valued features such as designated wildlife sites, ancient woodlands and watercourses.

Inset 5.3: Extract of the 2018 Framework's GI Strategy[32]

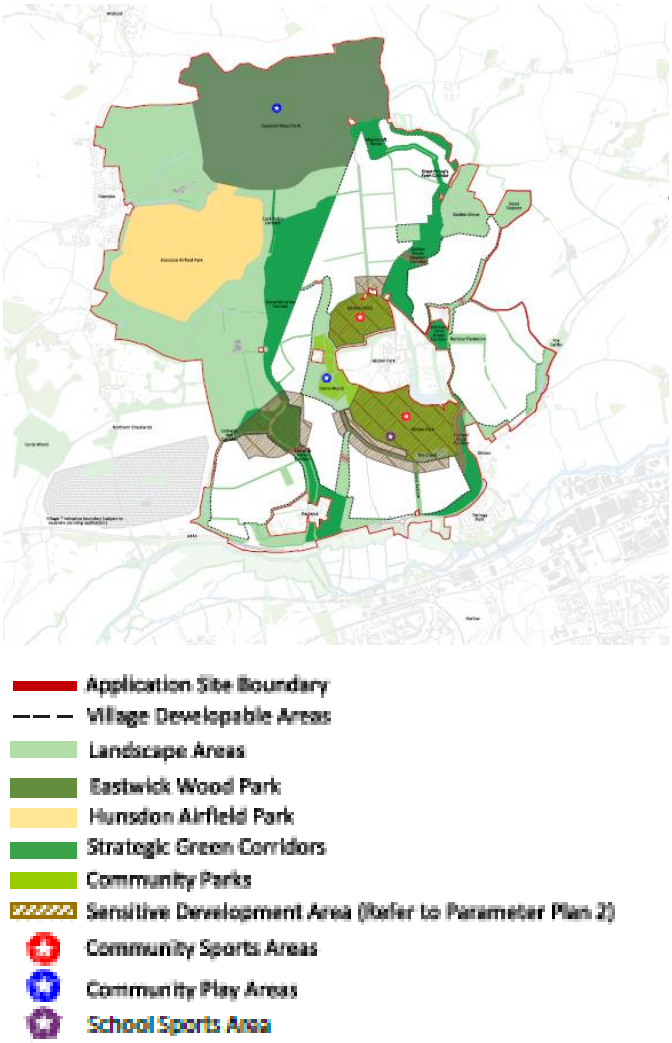
2020 Gilston Parameters Plan

F.6 The Parameters Plan forms the foundation for masterplanning within the strategic growth area. Plan 3: GI and Open Space identifies two parks north west of the 400kV electricity cables, at Hunsdon Airfield and at Eastwick Wood Park, in addition to strategic green corridors led by the brooks, community park based around registered parks and gardens, and recognition of woodlands, treelines and the hedgerow network.

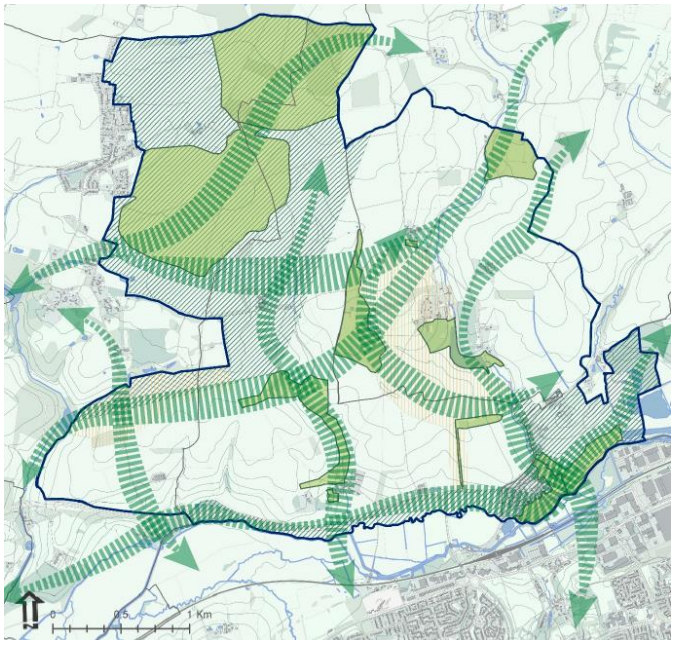
[31] Provided as a visual reference. Please see source document for detail and key: https://www.harlow.gov.uk/sites/default/files/documents/Town%20Centre%20Masterplan%20Framework%20Supplementary%20Planning%20Document.pdf

[32] Provided as a visual reference. Please see source document for detail and key: https://democracy.eastherts.gov.uk/documents/s35753/Chapter%2011%20Gilston%20-%20ERP%20D6%20Concept%20Framework%20Report_Chapters%206%207%208.pdf

Inset 5.4: Extract of Gilston Parameter Plan 3: GI and Open Space



Inset 5.5: Extract of Gilston Neighbourhood Plan: Indicative GI Network indicating green corridor opportunities[33]



2022-2033 Gilston Neighbourhood Plan

F.7 Regarding GI, the Plan recognises the 'great value' attributed by the community on the countryside setting of the villages, the proximity of wildlife habitats and access to natural greenspace. Priorities arising from 2017 public consultation on the Concept Framework "*highlighted local concerns about the impact of development on the relationship between countryside and new and existing villages and the need to protect and expand existing wildlife habitats and achieve a net biodiversity gain*". The indicative GI network identifies GI corridors between established and proposed GI assets.

[33] Provided as a visual reference. Please see source document for detail and key: https://hegnp.org.uk/?mdocs-file=2725

Appendix G

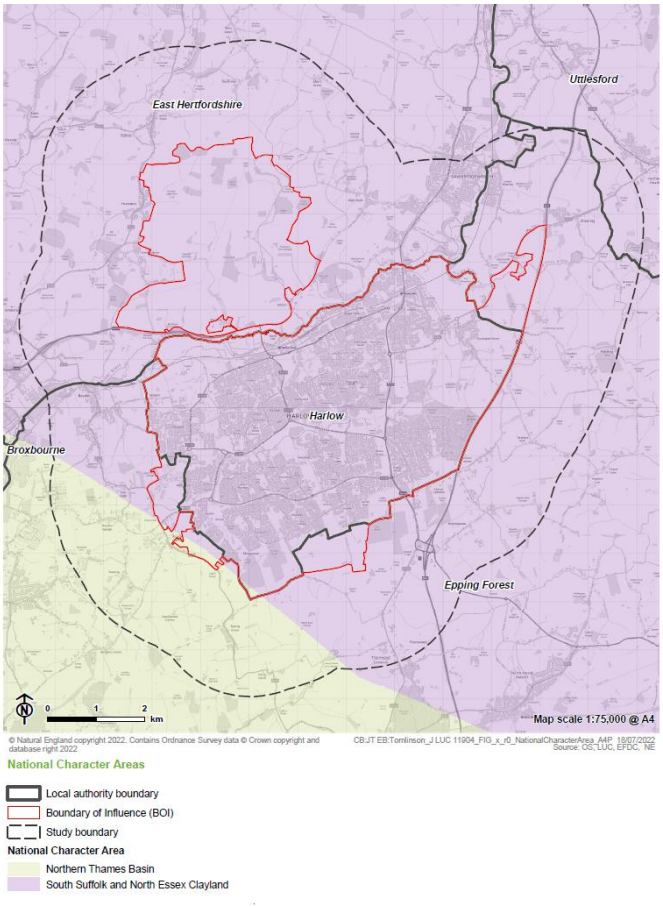
Landscape Context: Supporting Information

National Character Areas

G.1 Natural England has provided a series of 159 National Character Area (NCA) profiles covering the whole of England. These group areas of similar landscape characteristics and enables positive decision-making which aims to conserve environmental character, whilst also informing the delivery of emerging Local Nature Recovery Strategies and guiding appropriate management.

G.2 HGGT is located almost entirely within NCA 86: South Suffolk and North Essex Clayland, with a small portion of NCA 111: Northern Thames Basin encompassing the south-western extents of the development's boundary, as shown in **Inset E.1**.

Inset E.1: National Character Areas



NCA 86: South Suffolk and North Essex Clayland[34]

G.3 This NCA covers the entirety of Harlow, as well as the proposed Garden Town development at Latton Priory, East of Harlow and Gilston Villages. This is an undulating and ancient landscape characterised by wooded arable countryside dissected by river valleys. A complex network of species-rich hedgerows creates a distinct sense of enclosure across the landscape, affording a range of glimpsed and open views, alongside linear habitat connectivity. Blocks of ancient woodland and parkland are common features within this landscape and further contribute to the landscape's nature network.

G.4 Along the lower reaches of the river valleys, wider floodplains give rise to mosaics of wetland, wet woodland, marsh and fen-type habitats, which support a number of European-protected species. Also supporting some pastoral landscapes, these valleys are framed by willows and native black poplars, which form distinctive elements on the skyline.

G.5 This landscape is characterised by a dispersed settlement pattern with scattered farmsteads and small nucleated settlements, commonly focused around commons (also known locally as tyes) and greens. The new town of Harlow, which was built following World War II to ease overcrowding in London, contrasts with this surrounding agricultural settlement character.

NCA 111: Northern Thames Basin[35]

G.6 This NCA covers the south-western extents of the HGGT boundary, including the proposed development at Water Lane. This plateau landscape is dissected by river valleys and some prominent hill and ridges. The area's thick clay geology and resulting acidic soils has led to the retention of large areas of ancient woodland, for example Epping Forest. A mixture of agricultural land uses dominates the area, with principally arable fields in proximity to Harlow. Earlier enclosure patterns have largely been lost, however, remnant hedgerows and woodland blocks lead to a variety of open and enclosed views, alongside providing a framework for wildlife movement. Remnants of a dispersed settlement pattern exist in places; however, the expansion of London, surrounding commuter towns and industry has seen this lost in places.

G.7 A number of the SEOs and are specifically relevant to strategic GI objectives across the Garden Town and beyond its study area.

NCA86: South Suffolk and North Essex Clayland

- **SEO1** – Enhance the character of the gently undulating rural landscape by maintaining agricultural productivity whilst encouraging sustainable land management practices for the benefit of carbon storage, biodiversity, water quality and landscape.
- **SEO2** – Protect and enhance ancient woodland cover, parkland trees and ancient hedgerows through management and planting of new woods, hedgerows, and hedgerow trees for the benefit of landscape character, habitat connectivity and ecosystem services.
- **SEO3** – Enhance winding river valleys and their pastoral floodplains, including former gravel and sand extraction sites, for ecological, recreational, and historical importance. Support the operation of natural processes which contribute to biodiversity, geodiversity, soil quality, water availability, regulating water flower and character.

[34] Natural England (2014). NCA Profile 86: South Suffolk and North Essex Clayland. Available at: http://publications.naturalengland.org.uk/file/5148978341478400

[35] Natural England (2013). NCA Profile 111: Northern Thames Basin. Available at: http://publications.naturalengland.org.uk/file/5766163782959104

Local Landscape Character Assessments

G.8 Local Landscape Character Assessments (LCA) have been carried out for Hertfordshire County and Epping Forest District, as well as for the Harlow area as part of a wider landscape and environment study. The outputs of these three assessments are explored within this section. The Hertfordshire and Epping Forest LCAs both explore key planning and land management issues. These have been evaluated to form key landscape planning and management guidance for each local landscape character area (LLCA), as shown in green boxes. This guidance relates more explicitly to the principles of implementing GI within development. Additional points and issues relating more specifically to farming practices and general land management can be found within the LCAs.

Hertfordshire Landscape Character Assessment[36]

G.9 The Hertfordshire Landscape Character Assessment was carried out in 2004 and identifies over 230 local landscape character areas (LLCA) across the county. This assessment is relevant to the district scale of East Hertfordshire which borders Harlow and includes the proposed development at Gilston Villages. An overview of relevant landscape character areas can be seen in **Figure E.1**.

Area 81 – Stanstead to Pishiobury Parklands

G.10 This LLCA encompasses a large proportion of the proposed HGGT development at Gilston Villages to the north of Harlow. The landscape is characterised by gently undulating parkland and arable farmland with south-facing slopes which meet the Stort Valley and its tributaries to the south. The name of the LLCA originates from its incidence of parklands, many of which have been retained and therefore, alongside the scattering of ancient settlement within the area, helps to enhance the sense of time-depth within the landscape.

G.11 Stretching between Stanstead Abbots in the west and Sawbridgeworth in the east, the LLCA includes an unusual number of closely associated parklands, including at Stanstead Bury, Bonnington, Hundonsbury and Briggens Park, Eastwick (relic), Gilston Park and the former deer park around Sayes Park Farm, and Pishiobury.

G.12 Earlier enclosure has mostly been lost to large-scale arable farmland with some larger blocks of woodland associated with former parklands. The visual and perceptual connections between these parkland landscapes have been eroded over time due to mineral workings and modern arable farmland.

G.13 The south-facing slopes afford open and long views southward across the River Stort valley and towards the industrial northern edge of Harlow. From here, the tall chimneys and industrial warehouses create a harsh contrast with the wetlands and shallow valley of the Stort. Tranquillity is reduced by the consistent noise of planes coming into land at Stansted Airport, alongside the rumble of cars from the A414.

Key landscape planning and management guidance for this LLCA includes:

- Safeguard existing hedgerows, particularly along historic field boundaries, and increase the number of hedged field boundaries;
- Enhance public interpretation and engagement with the historic and ecological value of the landscape, particularly veteran and parkland trees;
- Encourage the reversal of more areas from arable to pastoral, alongside the creation of grasslands;
- Encourage the management of woodland to ensure age and species diversity, whilst also retaining historic features such as banks and ditches; and
- Ensure new planting respects the historic integrity of the parkland landscape, using similar species to those which were planted originally in order to reinforce character.

Area 82 – River Stort

G.14 This LLCA encompasses the Stort Valley as the river flows between Bishop's Stortford in the north-east and Roydon in the south-west. The Stort Valley marks the northern edge of Harlow and is characterised by gently sloping sides which are relatively enclosed by linear belts of woodland, hedgerows and, more locally to the north of Harlow, industrial warehouses. This lack of open and panoramic views means user experiences are focussed on the river.

G.15 The River Stort's valley hosts a mosaic of important habitats, including wetlands, wet woodland and open water, providing important local and national habitats. Evidence of man-made interventions exist along the river and have degraded its quality in places, including former gravel extraction sites at Hollingson Mead and Pole Hole which have since been restored to include areas of grassland, carr and lakes. Furthermore, recent development within the river valley,

[36] East Herts Council (2007). Landscape Character Assessment, Supplementary Planning Document. Available at: https://cdn-eastherts.onwebcurl.com/s3fs-public/documents/Landscape_Character_Assessment_SPD.pdf

for example at Terlings Park add to this man-made influence. Away from these areas of human activity, traditional grazing marsh is common, however, the location of the river between the urbanised edge of Harlow to the south and the A414 to the north means tranquillity is reduced.

Key landscape planning and management guidance for this LLCA includes:

- Discourage development within or adjacent to the floodplain which could detract from the ecological and visual interest of the river;
- Encourage the use of buffer strips along watercourses to enhance ecological corridors and reduce impacts of farming on water quality, this should be coupled with decreased use of pesticides;
- Explore the use of grazing as a management tool for managing vegetation;
- Encourage the connection of wetlands and other riverside habitats along the entire length of the river corridor;
- Ensure mineral restoration proposals maximise the ecological opportunities and conservation potential, contributing to the corridor of wetland habitats; and
- Resist proposals for any further mineral extraction within the Stort valley.

Area 83 – Hunsdon Plateau

G.16 This LLCA encompasses the northern extents of HGGT where the northern Gilston Villages are proposed. The area is characterised by large-scale open farmland located on a flat, upland plateau. In the north-east, smaller fields and blocks of woodland, some of which is ancient, creates a more enclosed landscape. These are connected by some hedgerows; however, they are generally fragmented within the area following the loss of earlier enclosure boundaries. Where hedgerows are extant, they commonly host native species, including elm, hawthorn and sallow with oak and ash hedgerow trees. Willows are also common features along ditch field boundaries.

G.17 The former Hunsdon Airfield, which is located within the HGGT boundary, is an open landscape characterised by grassland and a lack of vertical features following the removal of tress and hedgerows which have not been replaced. The airfield creates a unique cultural and historic element within the landscape which is still visible today.

G.18 The large to vast scale of fields creates an open landscape, however, the field pattern is varied across the area, with a handful of smaller and more regular fields located directly to the west of Hunsdon, geometric fields directly to the north of Gilston and irregular fields interspersed with ancient woodland in the north-east. The open nature of the landscape affords extensive views within due to the plateau topography, however, views into the area from outside are concealed by this elevated landform.

Key landscape planning and management guidance for this LLCA includes:

- Retain the historic characteristics of ancient woodland linked by ditched hedgerows in the north-east of the area bounding irregular fields;
- Safeguard existing hedgerows and where possible increase hedged field boundaries, particularly along historic field boundaries;
- Encourage the planting of new woodland surrounding existing blocks to protect and increase their scale and ecological diversity. This should use locally indigenous species and encourage age diversity and succession;
- Encourage the importance and awareness of veteran trees;
- If the loss of landscape features, such as ponds, ditches and hedgerows is unavoidable, ensure replacement features enhance potential nature conservation value are created and maintained to ensure they continue to provide this value; and
- Heritage assets at Hunsdon Airfield, including the engine and war memorial, must be retained and conserved.

Area 84 – High Wych Slopes

G.19 Although located just outside the HGGT boundary, this LLCA will play an important role in providing a landscape setting to the eastern edges of the Gilston Villages. The south-facing slopes of mainly arable farmland are largely characterised by irregular field patterns which are not commonly bounded by hedgerows. In places, small copses and blocks of woodland frame houses and farmsteads and create vertical elements of interest within the largely open landscape. A tight network of winding lanes, most of which are sunken with ditches, represents the main opportunity for movement through the area.

Key landscape planning and management guidance for this LLCA includes:

- Safeguard existing hedgerows and increase coverage along historic boundaries, ensuring other features such as banks and ditches are retained;
- Discourage the use of non-native species for both woodlands and hedgerows, with new planning ideally being species of local provenance;
- Plant new woodland around settlement to reduce the urban influence on the landscape, with the aim of it becoming a local amenity asset;
- Reinforce small parklands by planting additional woodlands adjacent to their boundaries; and
- Encourage the reversion of arable to pastoral and using low-density stock grazing to manage grasslands.

Epping Forest Landscape Character Assessment

G.20 An overview of relevant landscape character areas can be seen in **Figure E.2**.

Area B1 – River Stort

G.21 This area falls within the 'River Valley' landscape character type. Small parts of the proposed development at East of Harlow falls within this character area.

G.22 Characterised by the gently meandering River Stort, this part of the river corridor is relatively enclosed as a result of the thick belts of vegetation lining the watercourse, which limits views to within the area. This gives rise to a strong sense of tranquillity, despite the proximity of key transport corridors nearby. A mosaic of wetlands, wet woodland and pastoral farmland line the floodplain and contribute to the rural feel of this landscape. Where arable fields are present, these are often lined by mature hedgerows and hedgerow trees.

Key landscape planning and management guidance for this LLCA includes:

- Ensure any new development in this area is small-scale and responds to historic development patterns, utilising local vernacular and materials;
- Maintain open views along the valley corridor;
- Conserve the largely undeveloped and tranquil nature of the river valley;
- Conserve and enhance existing hedgerow pattern and restore where possible in places; and
- Enhance the habitat corridor along the River Stour and connect with wider ecological networks, including the enhancement of wetlands.

Area C1 – Sheering

G.23 This area falls within the 'Farmland Plateau' landscape character type. Small parts of the proposed development at East of Harlow falls within this character area.

G.24 A gently rolling plateau landscape which is dominated by medium- to large-scale arable fields, bounded by a network of gappy hedgerows. Occasional scattered farmsteads and the nucleated village of Sheering make up the settlement within this area, adding to the relatively tranquil landscape which increases with distance from the M11. Pockets of small, isolated woodland merge with the hedgerow network and add vertical elements onto the skyline, alongside the occasional veteran hedgerow tree. Views within this area vary between intermittent enclosure and open views of large arable fields.

Key landscape planning and management guidance for this LLCA includes:

- Ensure new development is small-scale and responds to the historic settlement pattern;
- Conserve and enhance the landscape setting of Sheering;
- Maintain open views across farmland and into the Stort Valley;
- Strengthen hedgerow pattern; and
- Ensure highways schemes reflect local character.

Area C2 – Matching

G.25 This area falls within the 'Farmland Plateau' landscape character type. Small parts of the proposed development at East of Harlow falls within this character area.

G.26 A rolling landscape dominated by medium- to large-scale arable fields, interspersed with blocks of woodland. Small hamlets, villages and scattered farmsteads create a dispersed settlement pattern, occasionally siting halls associated with designed landscapes. Consequently, veteran trees are a common feature, including hornbeam, oak, ash and willow. Several small streams dissect the plateau landscape and create intimate landscape features.

Key landscape planning and management guidance for this LLCA includes:

- Ensure new development is small-scale and responds to the historic settlement pattern, landscape setting and locally distinctive building styles;
- Conserve parkland and associated historic landscape features;
- Maintain characteristic panoramic views across farmland;
- Enhance the hedgerow network with local species of provenance;
- Establish species-rich field margins;
- Conserve and positively manage areas of ancient woodland;
- Strengthen existing and introduce new shelterbelts along main road corridors where appropriate;
- Conserve and manage veteran trees; and
- Protect small stream corridors.

Area C7 – Roydon Hamlet

G.27 This area falls within the 'Farmland Plateau' landscape character type. Parts of the proposed development at Water Lane falls within this character area.

G.28 An undulating landscape which is predominantly arable and framed by mature hedgerows, including veteran hedgerow trees. Glasshouses are visibly prevalent on the landscape and, although are an obvious man-made addition, contribute towards the sense of place. Small blocks of deciduous woodland provide some enclosure whilst also framing views, alongside contributing towards the nature network. Small-scale linear settlements and scattered farmsteads form the prevailing settlement pattern.

Key landscape planning and management guidance for this LLCA includes:

- Conserve and enhance the landscape setting to Roydon Hamlet and Halls Green;
- Ensure new development is small-scale and responds to the landscape setting and pattern;
- Maintain views across farmland;
- Enhance the existing hedgerow pattern and Medieval field systems;
- Conserve veteran trees as key landscape and ecological features; and
- Establish species-rich field margins.

Area C8 – Bumble's Green

G.29 This area falls within the 'Farmland Plateau' landscape character type. Parts of the proposed development at Water Lane falls within this character area.

G.30 An undulating landscape of arable fields lined with mature hedgerows which are marked by distinctive mature hedgerow trees, providing well-treed horizons that contribute to a recognisable sense of place. A network of promoted walking routes and National Trails traverse the landscape and make it an important recreational asset. The Nazeing Triangle forms an important Local Nature Reserve due to its population of great crested newts, dragonflies, smooth newts and grass snakes.

Key landscape planning and management guidance for this LLCA includes:

- Ensure new development within the farmland is small-scale and reflects the rural landscape character;
- Conserve and enhance the existing hedgerow pattern;
- Conserve and enhance the setting to designed historic landscapes;
- Conserve veteran trees as key landscape and ecological features;
- Protect and enhance small stream corridors; and
- Establish species rich field margins.

Area E1 – Jack's Hatch to Church Langley

G.31 This area falls within the 'Farmland Ridges' landscape character type. The proposed development at Latton Priory falls within this character area.

G.32 Marking the southern boundary of Harlow, this area forms some locally high points. This affords views northward across the urban extents of Harlow and southward across the gently undulating farmlands and contribute to the areas sense of place. Large blocks of woodland are important features within this landscape, interspersed between varying scales and shapes of arable fields. Patches of open common land also exist within this area and provide important habitat features. The ridge also plays an important role in providing a landscape setting to Harlow itself, with woodland and hedgerow trees forming distinctive features on the skyline when looking south from the town.

Key landscape planning and management guidance for this LLCA includes:

- Conserve the rural character;
- Conserve the landscape setting of Harlow and ensure new development at the settlement edge does not encroach onto the ridge;
- Consider the visual impact of taller development in relation to views to and from the area;
- Maintain open views across undulating farmland;
- Conserve and enhance existing hedgerow pattern;
- Conserve veteran trees as key ecological features; and
- Establish species rich field margins.

Harlow Area Landscape & Environment Study[37]

G.33 31 distinctive Landscape Character Areas were identified within the Harlow Area Landscape & Environment Study, as shown in **Figure E.3**. This study draws on the outputs of the 2001 south of Hertfordshire assessment and the 2002 Essex assessment. The Harlow assessment, carried out in 2005, provides a useful grain of detail for this study as it provides more refined boundaries and areas. However, the landscape character area and landscape character type boundaries are largely similar between all the studies, with the more recent outputs from Epping Forest's Landscape Character Assessment, carried out in 2010, and East Hertfordshire's 2004 assessment also providing a useful depth of analysis. Therefore, a combination of all studies will be assessed in the baseline of the landscape context and when determining future 'Landscape Zones' and their defining principles.

G.34 Making up the 31 Landscape Character Areas is 10 Landscape Character Types, of which 7 are relevant to the HGGT boundary of influence. These are listed below alongside their key characteristics.

Major Urban Areas

- Combination of several residential, commercial and industrial areas
- Large areas of publicly accessible open greenspace
- Varying architectural styles
- Well connected to the major road network

Urban Areas

- Commercial areas with shops, restaurants and small offices, centred around a high street
- Residential areas comprising a mix of housing ages and architectural styles
- Apparent historic influence

Valley Floodplains

- River or series of water bodies flowing through the area
- Variation in urban impact, dependent on whether industry is water-related or not
- Pronounced wetland vegetation
- Variety of hydrological types that can include: meandering river; canalised navigation or extensive waterbodies from former mineral workings
- Flat landform

Ridges and Slopes

- Series of minor ridges and slopes
- Gently undulating or rolling landform
- Woodland with public access
- Isolated farmsteads
- Small areas of parkland

Plateaus

- Medium to large scale fields
- Series of winding lanes
- Scattered farmsteads
- Predominantly arable farmland
- Predominantly flat landform

Ridges

- Broad ridge-top landform
- Pronounced slopes leading up to elevated/exposed ridge-top

Ridges and Valleys

- Series of broad valleys, encapsulated by minor ridges

[37] Harlow District Council and Partners (2005). Harlow Area Landscape & Environment Study. Volume 1: Strategic Sensitivity Analysis of the Harlow Area. Available at: https://www.harlow.gov.uk/sites/default/files/documents/HEBPS5%20-%20Harlow%20Area%20Landscape%20and%20Environment%20Study%202005.pdf

- Undulating landform
- Predominantly arable farmland, interspersed with pasture

Figure G.1: Hertfordshire Landscape Character Assessment

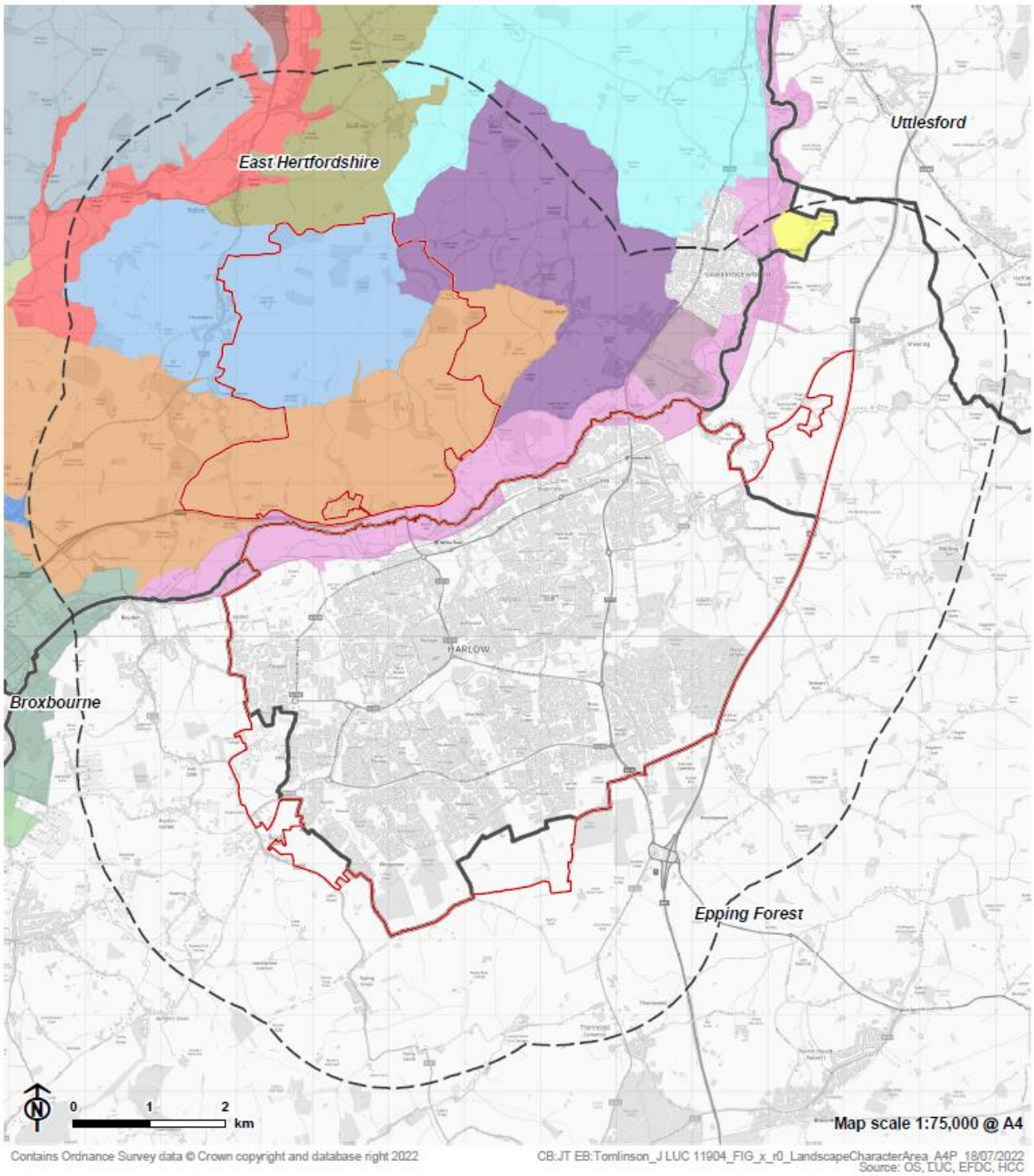


Figure G.2: Epping Forest Landscape Character Assessment, Landscape Character Types and Areas[38]

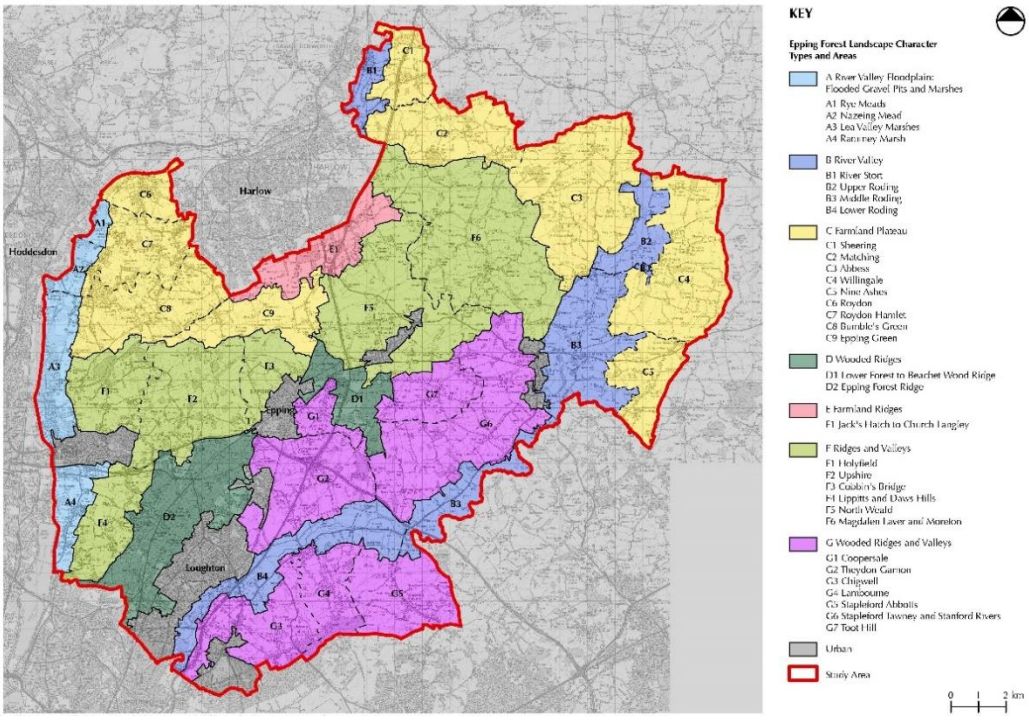
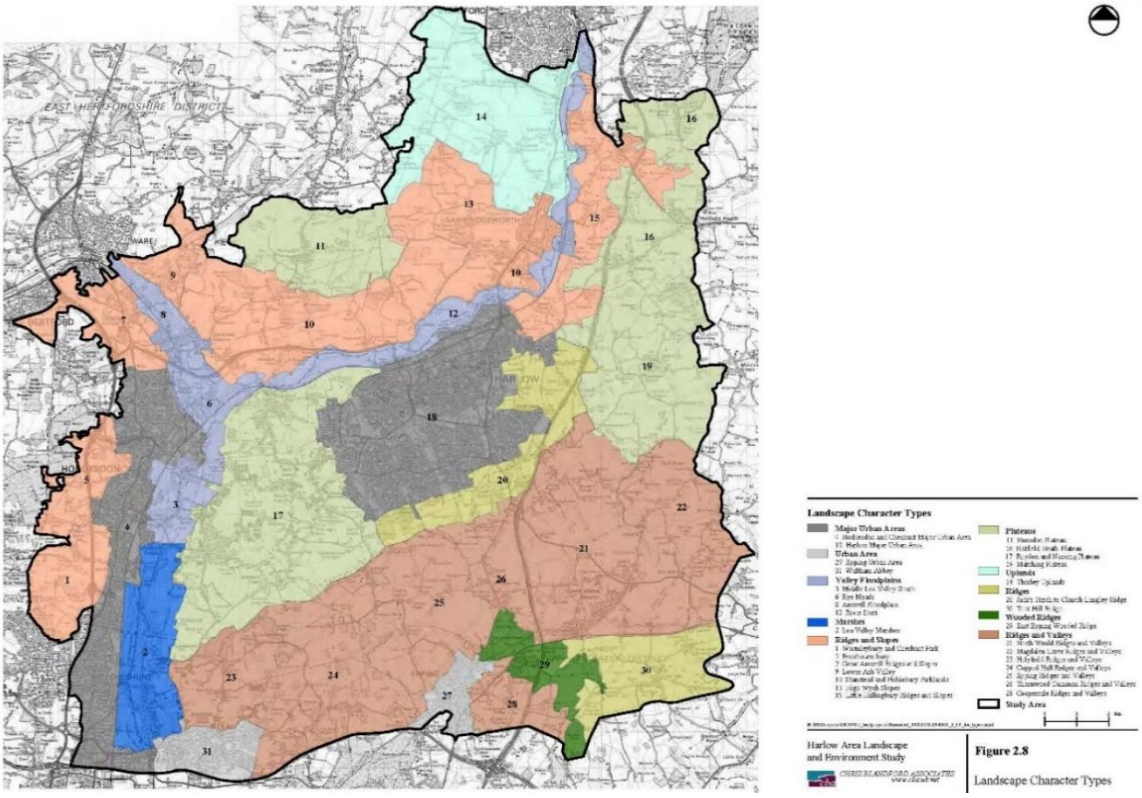


Figure G.3: Harlow Landscape and Environment Study, Landscape Character Types[39]



[38] https://www.efdclocalplan.org/wp-content/uploads/2018/03/EB709E1.pdf (Page 49)
[39] https://www.harlow.gov.uk/sites/default/files/documents/HEBPS5%20-%20Harlow%20Area%20Landscape%20and%20Environment%20Study%202005.pdf (Page 267)

Table E1: Combined overview of the local landscape character areas across the Garden Town generated from the 2004 Hertfordshire LCA and 2010 Epping Forest LCA

Local landscape character area	Overview of key characteristics	Key landscape planning and management guidance
2004 Hertfordshire LCA		
Area 81 – Stansted to Pishiobury Parklands	■ Gently undulating parkland and arable farmland on south-facing slopes; ■ Scattering of ancient settlement enhances the sense of time-depth; ■ Loss of earlier enclosure to large-scale arable farmland; ■ Large woodland blocks associated with former parklands; and ■ Long views southward across the Stort Valley and towards norther Harlow with its industrial chimneys and warehouses.	■ Safeguard existing hedgerows, particularly along historic field boundaries, and increase the number of hedged field boundaries; ■ Enhance public interpretation and engagement with the historic and ecological value of the landscape, particularly veteran and parkland trees; ■ Encourage the reversal of more areas from arable to pastoral, alongside the creation of grasslands; ■ Encourage the management of woodland to ensure age and species diversity, whilst also retaining historic features such as banks and ditches; and ■ Ensure new planting respects the historic integrity of the parkland landscape, using similar species to those which were planted originally to reinforce character.
Area 82 – River Stort	■ Gently undulating and sloping valley sides; ■ Relative enclosure by linear belts of woodland, hedgerows, and in places, industrial warehouses; ■ Lack of open and panoramic views focuses attention on the river; ■ Mosaic of wetlands, wet woodland, grazing marsh and open water; ■ Regular evidence of man-made interventions, including former gravel extraction sites; and ■ Tranquillity is reduced due to over human influence.	■ Discourage development within or adjacent to the floodplain which could detract from the ecological and visual interest of the river; ■ Encourage the use of buffer strips along watercourses to enhance ecological corridors and reduce impacts of farming on water quality, this should be coupled with decreased use of pesticides; ■ Explore the use of grazing as a management tool for managing vegetation; ■ Encourage the connection of wetlands and other riverside habitats along the entire length of the river corridor; ■ Ensure mineral restoration proposals maximise the ecological opportunities and conservation potential, contributing to the corridor of wetland habitats; and ■ Resist proposals for any further mineral extraction.
Area 83 – Hunsdon Plateau	■ Large-scale open farmland located on flat, upland plateau; ■ Some areas of smaller fields and blocks of ancient woodland which create a sense of enclosure;	■ Retain the historic characteristics of ancient woodland linked by ditched hedgerows in the north-east of the area bounding irregular fields; ■ Safeguard existing hedgerows and where possible increase hedged field boundaries, particularly along historic field boundaries; ■ Encourage the planting of new woodland surrounding existing blocks to protect and increase their scale and

Local landscape character area	Overview of key characteristics	Key landscape planning and management guidance
	■ Fragmented hedgerows due to the loss of early enclosure; ■ Extant hedgerows host native species including elm, hawthorn, sallow, oak and ash; ■ Hunsdon Airfield creates a uniquely open feature, alongside being an important cultural and historic element; and ■ Extensive views within due to the plateau topography.	ecological diversity. This should use locally indigenous species and encourage age diversity and succession; ■ Encourage the importance and awareness of veteran trees; ■ If the loss of landscape features, such as ponds, ditches and hedgerows is unavoidable, ensure replacement features enhance potential nature conservation value are created and maintained to ensure they continue to provide this value; and ■ If any extant artefacts exist relating to Hunsdon Airfield and WWII, consider their retention and conservation.
Area 84 – High Wych Slopes	■ A relatively open landscape; ■ South-facing slopes of arable farmland; ■ Irregular field patterns with minimal hedgerow boundaries; ■ Small copses and blocks of woodland frame houses and farmsteads; and ■ A tight network of winding lanes, many of with are sunken and bounded by ditches.	■ Safeguard existing hedgerows and increase coverage along historic boundaries, ensuring other features such as banks and ditches are retained; ■ Discourage the use of non-native species for both woodlands and hedgerows, with new planning ideally being species of local provenance; ■ Plant new woodland around settlement to reduce the urban influence on the landscape, with the aim of it becoming a local amenity asset; ■ Reinforce small parklands by planting additional woodlands adjacent to their boundaries; and ■ Encourage the reversion of arable to pastoral and using low-density stock grazing to manage grasslands.
2010 Epping Forest LCA		
Area B1 – River Stort	■ Gently meandering River Stort; ■ Relative enclosure due to thick belts of vegetation lining the watercourse which limit outwards views; ■ Strong sense of tranquillity, despite proximity of transport corridors; and ■ Mosaic of wetlands, wet woodland and pastoral farmland with some arable fields, often lined by mature hedgerows and trees.	■ Ensure any new development in this area is small-scale and responds to historic development patterns, utilising local vernacular and materials; ■ Maintain open views along the valley corridor; ■ Conserve the largely undeveloped and tranquil nature of the river valley; ■ Conserve and enhance existing hedgerow pattern and restore where possible in places; and ■ Enhance the habitat corridor along the River Stour and connect with wider ecological networks, including the enhancement of wetlands.
Area C1 – Sheering	■ Gently rolling plateau dominated by medium- to large-scale arable fields;	■ Ensure new development is small-scale and responds to the historic settlement pattern;

Local landscape character area	Overview of key characteristics	Key landscape planning and management guidance
	■ Network of gappy hedgerows; ■ Occasional scattered farmsteads; and ■ Pockets of isolated woodland merge within the hedgerow network with occasional veteran hedgerow trees.	■ Conserve and enhance the landscape setting of Sheering; ■ Maintain open views across farmland and into the Stort Valley; ■ Strengthen hedgerow pattern; and ■ Ensure highways schemes reflect local character.
Area C2 – Matching	■ Rolling landscape dominated by medium- to large-scale arable fields; ■ Interspersing of large woodland blocks; ■ Small hamlets, villages and scattered farmsteads; ■ Some halls associated with designed landscapes; ■ Veteran trees are common, including hornbeam, oak, ash and willow; and ■ Small stream dissect the plateau and create intimate landscape features.	■ Ensure new development is small-scale and responds to the historic settlement pattern, landscape setting and locally distinctive building styles; ■ Conserve parkland and associated historic landscape features; ■ Maintain characteristic panoramic views across farmland; ■ Enhance the hedgerow network with local species of provenance; ■ Establish species-rich field margins; ■ Conserve and positively manage areas of ancient woodland; ■ Strengthen existing and introduce new shelterbelts along main road corridors where appropriate; ■ Conserve and manage veteran trees; and ■ Protect small stream corridors.
Area C7 – Roydon Hamlet	■ An undulating landscape which is predominantly arable and framed by mature hedgerows; ■ Veteran hedgerow trees; ■ Glasshouses create a prevalent human feature within the landscape; ■ Small blocks of deciduous woodland which frame views; and ■ Linear settlement pattern.	■ Conserve and enhance the landscape setting to Roydon Hamlet and Halls Green; ■ Ensure new development is small-scale and responds to the landscape setting and pattern; ■ Maintain views across farmland; ■ Enhance the existing hedgerow pattern and Medieval field systems; ■ Conserve veteran trees as key landscape and ecological features; and ■ Establish species-rich field margins.
Area C8 – Bumble's Green	■ An undulating landscape of arable fields lined with mature hedgerows; ■ Well-treed horizons; ■ Network of promoted walking routes and National Trails; and	■ Ensure new development within the farmland is small-scale and reflects the rural landscape character; ■ Conserve and enhance the existing hedgerow pattern; ■ Conserve and enhance the setting to designed historic landscapes; ■ Conserve veteran trees as key landscape and ecological features;

Local landscape character area	Overview of key characteristics	Key landscape planning and management guidance
	■ The Nazeing Triangle forms an important Local Nature Reserve.	■ Protect and enhance small stream corridors; and ■ Establish species rich field margins.
Area E1 – Jack's Hatch to Church Langley	■ Locally high points; ■ Open and distant views northward across the urban extents of Harlow; ■ Views southward across undulating farmland; ■ Large blocks of woodland interspersed with varying shapes and sizes of arable fields; and ■ Patches of open common land and the ridge provide a landscape setting to Harlow.	■ Conserve the rural character; ■ Conserve the landscape setting of Harlow and ensure new development at the settlement edge does not encroach onto the ridge; ■ Consider the visual impact of taller development in relation to views to and from the area; ■ Maintain open views across undulating farmland; ■ Conserve and enhance existing hedgerow pattern; ■ Conserve veteran trees as key ecological features; and ■ Establish species rich field margins.

Table E2: Landscape character types identified within the Harlow Landscape & Environment Study relevant to the Garden Town

Landscape character type	Overview of key characteristics
Major Urban Areas	■ Combination of several residential, commercial and industrial areas ■ Large areas of publicly accessible open greenspace ■ Varying architectural styles ■ Well connected to the major road network
Valley Floodplains	■ River or series of water bodies flowing through the area ■ Variation in urban impact, dependent on whether industry is water-related ■ Pronounced wetland vegetation ■ Variety of hydrological types that can include: meandering river; canalised navigation or extensive waterbodies from former mineral workings ■ Flat landform
Ridges and Slopes	■ Series of minor ridges and slopes ■ Gently undulating or rolling landform ■ Woodland with public access ■ Isolated farmsteads ■ Small areas of parkland
Plateaux	■ Medium to large scale fields ■ Series of winding lanes

	■ Scattered farmsteads ■ Predominantly arable farmland ■ Predominantly flat landform
Ridges	■ Broad ridge-top landform ■ Pronounced slopes leading up to elevated/exposed ridge-top
Ridges and Valleys	■ Series of broad valleys, encapsulated by minor ridges ■ Undulating landform ■ Predominantly arable farmland, interspersed with pasture

Views and Landmarks

G.35 Harlow's position adjacent to the River Stort and situated within a topographic basin means higher ground is present to the north, at Rye Hill, and to the south, at Gilston, as part of Frederick Gibberd's original vision for the town. This not only provides an important landscape setting to Harlow, but also means views across the urban area and towards local landmarks can be achieved. Therefore, new development should ensure important views across Harlow, as well as outwards towards surrounding horizons and skylines, are maintained and where possible enhanced.

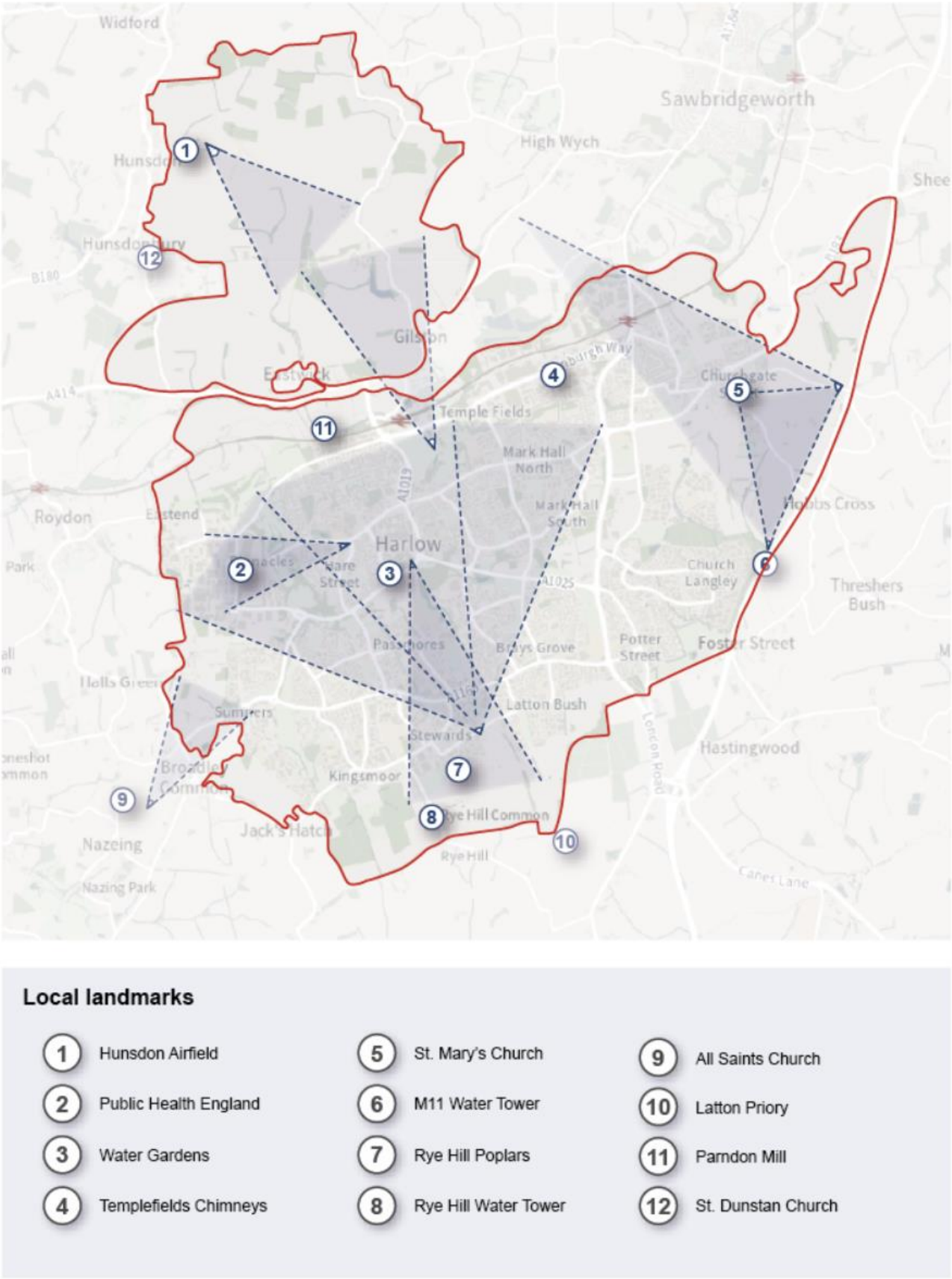
G.36 There are a number of key views and landmarks across Harlow, as identified within the Garden Town Design Guide[40]. These are mapped on **Figure E.4** and listed below.

Key local landmarks

- Hunsdon Airfield
- Public Health England
- Water Gardens
- Templefields Chimneys
- St. Mary's Church
- M11 Water Tower
- Rye Hill Poplars
- Rye Hill Water Tower
- All Saints Church
- Latton Priory
- Parndon Mill
- St. Dunstan Church

[40] Harlow and Gilston Garden Town (2018). Harlow and Gilston Garden Town Design Guide. Available at: https://moderngov.harlow.gov.uk/documents/s12718/Appendix%20B%20-%20Garden%20Town%20Design%20Guide%20November%202018.pdf

Figure G.4: HGGT's key strategic viewpoints and distinctive local landmarks



Appendix H

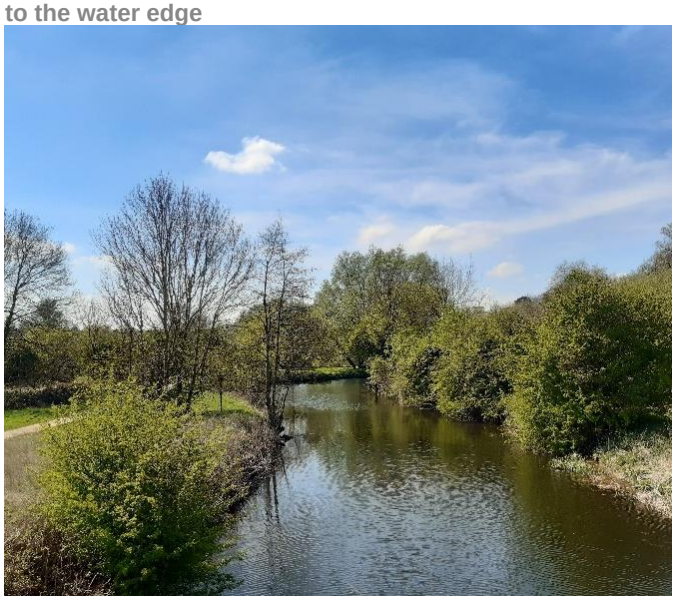
Addressing the Triple Challenge: Analysis for Each Landscape Zone

River Stort Valley

Nature Recovery

H.1 Hudson Mead SSSI, Harlow Marsh Local Nature Reserve (LNR) Pishiobury Park LNR are key GI assets, along with the wider mosaic of grassland, marsh, reedbeds, willow carr, streams and woodland. The River Stort provides an important wildlife corridor through the local landscape and provides a buffer between Harlow and the countryside to the north. For this reason it is recognised as a Hertfordshire 'Key Biodiversity Area', and by the Wildlife Trusts as a 'Living Landscape'.

Inset F.1: Riparian habitats along the River Stort indicating some areas of high disturbance leading down to the water edge



H.2 The biological quality of both the River Stort and Stort Navigation is Moderate under the WFD but it is failing on targets for fish. Hertfordshire CC, the Environment Agency and the River Stort Catchment Partnership have initiated projects to remove weirs which acts as a barrier to fish migration.

The aims of the Stort Catchment Plan are to:

- Maintain sufficient flow to support a healthy river ecosystem.
- Achieve water quality that is good enough to support a healthy aquatic ecology.
- Maintain and enhance the river's natural habitats and wildlife.
- Increase people's awareness, appreciation, education and involvement.

H.3 The floodplains' unique unimproved grassland and associated ground flora requires conservation management, including control of otherwise intense recreational pressure. Increased disturbance associated with proposed population growth, active travel routes and visitor facilities through the valley, will incur potential impact on sensitive habitats and species. There is potential for otters and water voles to inhabit areas of the River Stort and Stort Navigation, particularly where the banks are more natural, such as the overflow channel adjacent to the lock and in backwater areas. These species are sensitive to recreational disturbance and require connected areas of undisturbed habitat to disperse and successfully establish through the catchment.

H.4 The Stort Valley is part of the wider River Lea Catchment. Central to the catchment is the Lea Valley SPA and Ramsar. Whilst as a Regional Park its purpose is to help meet the various leisure needs of the growing populations of Hertfordshire, Essex and Greater London, due to its importance to birds at all times of the year, there is a need to balance increased recreational access with its ability to fulfil its designated biodiversity purpose.

H.5 In recognition of this, there is a need to re-frame the Stort Valley from promotion as a destination 'Stort Park' in recognition of ecological sensitivity. There is a need to explore how 'undisturbed areas' may be achieved in open habitats, such as grassland and wetland areas, as well as access opportunities for 'exploring nature'. This may be through tightly guided routes, such as board walks through wetland, seasonal access routes to avoid sensitive times of year (as regularly used in National Trust and RSPB sites for rutting and nesting / roosting periods respectively), or flexible routes to avoid over use (as used in the sand dune habitats on the Wirral coast).

H.6 There is a risk of severance from the new Stort crossings and associated habitat fragmentation associated with increased access paths, both formal and informal. Two crossings are proposed; widening of the existing Fifth Avenue Crossing ('the Central Stort Crossing') and the new 'Eastern Stort Crossing' (running west to east from the existing Eastwick roundabout, across the valley to River Way in Harlow next to the Templefields Enterprise Zone and connecting to Edinburgh Way). These will result in a loss of designated land at:

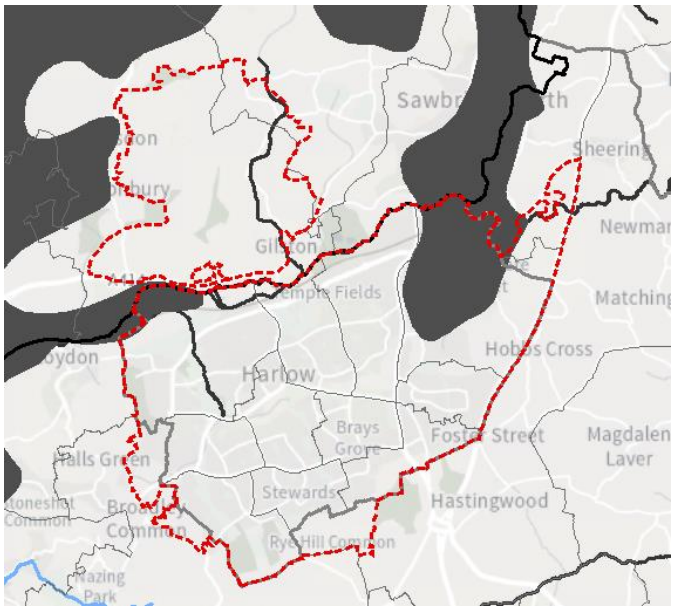
- Parndon Moat Marsh LWS and LNR;
- Eastwick and Parndon Mead LWS;
- Fiddler's Brook Marsh Hollingson Meads LWS.

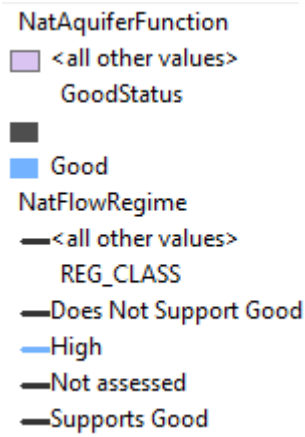
H.7 To mitigate the loss of floodplain used in widening the existing A414 bridge crossing, the scheme proposes to create areas of wetland and floodplain habitat by converting two areas of land from grassland to wetland.

Climate Change Mitigation

H.8 The construction of the Navigation in 1769 considerably altered the natural regime of the river. The combination of a system with many navigational controls and subsequent development in the floodplain of the Stort Valley has resulted in several flooding problems. Figure 7.4 shows there is a high risk of flooding in the area surrounding the River Stort and several outlines where the river has exceeded its capacity. Flood events are expected to become more frequent with more variable and extreme precipitation. For this reason, rivers and streams are classified as having high sensitivity to climate change.

Inset F.2: Natural aquifer function and natural flow regime





H.9 The Stort's floodplains are important flood storage areas, both ecologically and for the protection of surrounding infrastructure. Additional wetland creation through this landscape zone, such as bioswales, dry ponds and wet ponds through would help to slow, collect, infiltrate, and filter stormwater. Wet woodland is able to thrive in poorly drained or seasonally flooded soils. Alder and willow are found along the reach of the Stort through Harlow. Wet woodland is described in Natural England's Climate Adaptation Manual[41] as having medium sensitivity to climate change. Changes in rainfall patterns are likely to change the extent of this habitat. In certain sites reduced water availability will drive succession to drier woodland types. The resilience of wet woodland may be increased by promoting structural and species diversity and the management of invasive species.

H.10 Climate impacts will also create changes to the thermal, flow and chemical regimes of rivers and streams, with associate changes to ecology. Inset F.2 shows no areas of the River Stort are currently classified as the highest rating for natural aquifer function or natural flow regime. Some aquatic and riparian non-native species may become invasive, and other currently geographically restricted species may spread more easily.

H.11 As shown in Figure 7.3, the western side of this landscape zone has high soil carbon content, owing to the presence of fen habitat and extensive areas of floodplain grazing marsh at Hudson Mead SSSI. Floodplain grazing marsh has medium sensitivity to climate change with potential changes in species composition as specialist flora may be outcompeted by more generalist species adapted to drier and/or fluctuating conditions. Lowland fens can be highly sensitive to changes in the quality and quantity of water supply and its seasonal availability, all of which are likely to alter significantly under climate change. The direct impacts of changes to precipitation and temperature pose a severe threat to lowland fen habitat. Resilience to these impacts is currently compromised on many fens by existing pressures such as diffuse water pollution, which is currently flows off from the surrounding agricultural land. Restoring the natural function of floodplains can help to increase resilience.

Health and Wellbeing

H.12 Natural green spaces of the Stort Valley is accessible by formal and informal access routes that cut across the floodplain and run along the river. These include the Stort Valley Way and Three Forest Way. There are some links to the Lea Valley but few to the north where the Stort is bordered by arable land. Links into Harlow are limited by the railway line, A414 and industrial development.

H.13 The proposed River Stort Crossings will provide the public transport, walking and cycling infrastructure required to connect the seven Gilston Garden Villages with the Harlow Town Centre.

H.14 As described above, the Stort is ecologically sensitive. In recognition of both high existing levels of recreation use and proposed growth, the number of key linear active travel routes that pass through the valley should be defined as corridors for movement through the landscape. Provision of alternative 'destination green spaces' or 'enhancement and expansion of the Green Wedge network' will dilute pressure (both local and visitor) away from the river valley. Visitor facilities such as toilets and cafes are widely recognised as honeypot attractions, drawing high levels of recreational access[42]. There is a need to ensure all visitor facilities achieve the 'right amenity in the right place' to balance these competing demands.

Farmland Plateau

Nature Recovery

H.15 As shown in Inset 7.5, much of this landscape zone is arable. Associated features include fallow land, field margins and hedgerows, which could be strengthened to support biodiversity. Farmland birds continue to suffer national decline and from an indicator of the general quality of the farmed

[41] Natural England. 2014. Climate Change Adaptation Manual - Evidence to support nature conservation in a changing climate (NE546): http://publications.naturalengland.org.uk/publication/5629923804839936

[42] Published evidence is wide ranging in the HRA assessment of Natura 2000 sites sensitive to recreational pressure across England, such as Visitor survey, recreation impact assessment and mitigation requirements for the Chilterns Beechwoods SAC and the Dacorum Local Plan: https://www.dacorum.gov.uk/docs/default-source/strategic-planning/dacorum-recreation-evidence-base-200322-low-res-version.pdf?sfvrsn=3ebe079e_2

environment. In Hertfordshire, the former county BAP species, the stone-curlew, has become locally extinct[43]. Similarly, corn bunting and turtle dove have been lost from southwest Essex. A 2017 study at one site in the Epping Forest Buffer Lands registered only 11 of the 19 farmland index bird species, highlighting intensification of agriculture and predation pressure[44]. The study did note known breeding territories for skylark in adjacent farmland.

H.16 Opportunities to support nature's recovery may be high where soils are least suitable for farming and where habitat corridors already exist, such as alongside hedges, grassy margins, and drainage ditches. In this landscape zone, areas where the hedgerow network is fragmented and lacks structural complexity, have reduced ability to support wildlife or its dispersal. The importance of habitats found on LWS and nature reserves play an elevated role as refugia and core habitats.

Inset F.3: Opportunities to reinstate linear features across Gilston farmland e.g. hedgerows with trees, ditches and associated verges

H.17 In addition to the farmland bird species favouring open habitats, for others, structurally complex, 'messy' habitats such as scrub are vital. Yellowhammer, for example, favours young, scattered scrub whereas song thrush uses older, mature stands of scrub. Management of the collective habitat mosaic must achieve a range and sufficient extent of shrub habitats (species, age and structure) to support local conservation priorities across the local landscape.

H.18 The Essex Climate Action Commission has set a target for 50% of farmland in Essex to adopt sustainable land stewardship practices. This will require many individual farmers to coordinate their management to link GI on a regional scale. Relevant initiatives to support this include, for example, the establishment of Turtle Dove Friendly Zones.

H.19 In Gilston, this landscape zone supports clusters of ancient woodland, which are protected as LWS, namely Laws Wood and Queens Wood LWS and Marshland Wood LWS. These areas are to form part of the Eastwick Wood country park. A sensitive approach to masterplanning is required to ensure new access associated with the country parks do not fragment or disturb habitats within or adjacent to ancient woodland as a priority. Habitat creation to buffer and connect existing habitats of high ecological value will contribute to nature recovery.

H.20 As referenced in Chapter 4, the north-most part of the East of Harlow allocation (within the flood zone) is set aside as 'strategic nature and semi-natural green space'. Habitat creation and enhancement here will help connect fragmented woodland and protect the meandering Pincey Brook.

H.21 Habitat creation and management across the two new country parks offer will incorporate new planting and sowing, natural regeneration, in balance with open farmland habitats. Creation of wetlands, including wader scrapes and ponds can be achieved across the plateau where clay dominated soils permit.

Inset F.4: Intensively farmed habitats across Hunsdon Airfield

H.22 Large areas of wood pasture and parkland occur west of Water Lane at Roydon Park and Nazeingwood Common.

[43] https://www.hertswildlifetrust.org.uk/stateofnature#report

[44] https://eprints.mdx.ac.uk/21586/1/Dickins_Froud_CH_write_up.pdf

Opportunities to enhance and connect the woodland network spanning these two areas are illustrated in Figure 7.5.

Climate Change Mitigation

H.23 Arable land has limited value for climate mitigation as monoculture crops have limited carbon storage, cooling and shading, or erosion protection functions. Food and farming accounts for a fifth of all UK carbon emissions. Increase drought and flooding, and associated declines in soil health, could cause a greater area of land to come into productivity to meet food demands. Regenerative agriculture provides opportunities for people, crops, farm animals and wildlife to thrive by mimic natural processes to combine food production with environmental stewardship.

H.24 Arable field margins and hedgerows have low sensitivity to climate change[45]. These habitats are important to accommodate species and facilitate their dispersal through the landscape in response to a changing climate, particularly where connected, structurally diverse and species-rich. Due to the topography of the land, these features also benefit water quality by reducing run-off, sediment, nutrients and chemical application flow into watercourses/bodies across the catchment.

H.25 The Climate Change Committee has recommended that the extent of hedgerows be increased by 40% as part of measures against the climate emergency. Planting and gapping-up of hedgerows should incorporate a range of locally-appropriate species, particularly those that are adapted to a wide range of climatic conditions.

H.26 The smaller blocks of woodland in Gilston and to the west of Harlow are vulnerable to edge effects i.e. a greater proportion of the total habitat area becomes exposed to the extreme and/or fluctuating conditions associated with climate change. In this regard, increasing the size and structural heterogeneity of woodland increases climate change mitigation.

Health and Wellbeing

H.27 The existing ANSGt profile maps the area of proposed Gilston strategic growth area within this landscape zone as deficient in access to green space; the majority only meets one ANGSt Standard and the most north easterly edge meets none (see Figure 7.6). This does not correlate with IMD (health) as most of the area is in the decile for lowest level of deprivation.

H.28 The combined area of the Hunsdon Airfield and Eastwick Woodlands country parks provide a substantial permanent area of natural greenspace. Located within the ZoI for both Hatfield Forest SSSI and the Lea Valley SPA and Ramsar SPA, these provide alternative destinations to the critical threshold sites. As planned and managed GI, these must also contribute to preventing additional pressure on the ecologically sensitive Stort Valley.

H.29 Across both country parks, masterplanning will accommodate all three access types – 'active access', 'exploring nature' and 'undisturbed areas' – but in contrasting proportions to reflect the individual character of each park. Hunsdon Airfield supports greater cultural heritage assets and relatively fewer wildlife sites in comparison to Eastwick Woods, for example. To determine the ratio and extent of access types to be incorporated into each masterplan, the existing value of, and future potential for, farmland biodiversity will require assessment.

H.30 The area of this landscape zone west and south of Harlow has greater existing access to green space and IMD (health) of mostly 60-70%. The public rights of way network provides good existing links into the countryside. Despite SANG provision within the strategic growth areas overlapping this landscape zone, there is risk of increase recreational pressure on ancient woodland habitats of Harlow Woods SSSI if access is not clearly directed and / or SANG capacity is not integrated within each growth development site. New active travel connections from Harlow New Town, through the Water Lane growth areas and out to the wider countryside, can divert and dissipate recreational access from Harlow Woods SSSI of sensitively designed and managed.

H.31 There is also opportunity to strengthen long-ranging active travel connections to the Lea Valley via Broxbourne and Cheshunt, to reduce dependence on vehicle access from the east. Concurrently, this could dissipate recreational pressure arriving in the Lea Valley. Any route connection/s need to recognise the ecological sensitivity of the Lea Valley SPA and Ramsar.

Farmland and Wooded Ridge

Nature Recovery

H.32 Substantial woodland areas occur across this landscape zone, typically linked by hedges and watercourses through the intervening arable land. Harlow Woods SSSI (including Parndon Woods, Risdens Woods and Hospital Woods) is a core feature of high biodiversity value. This ancient woodland

[45] Natural England. 2014. Climate Change Adaptation Manual - Evidence to support nature conservation in a changing climate (NE546): http://publications.naturalengland.org.uk/publication/5629923804839936

consists of mature hornbeam coppice and oak, with ponds and watercourses providing additional features for invertebrates (Inset F.5).

Inset F.5: Mosaic habitats at Harlow Woods SSSI

H.33 Marks Bush LWS and Harlow Park LWS provide important connectivity across the farmland ridge. As shown in Figure 7.5, these woodlands are a mixture of broadleaved and coniferous woodlands. Open rides and glades provide a varied structure with understorey and ground flora habitat between areas of plantation.

H.34 Where blocks of woodland are interface intensively managed arable land (see Inset F.6), extension of the woodland edge and buffering with scrub and grassland mosaic can be achieved through natural regeneration supplemented by planting. This potentially offers benefit to woodland specialists and, where straddling access routes, may screen farmland species from disturbance.

Inset F.6: The interface between Marks Bush LWS and farmland

H.35 Harlow Woods SSSI stands between Water Lane and Latton Priory. To avoid the risk of detrimental recreation pressure impacting the SSSI, detailed design of the SANG in each growth area will need to address the interconnecting access routes.

Climate Change Mitigation

H.36 The larger blocks of woodland present provide important carbon storage and sequestration services as well as cooling and shading, flood and erosion mitigation. Lowland deciduous woodland has low climate change sensitivity[46]. The greatest climate risk to woodlands is likely to be an increase in the frequency and severity of summer drought, which may cause a decline in canopy cover. Woodland will also become more vulnerable to the increased prevalence of pathogens and increased survival of disease vectors. Managing woodlands to increase climate change mitigation should focus on increasing the age structure and structural heterogeneity of trees.

H.37 As the woodland in this landscape zone sits within an agriculture matrix, creating more robust woodland and semi-natural habitat networks through planting new woodlands in targeted locations include north-facing or more sheltered slopes would increase resilience.

[46] [46] Natural England. 2014. Climate Change Adaptation Manual - Evidence to support nature conservation in a changing climate (NE546): http://publications.naturalengland.org.uk/publication/5629923804839936

Health and Wellbeing

H.38 Figure 7.6 illustrates the contrast in access to green space across this landscape zone, ranging from a maximum of six ANGSt met in the north western side of the Latton Priory growth area to no standards met in the east of the landscape zone adjacent to the east of Harlow. Health deprivation is consistent across the landscape zone in the 80-90% decile (Figure 7.7). Opportunities to enhance the function of Harlow Park and Harlow Commons to provide low-impact recreation, include provision of circular trails on-site that provide 'exploring nature' access, and strengthening of the PROW network into the countryside to provide 'active access'.

H.39 Areas of high concentrations of PM2.5 corresponds strongly with the M11, notably where the road meets at the roundabout with London Road (see Figure 7.8). Open space next to a road, particularly green open space such as a park, plays a vital role in reducing public exposure to road transport pollution. Marks Bushes will in part buffer the new Latton Priory community. Opportunities to create denser and thicker line of trees, with a hedge or green wall beneath, can provide an effective barrier to people occupying a larger area, further from the road.

H.40 Notably lacking elsewhere, this Landscape zone includes provision of the largest cemetery within HGGT. The Parndon Wood Cemetery and Crematorium is set within the tranquil ancient woodland of Harlow Woods SSSI.

Undulating Parklands

Nature Recovery

H.41 Veteran trees and parkland features remain evident in the areas that have fallen out of favourable management and/or are now subject to more intense land management or agriculture. Veteran trees and associated deadwood support a wide range of for flora, fauna and fungi. To ensure long term continuity of the veteran tree population, management is required to prevent premature structural failure and manage deadwood (standing and fallen) assets, planting to ensure succession and varied age structure, and potentially induce veteranisation (such as coronet cuts). This is important as veteran trees may support a wide range of fauna and fugal bodies, many of which are only associated with long periods of continuity in their habitat.

Inset F.7: Former Gilston parkland

H.42 Loss of livestock around Gilston Estate means much of the grassland that was a characteristic part of the former wood pasture and parkland in this landscape zone has come rank or been converted to arable. Reintroduction of grazing or mowing regimes should allow for the natural recruitment of young trees, for example in association with boundary hedgerows or as clusters / small copses where appropriate.

H.43 Many hedgerows in this landscape zone have either been removed for arable farming or have become fragmented though lack of management. Gaps in hedges not only reduce their total habitat area but also their value as a wildlife corridor. Planting up with native shrubs and trees strengthens and extends dispersal corridors and reduces the risk of local extinction.

H.44 Fiddler's Brook, Golden Brook and Gould's Brook feed into the River Stort and create wildlife corridors through this landscape zone. Analysis for these features is provided under 'Green Wedges' below.

Climate Change Mitigation

H.45 Wood pasture and parkland habitat type is classified as having low climate change vulnerability[47]. However increased frequency of storm conditions, extremes of soil temperature and moisture and drought could cause the loss of mature and veteran trees and their associate biodiversity, which are a key characteristic of this landscape zone. This can be addressed through management of the veteran tree population, ensuring

[47] Natural England. 2014. Climate Change Adaptation Manual - Evidence to support nature conservation in a changing climate (NE546): http://publications.naturalengland.org.uk/publication/5629923804839936

adequate protection, conservation and regeneration as described under 'Nature Recovery' above.

Health and Wellbeing

H.46 Existing access to natural green space is low across the landscape zone, between one and three ANGSt being met (see Figure 7.6). However, existing communities have lower levels of air pollution and the lowest levels of deprivation (Figure 7.7 and 7.8). Access to, and enjoyment of, the countryside is facilitated through the PROW network (see Figure 3.2). Maximising access to open spaces of the Garden Town, and to cross-boundary areas beyond via a rich network of walking and cycling routes, supporting active lifestyles and good health, is a key opportunity for the growth area.

H.47 There is a need to encourage movement northwards, away from sensitive Stort to the farmland plateau and proposed country parks. Movement corridors could sensitively follow natural contours and including visual links to wider heritage and natural assets, such as Eastwick Brook Green Wedge, which incorporates historic routes such as Cock Robin Lane. Longer distance cross-boundary connections, e.g. north east to Sawbridgeworth, can also be used to dilute pressure on the Stort Valley.

H.48 Heritage assets are intrinsic to the character of this landscape zone including for example, Gilston Estate, Hunsdon Brook Fishponds Scheduled Monument and the Registered Parks and Gardens of Briggens, Stanstead Bury and Pishiobury. Opportunities to reinforce landscape and biodiversity value of these sites should also public appreciation and education through improved connections and wayfinding.

Green Wedges

Nature Recovery

H.49 These substantial corridors Harlow provide movement of wildlife and people, whilst delineating neighbourhoods. Importantly, the Green Wedges capture several LWS designations; Markhall Wood LWS and Brenthall and Barnsley Wood LWS provide opportunities for undisturbed nature. Although backing onto the front of housing developments, these woodlands are less well connected by footpaths and the sustainable transport corridors, allowing nature to thrive without human disturbance.

H.50 The Green Wedge network provides important north-south and east-west connectivity, capturing hedgerows, watercourses and extending to tree-lined footpaths as corridors from one area of countryside to another.

H.51 A foci for offsetting recreational pressure on the Stort Valley is Town Hall Park. This is through its main purpose as a park, play and learning area but also through provision of biodiverse habitats, such as wildflower grassland, dense scrub and hedgerows that contribute to the habitat mosaic of the valley floor (see Inset F.8).

Inset F.8: Opportunities for enhancement through the stream corridor, surrounding grassland and boundary features at Harlow Town Park

H.52 Enhancement of connection to, and of habitats through, Glebelands Wood provides a quiet continuous corridor for species movement (see Inset F.9) include management to diversify the age-classes of trees, increase structural complexity (e.g. encouraging distinct understorey to create undisturbed areas) and promoting species richness (e.g. native climbers and ground flora, potentially targeting a greater foraging resource), together with improved signage and learning opportunities.

Inset F.9: Opportunities within Glebelands Woods include more complex habitat structure and areas of 'undisturbed habitat'

H.53 Fiddler's Brook has moderate ecological status under the WFD. Noted are the poor nutrient management and poor soil management form agriculture and rural land management creating diffuse pollution. Creating a network riparian buffer strips can provide a physical barrier that helps restrict the flow of pollutants and prevent them from being washed from the field into the watercourse. Buffer strips also contribute to the mosaic and connectivity of habitats in the wider landscape and can develop into valuable wildlife habitats.

H.54 Much of Cannon Brook through the centre of Harlow is inaccessible as it is either culverted or runs through privately owned land (e.g. Cannon Brook Golf Club). A recent project by the Stort Catchment Partnership, Environment Agency and HMWT improved the water quality and biodiversity of the Brook by cutting back of some overshading trees and shrubs to increase the amount of light reaching the river, planting of emergent vegetation and cleaning up plastic debris.

H.55 Similar interventions to maintain and enhance natural habitats and wildlife would be beneficial at Todd Brook to address the low flow / siltation, paucity of aquatic and marginal vegetation, limited shrub layer and presence of plastic debris. Improved wayfinding from Netteswell Pond would encourage positive recreation, away from the Stort Valley and provide essential nature discovery at the heart of Harlow.

Climate Change Mitigation

H.56 Fidler's Brook, Hudson Brook and Golden Brook are all flood alert areas, along with networks of ditches and through Eastwick. Hunsdon Brook flows through several blocks of woodland but there are gaps in the riparian vegetation at sections along its length. The riparian buffer along Fidler's Brook while continuous could be made wider to provide greater resilience. Much of Golden Brook intersects through agricultural land with no riparian buffer. Here risks of water quality issues are highest. Riparian buffers provide the first line of defence against flooding by absorb rainwater and floodwater as well as slowing down the release of runoff into the waterway, which in turn reduces flood intensity. Integrating SuDS into new developments can also help reduce flood risk

H.57 Todd Brook and Cannon Brook are in flood zone areas which may impact on nearby communities (see Figure 7.5). Woodland planting and management suited to both dry and ephemerally wet conditions would help intercept flood risk upstream, riparian habitat management, and clearing artificial debris from the Brooks to improve their capacity to hold water will provide natural flood management solutions. Surface water run-off will also be abated further upstream. For example associated with green wedge expansion through Gilston area and natural surface SuDS in Harlow New Town.

Inset F:10: Opportunities to improve water flow and quality at Todd Brook

H.58 Larger areas of woodland within the Green Wedges network, for example Glebelands Wood and Netteswell Plantation contribute to carbon sequestration and storage as well as cooling and shading. Improving structure of the habitat mosaic, particularly at Netteswell Plantation, will help improve these functions while also creating resilience against climate and air borne pathogens/diseases.

H.59 There are several mature trees at other green spaces through the Green Wedges network such as Harlow Town Park and Mark Hall Park. Managing existing trees as well as

planting new to create a diverse range of species and age structure will help ensure that habitats are optimally complex and maximise the delivery of climate related ecosystem services.

Health and Wellbeing

H.60 LCWIP zones cross the Stort Valley and run through the Green Wedges (see Figure 3.1). Expansion and enhancement of the sustainable transport network through into the growth areas will provide cohesion. Providing improved opportunities for 'active access' and 'exploring nature' routes along Todd Brook and down south to Latton Priory, alongside habitat improvements, should focus on dilution of pressure away from the Stort.

H.61 Public parks or gardens and playing fields should form the cornerstones of the Green Wedge network, with clear waymarking and contributing to sense of place within their respective neighbourhoods. These provide recreational opportunities and in the case of Harlow Town Park are also historically significant with several listed buildings contained within (see Figure 7.9). Creation of safe social spaces with natural play feature can create discovery-related activities where children can learn a variety of skills while being at play in close proximity with nature. The sensory, scented garden in Harlow Town Park is an example of how to provide nature-related experiences for those with diverse needs. Urban orchards can also provide accessible, green, community spaces.

Inset F.11: Primary school children learning about the importance of pruning fruit trees (source: The Orchard Project)

H.62 The A1169, A1019 and A1025 carry high traffic intensity along and incur associated air pollution issues for the Hare Street and Little Parndon, Netteswell and Mark Hall, Great Parndon and Toddbrook and Bush Fair and Harlow Common neighbourhoods (see Figure 7.8). These are priority areas for expansion of tree planting (canopy connectivity).

Green Fingers

Nature Recovery

H.63 Currently the Green Fingers have limited biodiversity value and predominately amenity grassland or closely mown verges along streets. If planted with street trees, hedgerows or native wildflowers, the Green Fingers can usefully support nature recovery, either as direct corridors or as stepping stone habitat. For example, the mature trees, scrub and hedgerow along Cambridge Road behind Harlow Town Rail Station bridge the gap between the River Stort and the Green Wedge in front of the railway line.

Inset F.12: Opportunity for habitat creation across amenity grass verges in residential areas

H.64 Along Southern Way, the Green Finger network also has provides east-west connectivity through the southern half of Harlow Town, spanning the Green Wedges along Second Avenue and Third Avenue. There are several mature trees along Southern Way of different species and structure and wide slopped grassy banks. Sections of grass are left to grow long and flower in the spring and summer months, providing essential pollinator habitat. Often overlooked and undervalued, road verges can be havens for wildlife. These narrow lanes of land cover a large area of the UK and are crucial habitats for many rare and declining native species.

Climate Change Mitigation

H.65 As the Green Fingers are generally smaller and thinner than the Green Wedges they have a supporting function in supporting climate change mitigation. The Fingers extend the reach of the Green Wedges into a more permeable urban fabric. Opportunities to increase this role include street tree planting, which can provide cooling and shading and carbon storage or installing SuDS such as filter strips and permeable paving that can assist with flood management.

Health and Wellbeing

H.66 As predominately intended to be corridors for movement, the Green Fingers have an important role in connecting people between the green spaces provided within Harlow New Town. Extending the reach of Green Wedges and active travel into each neighbourhood, the Green Fingers serve as entry points and create sense of place. Further, extending the network of active travel routes along the STC, such as new footpaths, bridleways and cycleways will link existing routes and provide access to areas of countryside and woodland.

H.67 As many of the Green Fingers follow roads through Harlow New Town, where air pollution is elevated there's an opportunity to increase the structure and function with new local appropriate GI such as street trees to provide air quality purification and local climate regulation.

Harlow New Town

Nature Recovery

H.68 Harolds Grove, Brays Grove, Vicarage Woods and Rams Grove, Kingsdon Ponds are all LWS that lie outside of the existing network of Green Wedges and Fingers. As some of the smallest LWS in Harlow New Town these provide stepping stone habitats that promote permeability for the dispersal and establishment of wildlife, as well as opportunities for nature exploration for communities nearby. Maintaining these LWS in favourable condition, as part of the local designated network, is core to wider nature recovery.

H.69 The STCs provide opportunities to accommodates functional greenspace for wildlife. As linear routes, lining these with pollinator-rich wildflower verges, hedgerows and street trees can help create enhanced and connected wildlife corridors.

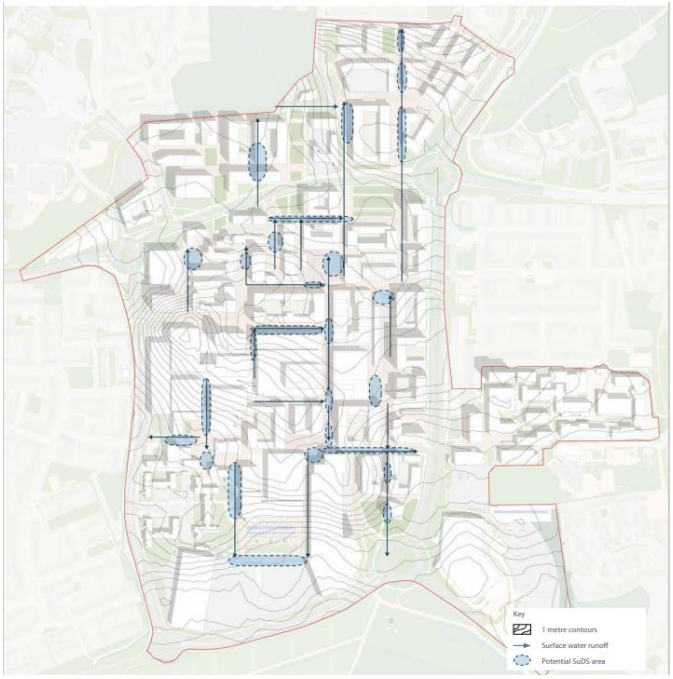
H.70 Smaller playfields and park, allotments and private land, including gardens and soft landscaping around social housing can also usefully contribute to nature recovery through tree planting, wildflower planting and low intensity mowing regimes on verges.

Climate Change Mitigation

H.71 Within the urban areas, with the exception of the Green Wedges and local green spaces, there is relatively little micro level green infrastructure such as street trees. This particularly applies to the central urban areas and to incidental and neighbourhood green spaces. As referenced in Chapter 5, the Harlow Town Centre SPD SPD 2022 proposes the creation of a Harlow Urban Forest. As well as retaining exiting trees, the urban forest would be created through dense planting of 'tiny forests' and understorey planting that will increase biodiversity, improve air quality and reduce urban heat island effect.

H.72 Flood zone 2 abuts the eastern edge of Harlow Old Town. Adding greater functionality to the brook tributary by increasing its flood storage capacity with additional pools and swales would help address flood risk. Integrating planted filter strips and swales as part of the streetscape network can help manage surface flood water. Inset F.13 shows opportunities for SuDS improvements within the town centre.

Inset F.13: Existing contours, surface water runoff and potential locations for focused SuDS improvements in Harlow Town Centre (extract: Harlow Town Centre SPD 2022)



Health and Wellbeing

H.73 Some of Harlow's neighbourhoods are better catered for than others with respect to access to natural greenspace. Access is high through the west and centre of Harlow New Town with a variety of open space typologies provided (e.g. allotments, playing fields, parks and gardens – see Figure 7.7

and 7.9). The north west is a foci for sports and recreation with Harlow Town Football Club., Canons Brook Golf Club. Harlow Greyhound Stadium and Harlow Town Cricket Club all in close proximity.

H.74 Many of the issues relating to Harlow's open spaces in these areas tend to be around the quality of existing open spaces and how they related to the local community in terms of getting access to them, overlooking/surveillance of spaces[48]. In the future focus should be on improving the quality of existing sites as well as meeting the quantitative needs of the future population.

H.75 The east of Harlow has greater deficiency in access to natural green space with some areas failing to meet any of the ANGSt (see Figure 7.6). The National Cycle Network passes east to west through Harlow New Town and links to Harlow Town station. Local cycling routes are well connected throughout the rest of the Town although provision is weaker into Harlow Old Town and the further east (see Figure 3.1).

H.76 This could be addressed by creating new destination green space as part of the East of Harlow strategic growth area. New active travel routes from Harlow New Town would ensure communities in the east of the town can access the new greenspace, as well as connecting to cross-boundary active access networks. Connections can also be provided from Pincey Fields and existing parklands. This would contribute to alleviating pressure in the Stort Valley as well as meet requirements for alternative greenspace within the Hatfield Forest SSSI ZoI. Proposals for the Harlow Urban Forest highlight using planting to strengthen walking and cycling connections from the town centre to surrounding landscapes, including the Town Park, Todd Brook and Rectory Woods.

H.77 Green spaces are important to the heritage of Harlow and are often found adjacent to or in overlap with these cultural heritage assets (see Figure 7.9). The eastern side of Harlow supp higher concentrations of Grade I and Grade II listed buildings as well as scheduled monuments. This an opportunity to increase wayfinding to the monuments, utilising active access routes and the STC to celebrate the historical value of Harlow New Town and create enriched and multifunctional recreational opportunities for local communities.

H.78 Air pollution levels are raised in Harlow New Town, reflective of the A-roads that thread through the urban centre (see Figure 7.8). Planting of street trees, clusters and pocket parks, and ensuring the STC are optimally green will help disperse and filter out particulate matter.

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Appendix I

Overview of GI Principles

I.1 The nine principles for GI, prescribed in the Brief, are described below.

Principle 1: Adaptable GI

I.2 Green infrastructure is inherently multi-functional and may support a variety of uses such as play, walking, cycling and community events. 'Adaptable GI' and a place that can adapt to climate change; healthy with space for food production – improving mental health and access to good nutrition and have a good range of active leisure facilities; sustainable, a biodiverse place with continuity of habitats; and innovative.

I.3 The adaptability of GI specifically to climate change is addressed further in Principle 4.

Principle 2: Enhancing the Green Belt and Expanding the Green Wedge Network

I.4 New developments will improve access to and enhance the quality and recreational value of areas of Green Belt on the edge of the Garden Town, expand and enhance the Green Wedge network and create country parks where appropriate through investment in public access, landscape and biodiversity enhancements across the Garden Town connecting out to the wider countryside and Stort Valley. Green Fingers within developments will be multi-functional spaces, playing fields, adventure spaces, play areas, running trails and bridleways will support new and existing residents. The open space network will support active lifestyles and good health supported by long term maintenance and stewardship.

I.5 This principle is transposed from the 2018 HGGT Vision: Landscape and GI Key Principle A, which includes ten supporting principles:

1. *Masterplans will identify and design open space that expands the existing Green Wedge network across the Garden Town and connects out to the wider countryside and Stort Valley.*
2. *Areas of Green Belt on the edge of the Garden Town will be improved with investment in public access, landscape and biodiversity enhancements, and the creation of country parks where appropriate.*
3. *New development adjoining the network will improve access to and enhance the quality and recreational value of Green Wedges and Green Fingers. Clusters of*

uses such as cafes, play areas and seating will be established close to local centres.

4. *New Green Wedges will be an appropriate size and character to maintain the individual identity of new and existing neighbourhoods and villages.*
5. *Green Fingers running through residential areas will be multi-functional spaces, accommodating play areas, a local park or village green.*
6. *New neighbourhood development will have a positive relationship with the enhanced Green Wedge network with front doors and windows facing onto green spaces where appropriate.*
7. *Green Wedges between villages will be rural in character using farmland and woodland to reinforce the separation of development and maintain existing village ways of life.*
8. *The open space network will support active lifestyles and good health through excellent walking and cycling routes, connecting all parts of the Garden Town and the wider countryside.*
9. *New development should identify appropriate locations for playing fields, adventure spaces, play areas, running trails and bridleways to support new and existing residents.*
10. *Local authorities will seek to secure the long-term maintenance and stewardship of open spaces; committed to achieving high quality such as the Green Flag standard for local parks and green spaces.*

Principle 3: Landscape-led Masterplanning: Responding to Natural Character and Function

I.6 An outstanding green and blue infrastructure network of open spaces and waterways will characterise the Garden Town, providing multiple benefits for residents' physical and mental health and rich habitats for wildlife, flora and fauna. The Stort Valley will form an important leisure, recreational and ecological asset uniting the new villages with the existing town and its new neighbourhoods balancing with its role as a natural habitat and navigation. The existing landscape should shape the pattern of development.

I.7 This principle is transposed from the 2018 HGGT Vision: Landscape and GI Key Principle B, which includes eight supporting principles:

11. *An outstanding green and blue infrastructure network of open spaces and waterways will characterise the Garden Town, providing multiple benefits for residents' physical and mental health; rich habitats for wildlife, flora and fauna; and important noise and air pollution buffers from roads and industry.*
12. *Development will sensitively respond to topography, with views of key landmarks and vistas into, out of and across the Garden Town, framing and enhancing these.*
13. *Street trees and planting in strategic locations will screen and filter views between development, enhance key vistas and provide buffers to busy roads.*
14. *The existing landscape should shape the pattern of new development and the character of open spaces, using existing woodlands, hedges, trees, meadows and waterways as natural cues.*
15. *Local species to be chosen for tree lined streets and garden hedges will reinforce local landscape character.*
16. *The Stort Valley Park will form an important leisure, recreational and ecological asset at the heart of the Garden Town, uniting the new villages with the existing town and its new neighbourhoods.*
17. *The Stort Valley will be part of the walking and cycling network. This will be carefully balanced with its role as a natural habitat and navigation system.*
18. *New and improved crossings are planned across the River Stort. These will carefully consider landscape, ecological and right of way impacts*.

Principle 4: Designing in Biodiversity, Climate change mitigation and Food Security

I.8 Early and continued engagement will take place with key stakeholders to create places that contribute to a clear net biodiversity gain. Tree and plant species will reinforce indigenous species, promote diversity and be responsive to local climate and geological conditions. Sustainable drainage systems will meet the challenge of climate change, control flooding and act as multifunctional habitats. Allotments and orchards will encourage community activity, tackling social isolation and improve access to low cost food and nutrition education supporting healthy living. Governance and maintenance strategies shall support funding and maintenance of green spaces.

I.9 This principle is transposed from the 2018 HGGT Vision: Landscape and GI Key Principle C, which includes nine supporting principles:

19. *Developers will be encouraged to use materials and construction methods that protect and support a network of wildlife havens across the Garden Town.*
20. *Local authorities will support approaches that demonstrate early and continued working with key stakeholders including the Environment Agency, RSPB*

and Canal and River Trust, creating places that contribute to a clear net biodiversity gain.

21. *Tree and plant selection will reinforce indigenous species, promote diversity and be responsive to local climate and geological conditions. Disease resistant and climate adaptable and species supportive of native ecological systems will be chosen.*
22. *SuDS will be a characteristic feature of the Garden Town, with developments meeting the challenges of climate change, and controlling flooding with multifunctional habitats. These will be balanced with archaeological considerations.*
23. *The Garden Town will have mechanisms for robust governance (e.g. Community Trusts), continued funding and maintenance of green spaces. Maintenance strategies shall form an integral part of new development permissions, conditions and legal agreements.*
24. *All homes will be within 800m of an allotment (10 minutes walking time). These play a key role in encouraging community activity and tackling social isolation; improving access to low-cost food and nutrition education; and supporting healthy living.*
25. *A community-led approach shall be taken to establishing local leadership of allotments, with appropriate sites identified within new developments.*
26. *Opportunities for informal growing spaces and orchards will be maximised at schools and health centres, pocket parks, Super Greenways, the town centre, and on temporary sites at phased schemes.*
27. *New development will bring forward proposals for innovative approaches to water supply, conservation and management; recognising areas of severe water stress.*

Principle 5: Anticipating Change and Future Proofing Infrastructure

I.10 Infrastructure must not act as a barrier towards existing green and blue networks and must anticipate their expansion. The future changes and needs of these routes and the people using them must be considered and as the existing landscape guides development, infrastructure must integrate where appropriate in sensitive and mutually beneficial ways.

I.11 This principle also reflects the 2021 HGGT Sustainability Guidance 'First Principles' No.5: *Adaptable and future proof design*.

Principle 6: Changing the Character of Roads to Street

I.12 Historically, the Garden Town has suffered from car-led development, where roads dominate the public realm. Through greening and re-wilding, and with a focus on active travel routes, rather than those of the car, we can refocus the character of these roads into humane scale streets that match the ambitions of the new Garden Town.

Principle 7: Revitalising the Cycle and Walking Network

I.13 The original Garden Town had highly ambitious cycling and walking infrastructure that was ahead of its time. Sadly, this has fallen into disrepair and been overshadowed by car-dominated development. With the new Garden Town, there is the need to revitalise the existing networks and expand them to the new development areas. Cycling and walking networks must be made as desirable as possible to use in order to help reach modal shift targets. The existing infrastructure must be upgraded and reconnected, with greening and more resilient landscaping. Proposed routes, can integrate into green and blue networks where possible, creating attractive areas to walk and cycle in, reconnecting those who use the with nature.

I.14 This principle also reflects the 2021 HGGT Sustainability Guidance 'First Principles' No.2: S*ustainable movement*.

Principle 8: Responsive and Distinctive Design

I.15 New developments should be encouraged to consider green roofs and other technologies that help green the environment, increase biodiversity and provide sustainable drainage solutions, whilst not losing reference to the context in which it sits. This environmental sensitivity in design should be used to develop distinctive character. Gardens should be designed to accommodate the movement of animals and planned in ways that enhance natural green routes rather than creating barriers.

I.16 This principle also reflects the 2021 HGGT Sustainability Guidance 'First Principles', notably No.6: *Fabric-first approach.*

Principle 9: Utilising Energy Generation and Conservation

I.17 This principle stems from the 2018 HGGT Vision: Landscape and GI Key Principle D: *Making best use of technology in energy generation and conservation*. Of the six supporting principles, that most relevant to GI states:

> *The Garden Town will spearhead the Clean Growth agenda set by the UK Industrial Strategy, championing the use of design that incorporates energy generation and conservation technologies. This should consider but not be limited to solar heat and power; rain water harvesting; passive gains; vertical and horizontal axis wind turbines; ground and air source heat pumps; and combined heat and power networks*.

I.18 This principle also reflects the 2021 HGGT Sustainability Guidance 'First Principles', notably No.5: *Adaptable and future proof design*.

Appendix J

GI Principles – Detailed Recommendations

GI Principles for the River Stort Valley

Principle 1: Adaptable green infrastructure that supports a variety of uses, can adapt to climate change, is a healthy space and is biodiverse

- Ensure the River Stort Valley serves as a multi-functional corridor that delivers nature-based solutions to climate change, such as flood storage, as well as a corridor for the movement of wildlife, and to a lesser degree the movement of people along a defined recreation corridor that respects the sensitivity of habitats and species.
- Within the Stort Valley, recreation activities should be concentrated in areas resilient enough to take the additional pressure, for example surrounding Harlow Station, where active travel paths have already been widened.
- Recreation should be sensitive to habitats and species, and ensure people are aware of the value of the Stort and the susceptibility of wildlife to recreation pressures. Appropriate activities include small-scale bird watching, interactive education boards with QR codes, nature trails and improved signage which reinforces the sense of being immersed in nature (see Strategic GI Opportunity – **A Resilient Stort Valley**).
- Identify designated areas for water recreation, for example enhancing provisions at Lackford Lakes which can help to filter people away from the Stort itself.

Principle 2: Enhancing the Green Belt and expanding the Green Wedge network

- Ensure the seamless connection of the Green Wedge network across the Stort, connecting wildlife and people between Harlow New Town and the Gilston Villages. Active travel corridors along the Fiddler's Brook and Golden Brook should be able to navigate the Stort Valley efficiently to access Harlow town centre and Harlow Station. This should include direct active travel connections with the new Stort Crossings (see Strategic GI Opportunities – **Enhance & Expand Green Wedge Network: Eastwick Green Wedge** and **Enhance & Expand Green Wedge Network: Fidler's Brook / Golden Brook Green Wedge**).

Principle 3: Landscape-led masterplanning which responds to natural character and function

- No areas of residential expansion are proposed within the Stort Valley, therefore masterplanning is not applicable. However, any changes within the corridor should consider the following:
  - Frame and enhance views along the Stort corridor of both natural and built heritage, ensuring a soft vegetated edge with adjacent urban areas is created and maintained. Ensure natural and soft boundary treatments are used.
  - Use woodland and shelter belts, particularly rows of native black poplars and pollard willow, to screen industry and development occurring in the north-east of Harlow. Vegetation should also be used to soften views of harsh urban edges.
  - Enhance the mosaic of habitats appropriate to the local landscape, ranging from enclosed and heavily wooded stretches with dense scrub boundaries, to open wetlands, grazing marsh and meadows.
  - Ensure development within the Gilston villages retain an undeveloped horizon from the Stort Valley, whilst allowing for sustainable development in close proximity to Harlow.
- The two Stort Crossings will present major infrastructure interventions within the Stort Valley. The landscape masterplans of these should consider the following:
  - Ensure active travel connections are maintained beneath the new crossings along the valley and that the ambient experience of the user is retained. This could be achieved through the introduction of vegetative softening and avoiding overly low underpasses which create dark and hostile environments for users. Ensure long views along the Stort corridor that are framed by vegetation are maintained whilst passing beneath the crossings in both directions.
  - Mitigate for the loss of river valley habitat caused by the new Eastern Stort Crossing and the widening of the Central Stort Crossing.
  - Where the Eastern Stort Crossing passes through the former gravel extraction site at Pye Corner, utilise the opportunity to deliver environmental net gain.
  - Where the Eastern Stort Crossing is elevated, ensure sufficient tree planting and other structural planting is delivered to filter views of the new road and help anchor it in the landscape.

Principle 4: Designing in biodiversity, climate change mitigation and food security

- Protect, connect and create new areas of wetland and wet woodland / carr habitats, allowing the development of boggy ground flora, including reeds and sedges. Invasive species should be closely monitored and managed.
- Explore the opportunity for reedbed establishment at key overflow locations, as well as at the confluence of the Stort and Harlow's more urbanised brooks, for example the Todd Brook and Canon's Brook. This will help enhance water quality of watercourses which may have been exposed to higher levels of urban surface water run off before it travels downstream in the Stort.
- Enhance the diversity of habitats within areas that are characterised by large swathes of amenity grassland, particularly at former gravel extraction sites.
- Widen and reinforce vegetated buffers, particularly through the establishment of riparian woodland, between adjacent farmland and the River Stort, as well as its tributaries.

Principle 5: Anticipating change and future proofing infrastructure

- Ensure the Stort Crossings do not allow for direct surface water run-off into the River Stort and its floodplain, helping to safeguard water quality as well as flood risk.
- Utilise vegetation as air and noise pollution buffers between main roads, rail and the new Stort Crossings, and users of the Stort river path.

Principle 6: Changing the character of roads to streets

- Not applicable for this Landscape Zone.

Principle 7: Revitalising the cycle, horse riding and walking network

- Enhance the management of invasive species along the river corridor to maintain the open riverside path.
- Limit widening of the Stort's riverside path to those stretches that will provide direct active travel links between new and existing communities and Harlow's town centre and train station. Where the riverside path is not considered to deliver a direct active travel link, widening is discouraged to help maintain a wilder experience for users of the route whilst also discouraging heavy foot and cycle traffic. However, enhanced surfacing to ensure access to for all users, including those with disabilities, should be explored, alongside enhancing access onto the towpath itself for those with mobility issues. This will allow for 'active access' of the Stort Valley.
  Alternative routes, such as the proposed Gilston to Sawbridgeworth green link (see Strategic GI Opportunity – **Cross-Boundary Active access Network: Gilston to Sawbridgeworth**), should be advertised along the Stort corridor.
- Ensure the delivery of safe and segregated walking and cycling routes along the Stort Crossings that create direct links with the proposed Green Wedges north of the Stort and the existing Green Wedges within Harlow New Town.

Principle 8: Responsive and distinctive design

- Install a distinctive set of street furniture and signage along the Stort Corridor which utilises a palette of natural and robust materials, for example wood and corten steel. These should blend in with their natural surroundings, whilst also contributing to landscape character and creating opportunities for better interpretation of the Stort's biodiversity and cultural value (see Strategic GI Opportunity – **A Resilient Stort Valley**). The use of dual street furniture / seating should be encouraged, for example a bench incorporating a planter, to help reduce clutter and provide green links along the corridor.
- Conserve and enhance the rural character and setting of heritage assets such as Parndon Mill.

Principle 9: Utilising energy generation and conservation

- Explore opportunities for small-scale hydrological energy generation at the sites of former mills to create green energy which reflects the historic context of the Stort Valley.

GI Principles for the Farmland Plateau

Principle 1: Adaptable green infrastructure that supports a variety of uses, can adapt to climate change, is a healthy space and is biodiverse

All growth areas

- Consider the implications of development and recreation pressures on the nearby Epping Forest Special Area of Conservation (SAC), Hatfield Forest Site of Special Scientific Interest (SSSI) and Broxbourne Woods National Nature Reserve (NNR) and SSSI. Design of new green space and SANGS need to be equally, if not more, desirable than visits to these protected landscapes and should replicate, to an extent, the experience for users. This could include the provision of open access to non-ancient woodland, alongside well-surfaced circular routes suitable for all abilities, safe areas for walkers to let dogs off the lead, educational interpretation and nature trails.

Gilston Villages Growth Area

- New country parks should be areas of public green space which amplify investment and opportunities for recreation, healthy lifestyles, interactions with nature, landscape recovery and nature-based solutions. The two country parks to the north of the Gilston Villages should exhibit different characteristics to provide a variety of recreation opportunities, functions and habitats.
  - The proposed country park in the north-east has an agricultural character with large blocks of ancient woodland that are not only important biodiversity assets, but also provide a sense of enclosure in the landscape.
    Additional linear connecting elements, including shelter belts, hedgerows, arable field margins and meadows should be delivered within the new country park to strengthen the local nature recovery network and provide additional habitats for farmland birds. Other habitats could include wood pasture and scrub, as well as marginal aquatic habitats associated with existing ponds and moats.
    Sections of agricultural land uses should be retained, with the potential to preserve an area of agricultural character for the creation of a market garden. Retaining these agricultural functions will help to reinforce the rural character of the country park and create a sense of free access and enjoyment of the countryside for its users. Activities should be focussed on education, informal play, interactions with nature and appreciation of the wider landscape.
    (see Strategic GI Opportunity – **Eastwick Wood country park**).
  - The country park located on the former Hunsdon Airfield has a much more open character than its surrounding countryside and could provide a recreationally focussed asset for the community, therefore taking pressure away from the Stort Valley and other sensitive ancient woodland sites in the vicinity. Networks of bridleways, cycle routes, fitness trails and circular walking routes should be delivered, utilising features such as avenues and holloways to immerse visitors in the countryside.
    This country park should host a mosaic of formal and informal uses, creating a balance between recreation and space for nature. Open horizons should be retained in places and the enhancement of views through framing by new woodland and hedgerows.
    (see Strategic GI Opportunity – **Hunsdon Airfield country park**).

Water Lane Growth Area

- Consider the recreation pressure new development will create on ancient woodland at Parndon Wood, which sits between proposed development at Water Lane and Latton Priory. Recreation pressures should ideally be contained within masterplan areas with new accessible community woodlands or focussed elsewhere, for example the wider countryside towards Nazeing or the

Green Wedge network (see Strategic GI Opportunity – **Cross-boundary Active Access Network: Nazeing and Lea Valley**).

Principle 2: Enhancing the Green Belt and expanding the Green Wedge network

All growth areas

- Ensure direct active travel connections are made between new communities and green spaces with the existing Green Wedge network. New habitat should enhance the linear connections along the existing Green Wedge network and extend the free movement of wildlife.

Gilston Villages Growth Area

- Around Gilston Village 4, explore opportunities for agricultural green wedges that will act as separating features between new villages, as well as reinforcing rural settings (see Strategic GI Opportunity – **Gilston Farmland: Support for Sustainable & Regenerative Farming**).
- Within areas of new Green Belt, ensure habitats, particularly linear boundary treatments, including hedgerows, woodland and arable field margins, are reinforced for their character and ecological value.

Principle 3: Landscape-led masterplanning which responds to natural character and function

All growth areas

- Restore gappy hedgerows and plant additional hedgerow trees to provide vertical interest along horizons. To create a diverse mix of locally-appropriate species choice, a minimum of five species should be targeted, selecting those suited to local ground conditions, etc. Ensure sympathetic ongoing management of hedgerows to ensure hedgerows remain healthy and continuous. Include species such as black native poplar and pollard willow.
- Schemes must demonstrate that GI is integral to the distinctiveness of place and designed to protect the local landscape and heritage from the outset.
- GI features, where possible, must be connected to the wider landscape GI network within the site and beyond the site boundary. This will help to prevent habitat fragmentation and enhance environmental net gain.

Gilston Villages growth area

- Re-structure existing woodland blocks to create non-uniform 'scalloped' edges which dilute the intensified agricultural character of the landscape. These more natural edges should be coupled with enhanced arable margins, woodland glades and a more diverse hierarchy at the woodland edge, creating a strengthened habitat network for farmland birds (see Strategic GI Opportunity – **Gilston Farmland: Support for Sustainable & Regenerative Farming**).
- Open and distant views from Hunsdon Airfield across Harlow and towards the wooded ridge to the south should be retained (see Strategic GI Opportunity – **Hunsdon Airfield country park**).
- Development within Gilston Village 4 should respond to the views of St Mary's Church.

East of Harlow Growth Area

- Enhance the setting to, and interpretation of, The Gibberd Garden.

Principle 4: Designing in biodiversity, climate change mitigation and food security

All growth areas;

- Design new green spaces, particularly the country parks to the north of Gilston and the area to the north of the Pincey Brook, for carbon capture and storage (see Strategic GI Opportunity – **Destination Greenspace: Princess Alexandra / Pincey Brook**).
- New GI should create a strong link to carbon reduction and nature-based solutions. This will support climate change adaptation and mitigation, including consideration of:
  - Management techniques and how they 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).
- All growth areas should demonstrate the multifunctional solution GI provides to a number of planning challenges, such as flood mitigation, air quality enhancement, shading and cooling.
- All new development should ensure GI is integrated with nature recovery, as set out within Local Nature Recovery Strategies.

Gilston Villages Growth Area:

- Improve the management of ancient woodland blocks through a rotation of coppicing and removal of more competitive species, such as elder and sycamore.
- Prioritise the creation and protection of arable field margins for red listed farmland birds, including skylarks, corn buntings and grey partridge. Hedgerows and veteran trees should also be protected (see Strategic GI Opportunity – **Gilston Farmland: Support for Sustainable & Regenerative Farming**).

East of Harlow Growth Area:

- Enhance habitat connections along the Pincey Brook, focussing on delivering additional wetlands and wet woodland. Create a new Green Wedge which also doubles as an active travel corridor along part of the Brook, however, allow for appropriate habitat buffers to create a relatively undisturbed blue corridor for wildlife (see Strategic GI Opportunity – **Enhance & Expand Green Wedge Network: Pincey Brook Green Wedge**).
- Safeguard the area to the north of the Pincey Brook for wildlife within the East of Harlow strategic growth area. Utilise this area for the focussing of biodiversity credits from developers. The ecological design and management of this area needs to be well considered, through the creation of an ecological masterplan (see Strategic GI Opportunity – **Destination Greenspace: Princess Alexandra / Pincey Brook**).

Principle 5: Anticipating change and future proofing infrastructure

All growth areas:

- Explore opportunities for delivering an hierarchy of on-site SuDS networks to connect with existing watercourses, for example Gould's Brook and Pincey Brook, promoting water quality and wildlife connections.

Principle 6: Changing the character of roads to streets

All growth areas:

- New development should aspire to the government's vision for every new street to be tree-lined, however, designs should ensure these streets are reflective of their rural location, where appropriate. Formal avenues of trees will not be suitable for all streets. Instead, a more eclectic range of buildings lines and roofscapes coupled with some street trees and local green spaces, for example village greens, could be appropriate in places. Other considerations could include, where appropriate, green roofs / walls, dual street furniture / seating, SuDS and tree cells.
- An integrated approach to the planning of streets to accommodate trees, SuDS and other green space should be adopted. This should ensure that sufficient space is provided for all, not just one or the other.

Gilston Villages Growth Area:

- New and upgraded roads that are connecting the Gilston Villages should adopt characteristics of rural lanes to create a sense of moving through the countryside when travelling between villages. This could be achieved through the use of hedges and hedgerow trees as boundary treatment. However, space for cyclists, walkers and horses should not be compromised and ideally segregated from vehicles through naturalistic greenways between villages. Minimal line works should be used where possible.

Principle 7: Revitalising the cycle, horse riding and walking network

All growth areas:

- Deliver multifunctional corridors, which sensitively combine wildlife and active travel, particularly along the course of existing brooks and proposed Green Wedges, for example Gould's Brook and Pincey Brook. Link new multifunctional corridors and proposed Green Wedges with Harlow's existing Green Wedge network, helping to deliver sustainable communities (see Strategic GI Opportunities – **Enhance & Expand the Green Wedge Network: Eastwick Green Wedge, Fidler's Brook Green Wedges,** and **Pincey Brook Green Wedge**).
- Revitalise ancient holloways for active travel in ways that conserve and enhances their character (see Strategic GI Opportunity – **Revitalising Holloways**). Where these holloways are anticipated to form key active travel links, the more formal travel space should be to one side of the holloway to conserve their character.
- Active travel routes should adopt a 'lane' character where appropriate, utilising shelter belts of trees and hedgerows to reinforce a rural sense of place. Where existing PRoWs follow 'lanes' and are proposed as key active travel routes, the active travel corridor should be constructed outside of the lane to retain the character of these heritage features.
- Explore opportunities for strategic active travel / greenway links between west Harlow, including development at Water Lane, towards Nazeing and the Lea Valley. Links with Nazeing Common should reinforce the southern common edge of Harlow (see Strategic GI Opportunity – **Cross-boundary Active Access Network: Nazeing & Lea Valley**).
- Explore opportunities for wider active travel links through the Farmland Plateau and stretching into Hertfordshire, including connecting with settlements at Hunsdon, Widford and Much Hadham.
- All active travel routes and links must be accessible for all ages and abilities.

Principle 8: Responsive and distinctive design

All growth areas:

- Bring existing rural linear features into the heart of new development, for example, utilise small woodland blocks, brooks and hedgerows within Gilston Village 4, utilise shelter belts of trees and small watercourses in the East of Harlow Growth Area, and utilise thick, well treed hedgerows within Water Lane.
- Extend the trail of sculptures found across Harlow New Town into surrounding areas of new development to create visual and cultural interest, and connections to the New Town.
- SuDS and green space should not just be pushed to the periphery of development, often resulting in poor quality public open space. Instead, GI, SuDS and public open space should permeate throughout development, creating a functional and connected network.

Gilston Villages Growth Area:

- Ensure SuDS within new development are responsive to their surrounding character and, where appropriate, reinforce the rural context through species choice and design. This could include soft-edged swales, ditches and attenuation basins at rural settlement edges, as opposed to constructed rain gardens which are more appropriate for the more urbanised cores.

GI Principles for the Farmland and Wooded Ridge

Principle 1: Adaptable green infrastructure that supports a variety of uses, can adapt to climate change, is a healthy space and is biodiverse

- Utilise areas of high and open land for recreation routes where expansive views north across Harlow can be afforded, for example to the west of Latton Woods, as well as Latton and Harlow Common (see Strategic GI Opportunity – **Southern Swathe Ecological Corridor**). Retain open and distant views from the Stort Valley Way.
- Enhance recreation provisions within Latton Woods to help direct pressure away from other, more sensitive ancient woodland, for example Parndon Wood. Implications of recreation pressure on the neighbouring Epping Forest SAC should also be considered. SANGS need to be equally, if not more, desirable than visits to the SAC and should replicate the experience for users. This could include the provision of open access to non-ancient woodland, for example Latton Woods, alongside well-surfaced circular routes suitable for all abilities, safe areas for walkers to let dogs off the lead, educational interpretation and nature trails (see Strategic GI Opportunity – **Southern Swathe Ecological Corridor**).
- Proposed SANGS within the south of the Latton Prioriy masterplan area, located on the ridge top, should exhibit 'commons' characteristics to help reinforce and enhance this distinctive southern common edge. This could include a mosaic of grazed grassland and woodland pasture edge to strengthen Harlow's rural setting (see Strategic GI Opportunity – **Southern Swathe Ecological Corridor**).

Principle 2: Enhancing the Green Belt and expanding the Green Wedge network

- New Green Wedges and Green Fingers should link in with the existing network and reflect the surrounding landscape character, including attributes of grazed common, woodland blocks and small groups of native black poplars.

Principle 3: Landscape-led masterplanning which responds to natural character and function

To be landscape-led, the Latton Priory masterplan area should deliver the following:

  - Enhanced commons character.
  - Awareness of the role of the rural ridgetop in views from central Harlow locations, for example the Water Gardens. Any development should not detract from existing features along the ridgeline, including woodland blocks, the Rye Hill Water Tower and the Rye Hill Poplars, and maintain the sense of an open undeveloped ridgeline.
  - The distinctive skyline feature of the Rye Hill Poplars should be retained and should not be incorporated a part of a larger tree group or woodland block.
  - Retain some open southerly views up the ridge within the existing and new Green Wedge network. Retain open northerly views across Harlow from the ridge top.
  - SuDS, particularly those within the north of the masterplan area, should be contained within the development parcel and not extend to adjoining common land.

- Outside of the Latton Priory masterplan area, areas of pine plantation should be re-structured with additional deciduous species, for example at Latton Woods. This will increase habitat diversity as well as visual interest.

Principle 4: Designing in biodiversity, climate change mitigation and food security

- Incorporate acid grassland/meadows/heathland and areas of deadwood into new green space to reflect the character of existing commons.
- Improve the management of ancient woodland, including rotational coppicing and the removal of more competitive species, such as elder and sycamore.
- Re-structure existing woodland blocks at Latton Wood, Mark Bushes and Harlow Park to create non-uniform, 'scalloped' edges, rides and glades to enhance the character and biodiversity. These more natural edges should be coupled with a more diverse woodland edge, including wider arable margins on adjoining agricultural land. This could also be done sensitively at the edges of Parndon Wood (see Strategic GI Opportunity – **Southern Swathe Ecological Corridor**).
- Promote management of commons by traditional grazing to reinforce the rural character of the ridge and promote sustainable management techniques.
- Fill gappy hedgerows and reinforce with hedgerow trees.

Principle 5: Anticipating change and future proofing infrastructure

- In this ridge location SuDS associated with new development should be carefully designed to manage the flow of surface water downslope, ensuring the gullying of footpaths and streaming of surface water run-off along streets does not occur during heavy rainfall. New SuDS should form part of one linked network providing opportunities for a cohesive water management system, alongside providing connectivity for wildlife. The introduction of large-scale SuDS features, including ponds, to the north of the Latton Priory masterplan area (at the bottom of the ridge) will provide a good opportunity for water-based habitats,

Principle 6: Changing the character of roads to streets

- Sloping streets should utilise an appropriate scale and form of street tree to frame north-facing views across Harlow without completely screening outward views once mature. This will apply to both new streets and existing streets where retrofitting of street trees is viable.

Principle 7: Revitalising the cycle, horse riding and walking network

- Promote circular countryside routes which utilise the existing PRoW network, including the Stort Valley Way and Three Forest Way (see Strategic GI Opportunity – **Cross Boundary Active Access Network: Nazeing to Lea Valley**).
- Within the proposed Latton Priory Green Wedge, create a mixture of fitness routes that utilise the slope of the ridge to deliver both challenging climbs and meandering trails. Stopping places for admiring views across Harlow should be provided on all routes.

Principle 8: Responsive and distinctive design

- Create green and welcoming gateways into Harlow through the use of colourful trees and planting at the settlement edge, namely on Rye Hill Road, Harlow Common and the A414.

GI Principles for the Undulating Parklands

Principle 1: Adaptable green infrastructure that supports a variety of uses, can adapt to climate change, is a healthy space and is biodiverse

- New green space should be flexible and host the opportunity for local food growth. The current concept masterplan indicates a single 400-plot allotment site adjacent to Village 4. The significant scale of this site could have implications on the sense of community allotments commonly create, as well as discourage people in further away villages to use it. The inclusion of community gardens, food growing spaces and orchards should be delivered locally within each village. Locations of these spaces would benefit from being adjacent to new community hubs, for example schools, local centres or village halls.
- Introduce adventurous, creative and naturalistic play features within new green spaces associated with the villages which appeal to those of all ages, genders and abilities (see Strategic Gi Opportunity – **Parklands: Gilston Park**).

Principle 2: Enhancing the Green Belt and expanding the Green Wedge network

- Extend the Green Wedge network across the River Stort and into the Gilston Village Growth Area by utilising the existing brook network, including Fiddlers' Brook, Golden Brook and Gould's Brook. These corridors should provide direct active travel connections from Gilston's villages into Harlow's town centre and train station (see Strategic GI Opportunities – **Enhance & Expand Green Wedge Network: Eastwick Green Wedge** and **Enhance & Expand Green Wedge Network: Fidler's Brook / Golden Brook Green Wedge**).
- New Green Wedges should provide the opportunity for partially undisturbed wildlife connections, particularly along the brooks which dissect the parkland landscape The introduction of additional riparian woodland, ditches and wetlands will help to strengthen the role of these corridors in the local nature recovery network. New Green Wedges. There are opportunities to extend the trail of sculptures found across Harlow New Town into new development.
- New Green Wedges should create a clear landscape separation between the Gilston Villages, whilst also providing rural settings to new development. These Green Wedges should exhibit characteristics of the former parklands, including veteran trees, copses, deadwood, pastoral grazing and small-scale arable production (see Strategic Gi Opportunity – **Parklands: Gilston Park**). The potential for market gardens could also be explored within this network of Green Wedges.

Principle 3: Landscape-led masterplanning which responds to natural character and function

- Utilise large-growing, predominantly broadleaved specimen tree species, for example oak, lime, sycamore, beech and horse chestnut, as well as occasional cedar specimens. Where appropriate, similar, robust cultivars which provide additional resilience to climate change and pests should be used.
- Views across Harlow should be retained from key historic landscapes, such as from the grounds of Gilston Park.
- Retain local views towards the spire of St Mary's Church in Gilston.
- Utilise open space and trees to enhance the setting of heritage features, such as St Mary's Church. Green space should be used to buffer the church from surrounding development.
- Use vegetation to filter views of development from sensitive receptors, for example existing residents at Gilston Park.
- Reinforce parkland character within large open spaces through the use of specimen trees, large linear ponds and woodland copses (see Strategic GI Opportunity – **Parklands: Gilston Park**).
- Apply boundary treatments which will reflect the parkland character of the landscape, including estate railings and ha-has where appropriate.

Principle 4: Designing in biodiversity, climate change mitigation and food security

- Ensuring the succession of veteran trees for future generations will be essential in the successful retention of parkland character. A veteran tree replacement strategy should be adopted which will also consider the management of deadwood. Deadwood from veteran trees can provide sculptural climbing structures for children or informal seating within new open space.
- Where arable fields are retained, ensure the creation and enhancement of arable field margins and the restoration of gappy hedgerows to strengthen habitats for farmland birds.
- Explore opportunities to create and enhance bat foraging corridors, focussing around structures with bat roost potential, for example St Mary's Church.
- Introduce ponds into green space, including within woodland areas, to reinforce landscape character and provide space for wildlife. Where ponds exist already, these should be retained and incorporated into masterplans with consideration for how they can contribute to the management of water. This is of particular note in Village 7 as ponds and moats are common around Hunsdon. New and existing ponds should be connected by a reinstated network of ditches, which will strengthen provisions for amphibian migration, whilst also allowing nature-based solutions to flooding.

Principle 5: Anticipating change and future proofing infrastructure

- Roads connecting the Gilston Villages should adopt characteristics of rural or parkland lanes, for example using hedges, hedgerow trees, shelter belts of woodland and estate railing as boundary treatments. Minimal line works should be used where possible and sufficient space created for safe and segregated cycle lanes and footpaths. Naturalistic materials, such as bound gravel, are preferred for cycle lanes and footpaths.
- Explore the potential for additional reedbeds along the Fiddlers', Golden and Gould's Brooks to enhance water quality through pollutant removal, before it reaches the River Stort. Additional riparian tree planting will act as a buffer between surrounding farmland and the brooks. Surface water run-off from new development should travel through a comprehensive network of SuDS before reaching these watercourses. Opportunities for the brooks to serve as part of the strategic attenuation network should be explored.

Principle 6: Changing the character of roads to streets

- Within the new Gilston Villages, the following principles should be applied:
  - A hierarchy of street trees should be installed across new development, building on the Government's vision for every new street to be tree-lined.
  - Formal avenues should line primary streets with suitably large specimens that create a sense of enclosure typical of a mature parkland avenue, yet not overshadow and overwhelm the street, for example lime.
  - Along secondary and tertiary streets, larger specimens could be used at street gateways or within 'nodes' which can be used to manage on street parking. Smaller species could be used for avenues and street trees where space is more limited.
  - Utilise a diversity of trees and planting to create distinctive gateways into each of the Gilston Villages. Species choice should ensure a long season of interest, including fruits, flowers and leaves. Occasional evergreens should be used for continual structure.
  - Vegetation, meadow verges and SuDS should be used to create a greater set back of buildings on the outskirts of villages. This will help to filter views of buildings, reinforcing the rural setting of the villages, and enhancing green gateways.
  - Use of incidental green spaces and green 'triangles' could be used at junctions on the village periphery. This will help to reinforce the village character of the street, whilst also providing pockets of amenity green space.
  - Incorporate some sporting provisions into the heart of villages as opposed to the village edges, for example cricket greens, to reinforce the sense of place whilst also enhancing natural surveillance and use of these spaces.
  - Encourage the planting of large tree species within private gardens which have sufficient space for them to mature to their full size. Where possible, large specimens should be planted on the perimeters of plots to allow for glimpses of mature vegetation between buildings for users on the street. It is important to ensure that a balance is provided between private and public planting as private trees are at risk of being removed by residents.
  - Incorporate SuDS and rain gardens where appropriate. Include dual street furniture / seating to reduce visual clutter and enhance landscape character.

Principle 7: Revitalising the cycle, horse riding and walking network

- Utilise and revise historic routes for active travel, including the holloway between Channocks Farm and the High Wych road (Village 2), the historic link between Eastwick and the Hunsdon Airfield (Cockrobin Lane, between Village 5 and 6), the crescent-shaped route between Home Wood and St Mary's Church (Village 4), as well as the byway between St Mary's Church and Battles Wood (Village 4) (see Strategic GI Opportunity – **Revitalising Holloways**).
- Explore the concept of holloways (slightly sunken paths surrounded by avenues of trees and hedges) for creating off-road active travel routes that connect the villages with the wider countryside. The perception of safety is an important consideration for users of these paths, particularly at night, therefore they should not form primary active travel routes.
- Safe and direct active travel routes, ideally segregated from roads, should be provided for pedestrians, cyclists, e-scooters, e-bikes, those with disabilities, children and pushchairs, between the Gilston Villages and amenities within Harlow. These should be focussed along the proposed Green Wedges and link in with the new Stort Crossings and Harlow's existing Green Wedge network.
- The concept of 15-minute neighbourhoods should be applied within all new villages to ensure they are truly sustainable.
- Explore opportunities for a Gilston to Bishop Stortford Greenway with the potential to link to the Lea Valley in the west. This should be a primary recreation route which can relieve pressure from the Stort Valley and can provide strategic countryside access (see Strategic GI Opportunity – **Cross-boundary Active Access Network: Gilston to Sawbridgeworth**).
- Seek opportunities to link Gilston with surrounding settlements within Hertfordshire through strategic active travel connections, including Sawbridgeworth, Bishop's Stortford, Hunsdon, Widford, Much Hadham, Stanstead Abbotts & St Margarets, as well as the borough of Broxbourne.

Principle 8: Responsive and distinctive design

- New public green space should reflect the former parkland character of this landscape, including woodland, glades, copses, grassland, meadow, wood pasture and veteran trees. Consideration should be given to how these spaces connect across the development to other GI features.
- The form and design of SuDS should vary depending on location within a village. Manicured and formal SuDS should not be used at village edges as this will erode the rural and arable character of the surrounding countryside and Green Wedges. Instead, naturalistic swales, ditches, attenuation basins and wetlands should be implemented. Within local centres, more formal, constructed rain gardens and vegetated swales can be used. The creative use of gullies and permeable paving should also be encouraged.
- SuDS and green space should not just be pushed to the periphery of development, often resulting in poor quality public open space. Instead, GI, SuDS and public open space should permeate throughout development, creating a functional and connected network.
- Avoid hard frontage gardens which are typically associated with a more urban character, unless used within village centres. Space should be made for front gardens that include mature hedging and some smaller specimen trees which help to frame the street, alongside street trees. Sufficient parking provisions should be delivered to ensure the paving over of front gardens does not occur.

GI Principles for the Green Wedges

Principle 1: Adaptable green infrastructure that supports a variety of uses, can adapt to climate change, is a healthy space and is biodiverse

- Harlow's existing network of Green Wedges would benefit from the production of a Green Wedge and Green Finger Management Plan. This should be guided by an assessment of quality, character and need to determine the most appropriate forms of management interventions and biodiversity enhancements (see strategic GI Opportunity – **Enhance & Expand Green Wedge Network: Harlow Reaches**). To include:
  - An assessment of the need for new amenities. If new amenities are planned, for example formal and informal play, seating, interpretation, cafes and toilets, these should be concentrated around local centres to help encourage their use and community ownership.
  - The introduction of additional natural and incidental play features across the Green Wedge network, as well as adventurous nature trails. These features should encourage the discovery of these green corridors, as well as aiding wider connections with surrounding countryside.
  - Where new open space is needed, its typology, and where open space enhancements are needed.
  - Opportunities for biodiversity enhancements, including changes in mowing regimes and woodland creation.
  - Where there are deficiencies in access for certain demographics, for example children, teenagers, people with disabilities, parents and elderly people.
  - Guide the introduction of new doorstep spaces for teenage girls who are a frequently forgotten demographic. Teenage boys are regularly catered for by Multi-Use Games Areas (MUGAs), BMX tracks and skate parks. Spaces for teenage girls could include swinging benches, sociable seating, performance spaces, hammocks, shelters and gym bars.

Principle 2: Enhancing the Green Belt and expanding the Green Wedge network

- Where Green Wedges interface with growth areas or new development, they should link with proposed open space, habitats and sustainable transport corridors to form a continuous nature recovery, active travel and amenity network (see Strategic GI Opportunity – **Optimally Green Sustainable Transport Corridors**).
- Ensure the scale of Green Wedges is retained and is not eroded by piecemeal development.

Principle 3: Landscape-led masterplanning which responds to natural character and function

- Where Green Wedges adjoin with growth areas, new Green Wedges should be appropriate in scale to the surrounding Green Wedge network, as well as the scale of the landscape context, for example at Latton Priory, Water Lane and East of Harlow Growth Area.
- New Green Wedges should ideally follow the course of existing watercourses and brooks, for example Pincey, Fiddlers', Golden and Gould's Brooks around Gilston.

Principle 4: Designing in biodiversity, climate change mitigation and food security

- Ensure biodiversity is designed into all new green spaces / Green Wedges and contains a mosaic of habitats, including linear connecting features, stepping stones and core habitat areas. For example, the biodiverse corridor of the Todd Brook and Canon's Brook should be extended into new Green Wedges at Latton Priory and Water Lane. Connections in the East of Harlow Growth Area should be made with the Pincey Brook wildlife corridor (see Strategic GI Opportunity – **Enhance & Expand Green Wedge Network: Harlow Reaches**).
- Encourage the development of community growing spaces and community orchards into the Green Wedge network, where appropriate.

Principle 5: Anticipating change and future proofing infrastructure

- Where roads are present within Green Wedges, consider the reclamation of amenity green space or adjacent grass verges for SuDS, such as linear rain gardens, meadows or urban boulevards. The realignment of carriageway space should take the focus away from the vehicle and provide a safe, attractive and direct active travel route for people to travel efficiently around Harlow by foot or bike. This will not only provide a more attractive corridor for users of the network, but also help to manage surface water run-off from some main roads prior to entering adjacent watercourses.

Principle 6: Changing the character of roads to streets

- Where roads are present within Green Wedges, explore opportunities to create green buffers between people and vehicles through the use of tree-lined boulevards and segregated cycle and footpaths (see Strategic GI Opportunity – **Enhance & Expand Green Wedge Network: Harlow Reaches**).
- Where large expanses of amenity green space adjoin roads, consider additional tree planting to create a mosaic of more enclosed and open spaces.

Principle 7: Revitalising the cycle, horse riding and walking network

- Ensure all existing and new Green Wedges accommodate direct, spacious and safe multi-user routes. New signage with walking / cycling distances and times to key amenities should be installed across the network.
- Green Wedges should make direct connections with the PRoW network within adjoining countryside.
- Take focus away from vehicle movement and more towards active travel.
- Where roads cut through Green Wedges, install crossings which give greater priority to pedestrians and cyclists and provide a more navigable active travel network with enhanced signage.
- Align with the emerging aspirations of the Local Cycling and Walking Infrastructure Plan (LCWIP)[49].

[49] https://hggt.co.uk/lcwip

Principle 8: Responsive and distinctive design

- Protect and reinforce the character of existing Green Wedges respecting Gibberd's vision and green framework.

GI Principles for the Green Fingers

Principle 1: Adaptable green infrastructure that supports a variety of uses, can adapt to climate change, is a healthy space and is biodiverse

- Harlow's existing network of Green Fingers would benefit from the production of a Green Wedge and Green Finger Management Plan. This should be guided by an assessment of quality and need to determine the most appropriate forms of management interventions and biodiversity enhancements (see Strategic GI Opportunity – E**nhance & Expand Green Wedge Network: Harlow Reaches**). To include:
  - The introduction of new doorstep spaces within the Green Finger network, including natural and incidental play, exploration trails and interpretation.
  - Enhanced wayfinding to promote the Green Fingers as 'shortcuts' around Harlow, using signage with distances and travel times.
  - Enhanced perceptions of safety along these routes.
  - Opportunities for biodiversity enhancements.
  - The introduction of new community growing spaces which will have the most influence on community cohesion and where community buy-in will be high. These spaces should benefit from good natural surveillance.

Principle 2: Enhancing the Green Belt and expanding the Green Wedge network

- Install green gateways between Green Fingers and Green Wedges, including trees, vegetation and signage, to encourage the use of the network for active travel. This should be coupled with enhanced wayfinding and signage to demonstrate the efficiency of travelling via the Green Wedge and Green Fingers network. These new green gateways could be adopted as Green Fingers within future version of the Local Plan.
- Where overgrown vegetation of screening trees create blind spots, consider thinning or removal to create better natural surveillance and perceptions of safety. Encouraging the increased use of the Green Fingers network will produce an uplift in pedestrian traffic, therefore increasing perceptions of safety.

Principle 3: Landscape-led masterplanning which responds to natural character and function

- Any new development which adjoins the Green Fingers network should ensure the setting of the green space is enhanced. New housing should front onto the Green Finger network to assist with natural surveillance.

Principle 4: Designing in biodiversity, climate change mitigation and food security

- Explore options for how the Green Finger network can better deliver nature-based solutions to issues such as flooding or poor air quality.
- Introduce small-scale community food growing, such as orchards, within areas of high community buy-in and strong natural surveillance

Principle 5: Anticipating change and future proofing infrastructure

- In areas where water drainage is not an issue (damp conditions can cause rutting by bikes and wheelchairs), more naturalistic materials such as self-binding gravel could be used for active travel routes. Crushed recycled concrete could be alternative option within more urbanised sections of the network.

Principle 6: Changing the character of roads to streets

- Where roads are present within Green Fingers, explore opportunities to create green buffers between people and vehicles through the use of tree-lined boulevards and segregated cycle and footpaths.
- Where expanses of amenity green space adjoin roads, consider additional tree planting to create a mosaic of more enclosed and open spaces.

Principle 7: Revitalising the cycle, horse riding and walking network

- Green Fingers should be focused on the safe and efficient movement of people via active travel, alongside the consideration for how wildlife can use the corridors. Ideally, active travel routes should be wide and smooth, with segregated lanes for cyclists / e-bikes / e-scooters and for walkers / wheelchairs / pushchairs.
- Where roads cut through the Green Fingers network, create additional crossings to prioritise pedestrians and cyclists over vehicles.

Principle 8: Responsive and distinctive design

- Protect and reinforce the character of existing Green Fingers in line with Gibberd's vision and green framework.

GI Principles for the Harlow New Town

Principle 1: Adaptable green infrastructure that supports a variety of uses, can adapt to climate change

- All new green spaces within development should provide opportunities for access to nature and naturalistic play, regardless of scale. Access should be provided for all ages and abilities.

Principle 2: Enhancing the Green Belt and expanding the Green Wedge network

- Ensure any new development links with the existing network of Green Belt, Green Wedges and Green Fingers. Where larger sites come forward, consider the creation of new Green Wedges and Green Fingers to reinforce Gibberd's urban grain.

Principle 3: Landscape-led masterplanning which responds to natural character and function

- Ensure all new development retains, celebrates and does not screen key views across the town, as well as towards landmarks. Ideally, vertical growth should be confined to the town centre.
- Ensure there are good accessible links for all throughout the neighbourhoods, urban and rural areas to green spaces and the wider GI network.
- Proposals should consider their contribution towards Harlow's 'urban forest' and retain all existing trees where possible.
- Distinctive forms of the landscape, including geological and natural features and existing landmarks and features within or on the edge of developments (including hedgebanks, lanes and footpaths) should form an integral part of the layout and design of the site, responding to and retaining native planting.
- Tree planting should contribute towards the creation of unique street characters.

Principle 4: Designing in biodiversity, climate change mitigation and food security

- Deliver enhanced wildlife provisions within the landscape gardens/parks within the Town Centre and other open spaces across the New Town. This should aim to link in with the local nature recovery network.
- Identify locations for additional allotments, community food growing spaces and community orchards within the existing footprint of the New Town.
- Explore options for upgrading street furniture to include better greening opportunities (dual street furniture / seating) and to enhance the character of streets, for example green bus stops, parklets, rain gardens and raised planters.
- Consider introduction of 'meanwhile uses', such as meadows or container gardens, in plots awaiting development. This will help to strengthen the nature recovery network and can be of particular importance whilst awaiting the retrofitting or upgrading of streets, open spaces, Green Wedges and Green Fingers for wildlife.

Principle 5: Anticipating change and future proofing infrastructure

- Include statement SuDS designs, including linear rain gardens and attenuation features, within new development. Explore options to retrofit existing public realm and carriageways with rain gardens.
- Reinforce Gibberd's vision of district, neighbourhood and housing groups so they function as self-sufficient 15-minute neighbourhoods. This should include direct and safe active travel routes which are green and attractive for users (see Green Finger and Green Wedge Zone recommendations).
- Greening and public realm enhancement should be used to reinvigorate local centres to stimulate investment and encourage use.

Principle 6: Changing the character of roads to streets

- Deliver a scheme of street tree planting across Harlow's existing urban area. Depending on function of the road and space availability, a range of street tree typologies could be used ranging from avenues, planting in parking 'nodes', and specimen trees at street gateways (see Strategic GI Opportunity – **Greening Harlow New Town**). Utilise this planting, alongside other GI features, to encourage investment within the town, whilst also managing drainage and enhancing air quality.

Principle 7: Revitalising the cycle, horse riding and walking network

- Enhance the active travel provisions of the Green Wedge and Green Finger network, by linking in with additional Low Traffic Neighbourhoods and School Streets.
- Utilise trees and planting to reinforce key routes and enhance legibility of the town.

Principle 8: Responsive and distinctive design

- Where appropriate, utilise small topographical mounds and tree planting to integrate new development and create a diversity of interesting landforms withing green spaces.
- Development and growth should be considerate of the setting of historic villages, for example Old Harlow and Potter's Street, and aim to replicate elements of local vernacular.
- Where infill development occurs within Harlow New Town, ensure the pattern of development is complementary to existing topography and has *"a design which both contrasts landscape with building groups and welds them into a coherent whole"* (Gibberd).
- Well-planned and designed GI (i.e. right GI in the right place) should be used to help soften the impact of new buildings and incorporate them into the surrounding landscape.