6 Strategic Flood Risk and Climate Resilience

6.1 Flood zones and surface water management

Water defines Castle Point's geography, ecology, and risk profile. Located on the Thames Estuary, the Borough is highly vulnerable to both tidal and surface water flooding, making the integration of green and blue infrastructure (GBI) critical for climate resilience, biodiversity, and health outcomes.

Approximately 45% of Castle Point lies within Flood Zone 3, indicating a high risk of flooding from rivers or the sea. Canvey Island, in particular, is almost entirely within this zone and protected by tidal defences, including embankments and sea walls. While these reduce the likelihood of flooding, residual risk remains—particularly in the event of overtopping or infrastructure failure. Sea-level rise and coastal change increase long-term vulnerability.

Surface water flooding presents a more dispersed but equally pressing challenge. The SFRA identifies several Critical Drainage Areas (CDAs) across the Borough—in Benfleet, Hadleigh, and Canvey Island—where drainage systems are already under pressure. Without intervention, continued urbanisation and impermeable surfacing will exacerbate runoff and overwhelm infrastructure. GBI plays a crucial role in mitigating these risks. Sustainable Drainage Systems (SuDS)—including swales, rain gardens, detention basins, and permeable paving—manage rainfall at source by slowing runoff, improving infiltration, and enhancing water quality. These systems offer multiple co-benefits, supporting biodiversity and cooling urban microclimates, while reducing strain on existing drainage.

In dense areas like Hadleigh and Benfleet, retrofitting SuDS into public realm improvements presents a key opportunity. On Canvey Island, where conventional drainage options are limited by topography, SuDS and naturalised green spaces offer one of the few viable flood management strategies. Here, multi-functional open spaces could act as flood storage during extreme rainfall events, helping protect homes and infrastructure.

Beyond the urban core, the SFRA identifies opportunities for catchment-scale nature-based solutions such as floodplain reconnection, tree planting, and wetland restoration. These interventions slow water flow, reduce erosion, and build long-term resilience—supporting objectives in Local Nature Recovery Strategies and aligning with national environmental policy.

Despite the benefits, the SFRA notes that barriers to SuDS delivery remain. These include ambiguity around adoption, maintenance responsibilities, and funding, which limit uptake. Stronger policy frameworks, clearer governance, and community engagement are needed to embed SuDS as a standard practice.

The Castle Point Green and Blue Infrastructure Strategy can help overcome these barriers by identifying priority locations for nature-based drainage, supporting co-investment, and promoting integrated solutions that address both water management and wider environmental goals.

Castle Point's relationship with water is both a constraint and an opportunity. By embedding green and blue infrastructure into planning and development, the Borough can reduce flood risk while delivering wider health, environmental, and social benefits—creating a more resilient, liveable, and ecologically connected future.

Key Facts and Figures: Flooding and Climate Risk in Castle Point

- Sea-Level Rise Projections (Thames Estuary 2100 Plan)

  By 2050, sea level is projected to rise by 0.35m to 0.44m.

  By 2100, the projected sea level rise ranges from 0.94m to 1.15m.

  These estimates significantly increase residual tidal flood risk, especially in low-lying areas like Canvey Island.

- Main Sources of Flood Risk

  Tidal flooding is the primary concern for Castle Point, particularly on Canvey Island, which is largely below mean sea level.

  Surface water (pluvial) flooding is also significant in Benfleet, Hadleigh, and parts of Thundersley.

  The Borough has no fluvial (river) flood risk except for minor ordinary watercourses; the primary risks are tidal and surface water.

- Flood Zones

  Around 45% of Castle Point lies within Flood Zone 3, with the vast majority of Canvey Island in this category.

  Flood Zone 2 (medium risk) extends further inland, affecting parts of South Benfleet and Hadleigh.

- Drainage Pressures

  Many existing combined sewers are at or near capacity.

  Some pumping stations, particularly on Canvey, are vulnerable to power failures during flood events.

- Critical Drainage Areas (CDAs)

  The SFRA identifies four CDAs across the Borough, including:
  - Benfleet Station and High Road area
  - Hadleigh town centre
  - Canvey Island Central
  - Thundersley

  These areas are at risk due to impermeable surfaces and insufficient drainage infrastructure.

- Historic Flood Events

  The most notable flood was the 1953 North Sea Flood, which caused 59 deaths on Canvey Island.

  Surface water incidents have increased over the last 15 years, particularly after intense summer rainfall events.

- Climate Change Impact

  More frequent and intense rainfall events are projected under UKCP18 scenarios, increasing surface water flooding across the Borough.

  Areas with steep topography (e.g. Hadleigh and Thundersley) experience fast runoff, while low-lying areas suffer from ponding and poor drainage.

- Tidal Defences

  Sea defences currently offer protection to a 1 in 1,000 year event standard, but this depends on continued investment and upgrades to the Thames Estuary 2100 Plan. These defences do not eliminate residual risk; overtopping or breaches remain critical threats.

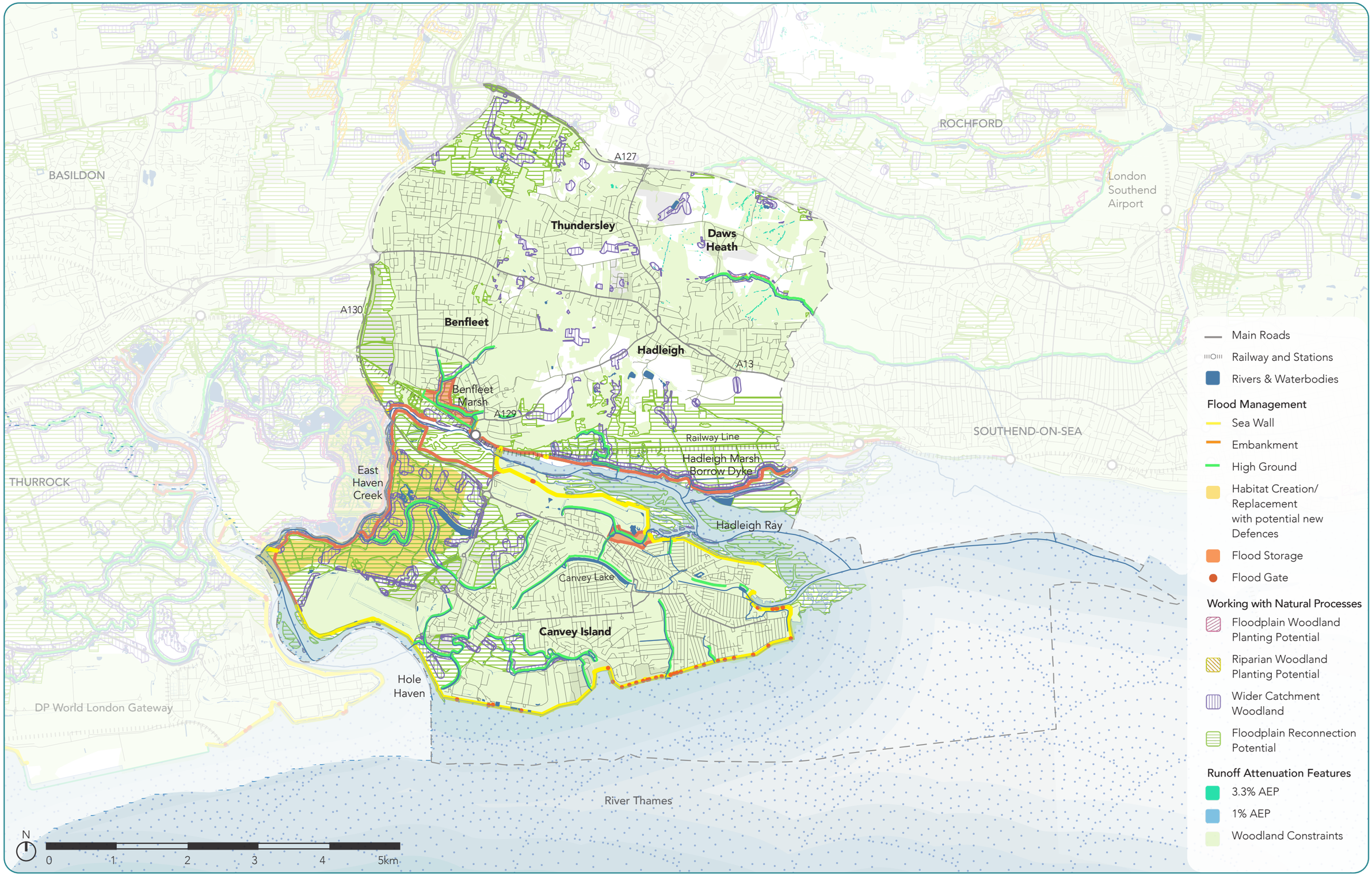

FIG.31 Map Shows Flood Management, Working with Natural Processes and Runoff Attenuation Features Based on Castle Point Borough Council Level 1 Strategic Flood Risk Assessment (2025)

6.2 Role of GBI in climate adaptation

"Green infrastructure is not a 'nice to have'—it is essential infrastructure. It must be planned, designed and managed as strategically and seriously as grey infrastructure if we are to adapt to climate change and build resilient, healthy places."
— Landscape Institute, Climate Change Position Statement (2016)

Green and Blue Infrastructure (GBI) plays a central role in building climate resilience at the neighbourhood, borough, and regional levels. As outlined in the Landscape Institute's position statements and reinforced by the South Essex Green and Blue Infrastructure Strategy, GBI is not simply an environmental enhancement — it is a form of living infrastructure capable of addressing critical 21st-century challenges, including flooding, overheating, biodiversity loss, and public health inequality.

Castle Point's exposure to tidal flood risk, surface water flooding, and urban heat island effects makes this role particularly urgent. The borough's low-lying geography, especially across Canvey Island and southern Benfleet, requires integrated, multi-functional responses that combine environmental performance with community value.

1. Managing Water and Reducing Flood Risk

A primary function of GBI in climate adaptation is regulating water flows and providing flood resilience. Features such as wetlands, marshes, restored river corridors, swales, and permeable surfaces serve to:

- Absorb stormwater and tidal surges
- Reduce surface runoff
- Filter pollutants
- Store and slowly release water to prevent downstream flooding

In Castle Point, existing assets such as West Canvey Marsh and the East Haven Creek corridor already provide flood storage and habitat co-benefits. There is a significant opportunity to expand this model using nature-based solutions, including SuDS and naturalised drainage channels, throughout new developments and public open spaces.

2. Urban Cooling and Thermal Comfort

As summers grow hotter, urban areas risk becoming dangerously overheated. According to the Landscape Institute, tree canopies, green roofs, and well-designed open spaces help mitigate urban heat islands by:

- Shading built surfaces
- Supporting evapotranspiration
- Reducing ambient temperatures by several degrees

In dense residential areas of Hadleigh, Benfleet and Canvey, enhancing canopy cover and vegetation within parks, playgrounds, and streetscapes will be crucial to reduce health risks for vulnerable populations.

3. Supporting Biodiversity Resilience

Climate adaptation is not just about water and temperature — it's also about ecological resilience. GBI supports species' ability to:

- Migrate through changing conditions
- Find refuge in high-quality habitats
- Maintain genetic diversity and reproduction patterns

Connectivity is key: linking Local Wildlife Sites, urban stepping stones, and coastal ecosystems ensures that species can move, adapt, and survive across fragmented landscapes.

4. Enhancing Community Wellbeing in a Changing Climate

Access to nature-rich, climate-resilient greenspaces helps people cope with a wide range of emotional, social, and physical stressors — from daily pressures to broader environmental and health challenges.

GBI (Green and Blue Infrastructure):

- Encourages active travel and exercise
- Improves air quality and mental health
- Provides places of shade, relief, and connection during extreme weather

Well-designed GBI can support climate equity, ensuring that underserved communities — often the most exposed to environmental risks — receive the greatest benefits.

5. Delivering a Resilient Landscape Framework

As highlighted in the South Essex GBI Strategy:

"An innovative and adaptable landscape will be created, capable of meeting significant 21st-century challenges, including climate change and biodiversity loss."

Castle Point's green and blue infrastructure must be seen as critical spatial infrastructure — equal in importance to utilities, transport, and housing. By investing in multifunctional GBI that addresses water, heat, biodiversity, and wellbeing together, the borough can meet its statutory duties while preparing its communities for an uncertain future.

GBI FUNCTIONS

Carbon Storage & Sequestration

Temperature Control

Storm Damage Control

Regulation of Flows

Water Purification

Storage of Freshwater

Image Enhancement

Tourism

Recreation

Soil Fertility

Diversified Products

Habitats

Biological Control

Pollination

Air Quality

Accessibility for Exercise and Amenity

Noise Regulation

Investment and Employment

Labour Productivity

Research and Education

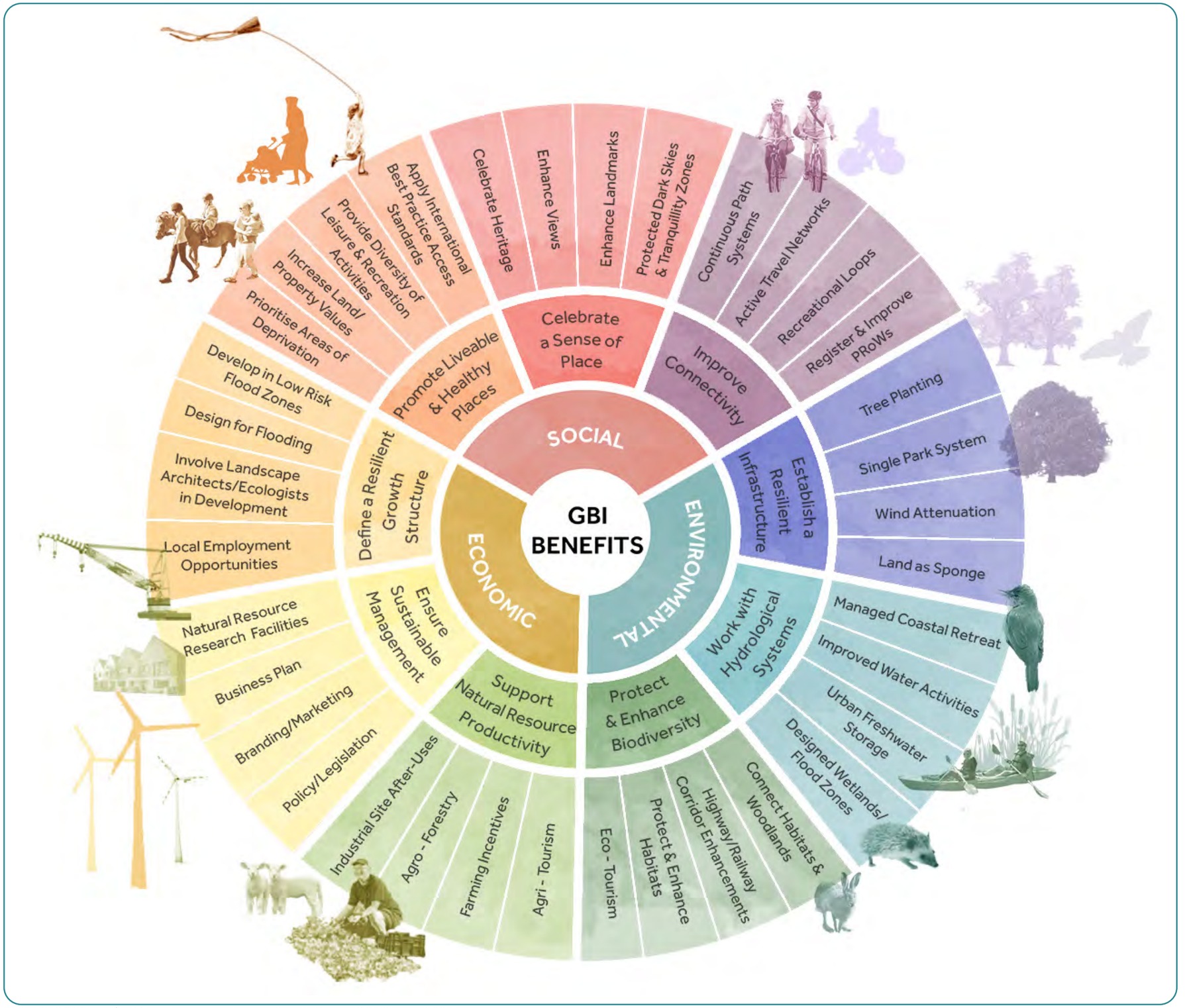

FIG.32 GBI Benefits Wheel, as seen in the South Essex GBI Study, 2020

6.3 Key opportunities for multifunctional infrastructure

Section 6.2 identified the critical functions that green and blue infrastructure (GBI) must deliver in response to climate pressures — from managing water and heat to supporting biodiversity and community resilience. In this section, we shift from what GBI can do to where and how it can be delivered. The following opportunities highlight key locations, typologies, and delivery themes where these benefits can be realised.

Strategic Opportunity Areas

South and West Canvey Marshes - These restored wetland landscapes already deliver significant biodiversity value and flood attenuation. With further investment in SuDS, reedbed expansion, and nature-based interpretation infrastructure, they could serve as living laboratories for climate adaptation and public engagement.

Hadleigh Castle and Two Tree Island Interface - This zone offers a rare convergence of heritage, panoramic views, accessible coastline, and high ecological value. Investment here could link estuarine habitat restoration, visitor experience, and cultural landscape management into a single coherent vision.

Urban Green Corridors in Hadleigh and South Benfleet - These areas suffer from fragmented green space and air quality challenges. Enhancing and linking linear parks, verges, and rights of way could support biodiversity, urban cooling, and active travel.

Limburg Road Open Space - Identified as one of the top five sites for Biodiversity Net Gain (BNG), this underused open space in a residential area has potential for meadow creation, natural play, shade trees, and community involvement.

Themes

Multifunctionality can also be understood thematically. The following categories highlight priority functions and co-benefits that can be layered into site and network-level GBI planning:

Flood Resilience - Integration of sustainable drainage systems (SuDS), wetland restoration, and coastal buffering — particularly on Canvey Island and along the creek margins — can reduce surface water and tidal flood risk while improving biodiversity and amenity value.

Health and Wellbeing - Therapeutic landscapes, inclusive play, and walkable access to greenspaces can support physical and mental health. Investing in underperforming spaces in disadvantaged wards will help address health inequalities.

Biodiversity Uplift - Targeting nature-rich enhancements on key sites (e.g. Canvey Heights, Creekside, Limburg Road) supports BNG targets, LNRS delivery, and Castle Point's role in the Greater Thames ecological network.

Climate Adaptation and Urban Cooling - Increased canopy cover, green corridors, and pollinator planting in urban areas can mitigate heat and improve air quality — especially around schools, health centres, and town centres.

Active Travel - Safe, connected, and green walking and cycling routes — aligned with the Local Cycling and Walking Infrastructure Plan (LCWIP) — support low-carbon transport, recreation, and equitable access to nature.

Partnerships and Delivery Mechanisms

Delivering multifunctional GBI at scale will require cross-sector collaboration. The following partners and funding pathways are especially relevant:

- Castle Point Borough Council (as landowner and planner)
- RSPB, Essex Wildlife Trust, Buglife, and other local charities (as site managers and delivery agents)
- South Essex Councils (through the SEEPark initiative)
- Essex County Council (through LCWIP, education, and health initiatives)
- Environment Agency and Natural England (strategic funders and advisors)

Mechanisms such as Biodiversity Net Gain offsetting, Section 106/CIL contributions, and LNRS-aligned project funding can all be leveraged to co-finance projects that deliver ecological and social returns.

Towards a Strategic Framework

These opportunity areas and themes will shape the development of a spatial GBI framework for Castle Point — one that reflects the Borough's unique environmental pressures, land use context, and community needs.

The opportunities outlined demonstrate the potential for Castle Point's green and blue infrastructure to deliver layered, place-based benefits — from biodiversity uplift and flood management to improved health and active travel. However, unlocking this potential depends not only on identifying where interventions could occur, but also on understanding the systemic barriers that prevent delivery.

Chapter 7 presents a Gap Analysis, exploring where provision, functionality, policy, and investment currently fall short. By identifying these gaps and constraints, the analysis provides a critical foundation for shaping a targeted, resilient, and equitable GBI strategy.

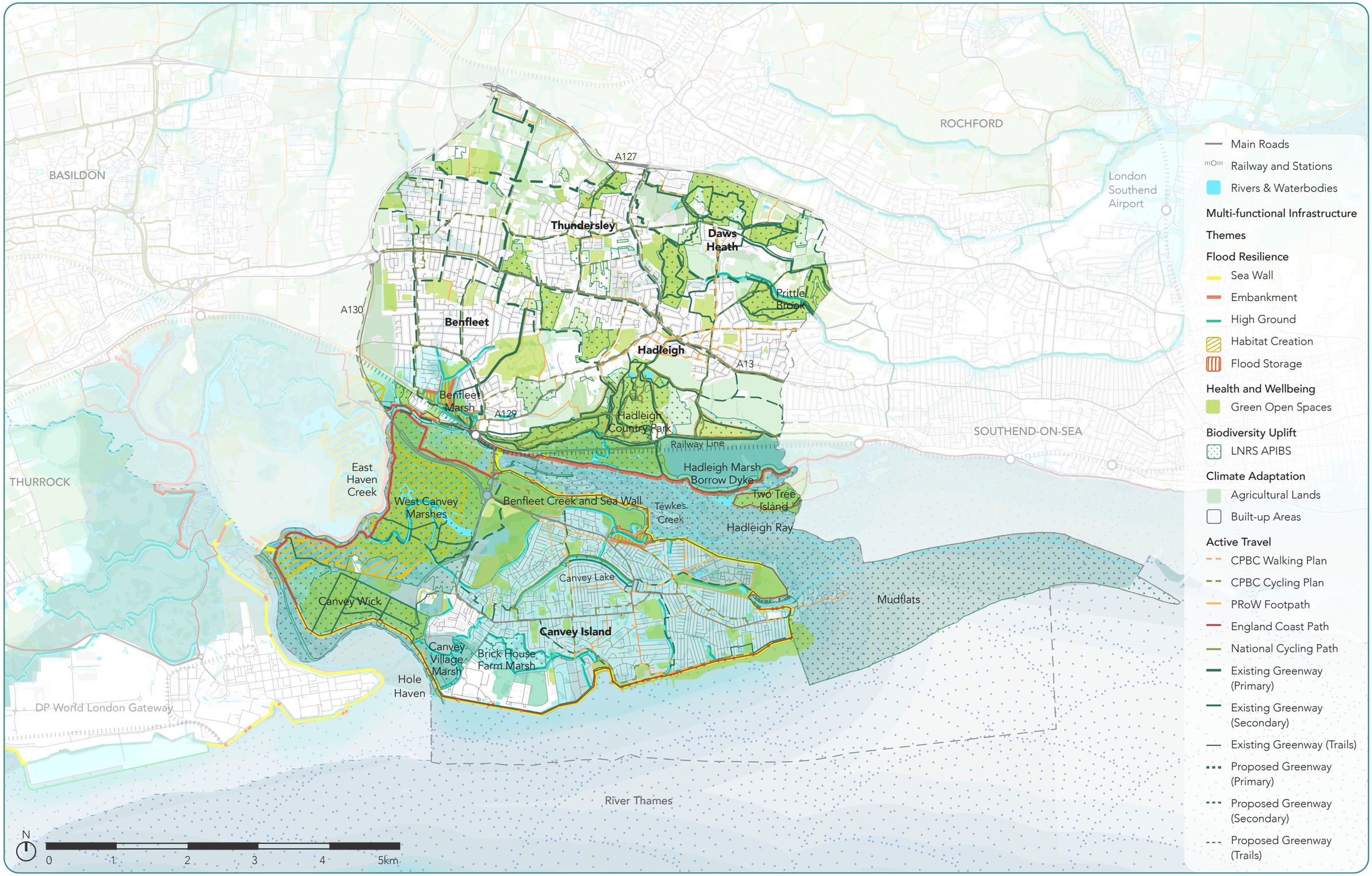

FIG.33 Castle Point Strategic Opportunities for Green and Blue Infrastructure, compiled from South Essex Green and Blue Infrastructure (SEGBI) Study (2020), Castle Point Open Space Assessment (2023), Castle Point Borough Council Level 1 Strategic Flood Risk Assessment (2025) and Draft LNRS (2024)

7 Gap Analysis

7.1 Evidence of change since SEGBI

Since the publication of the *South Essex Green and Blue Infrastructure Study (SEGBI)* in 2020, Castle Point has experienced important shifts in policy direction, evidence base, and the on-the-ground delivery of green and blue infrastructure (GBI). These developments collectively justify the need for an updated GBI strategy specific to the borough—one that reflects new priorities, aligns with current legislation, and builds on recent implementation efforts.

TAB.6 Change or Initiative since SEGBI

Change or Initiative	What It Is / Definition	Why It Matters / Impact
Environment Act 2021 , Biodiversity Net Gain	A legal requirement for most new developments to deliver at least a 10% net increase in biodiversity, measured using the Defra metric.	Ensures that development contributes positively to nature recovery, not just avoids harm.
Castle Point Open Space Assessment (2023)	A borough-wide audit of 311 public open spaces assessing quality, quantity, and accessibility using Green Flag criteria.	Provides detailed mapping of quantity, accessibility, and quality, revealing spatial inequities (particularly in Canvey Island and northern South Benfleet) and gaps in access to larger natural greenspaces.
Castle Point Local Wildlife Sites Review (2023)	Reassessment of 41 Local Wildlife Sites covering 875.6 hectares (almost 20% of the borough) to confirm habitat condition and importance to biodiversity.	Strengthens protection for habitats, identifies risks related to fragmentation and informs priorities for nature-based projects and connectivity.
Introduction of Community Infrastructure Levy (CIL) , 2023	A local development charge that provides funding for infrastructure, including open space and GBI improvements.	Enables sustained funding for open space improvements through developer contributions.
Essex Local Nature Recovery Strategy (LNRS) , Draft 2024	A spatial strategy identifying priority habitat areas and nature recovery corridors across Essex, mandated by the Environment Act.	Aligns local action with national nature recovery goals; identifies Castle Point as a priority delivery area.
Castle Point Plan (2025 Draft)	Emerging planning framework including stronger policies on landscape, GBI, biodiversity, flood resilience, and net gain.	Legally strengthens GBI in development decision-making and long-term planning.
Implementation of Site Quality Audits	Used to identify poor-quality spaces for future investment, prioritising gaps in access and provision.	Drives evidence-based investment in GBI, particularly in underserved areas.
Management Plans for Parks and Recreation Grounds	Planning documents that define long-term care, biodiversity goals, and community priorities for key green spaces.	Supports more sustainable management practices and community stewardship.
Canopy Cover Assessment and Tree Planting Targeting	Mapped all green spaces with <10% canopy cover to guide future urban tree planting programmes.	Targets investment in climate resilience and urban cooling through nature-based solutions.
Accessibility Improvements in Existing Parks	Targeted upgrades to signage, footpaths, and cycling access in Hadleigh and South Benfleet parks.	Improves access and inclusivity, helping deliver health, equity, and active travel outcomes.
Natural England's National Green Infrastructure Framework	A set of voluntary national standards for GI in England	Provides guidance on creating nature-rich towns and cities, helping millions realise the benefits of accessing nature.
National Planning Policy Framework (NPPF) (2023)	NPPF sets out the Government's planning policies for England and how they should be applied.	Provides a framework within which locally-prepared plans can provide for sufficient housing and other development in a sustainable manner.

7.2 Gaps in provision, policy, or functionality

While Castle Point benefits from a wide range of open spaces and a growing awareness of green and blue infrastructure (GBI), there are significant spatial, typological, policy, and functional gaps that constrain the performance of its GBI network ecological quality.

Provision Gaps

The *Open Space Assessment (2023)* highlights considerable spatial inequality in the quantity, type, and accessibility of green space across the Borough:

- **Canvey Island** has notable access gaps to natural and semi-natural greenspace. While West Canvey Marsh is a significant ecological and flood resilience asset, many residential areas on the island are served only by amenity spaces that lack biodiversity or multifunctionality.

- **South Benfleet,** especially in its northern and eastern neighbourhoods, faces a shortage of larger, multifunctional greenspaces. Fragmentation of available land and the legacy of low-density development have created physical and ecological disconnects.

- **Hadleigh's urban centre**, despite proximity to Hadleigh Castle Country Park, has poor access to small, everyday greenspaces within a short walking distance — the types of spaces most strongly associated with mental health, physical activity, and child development.

Moreover, the typological shortfalls are pronounced:

- Natural and semi-natural greenspace does not meet the 720m accessibility standard in several wards.

- Children's and youth play spaces are consistently under-provided; only 2.52 ha and 1.04 ha are available, respectively, across the entire Borough.

- Allotment provision stands at just 7.24 ha across eight sites — well below demand and distributed unevenly.

- Parks and recreation spaces, while better distributed, are often not multifunctional and do not serve their full potential for ecological or climate-related benefits.

These provision gaps affect both ecological performance and social equity. Many communities — particularly in Canvey Island and parts of Hadleigh — the only available green spaces are underperforming amenity areas, not designed to deliver biodiversity or health benefits.

Policy Gaps

While Castle Point Borough Council has developed a strong set of GBI-aligned policies — including:

- SP1 (Enhancing Green Spaces),

- ENV3 (Biodiversity Net Gain),

- SD3 (Sustainable Drainage Systems), and

- Infra4 (Open Space) — the ability to translate these ambitions into consistent action remains constrained by several structural limitations.

However, several gaps in implementation and governance remain:

- Local Wildlife Sites (LoWS), while referenced in policy ENV4, lack statutory protection. As non-designated assets, they are vulnerable to incremental degradation, loss through permitted development, and lack of active management. Their fragmentation across the landscape further reduces their ecological value unless buffered or linked by green corridors.

- Biodiversity Net Gain (BNG) is now a legal requirement under the Environment Act 2021. However, the absence of a local offsetting framework — including a delivery register, prioritised opportunity areas, or a habitat bank — limits the Borough's ability to harness BNG contributions strategically. Without these tools, there is a risk that biodiversity compensation is poorly targeted or occurs outside the local context.

- There is currently no adopted Green Infrastructure Strategy or Supplementary Planning Document (SPD) for Castle Point. While the South Essex Green and Blue Infrastructure Strategy (SEGBI) offers a regional vision, its recommendations are not formally embedded into local development management processes.

- Health and wellbeing policy, while recognised in Infra3, is inconsistently linked to GBI delivery. Open spaces with the greatest potential to improve mental health, physical activity, and climate resilience are not always prioritised in planning or investment decisions.

These policy gaps mean that while the strategic intent for GBI exists, its delivery mechanisms remain fragmented. Opportunities are often reactive rather than plan-led, and the full potential of development contributions, landscape-led design, and community co-stewardship is not yet being realised.

Functional Gaps

There are significant issues with the functionality of existing open spaces — particularly in their capacity to deliver ecological, climate, and social value.

- Biodiversity functionality is often low, particularly in amenity greenspaces and older parks. Short-mown turf, sparse planting, and a lack of natural features mean that many spaces do not support pollinators, native flora, or habitat diversity.

- Urban cooling and shade provision is insufficient in many town centres and residential areas, especially in dense housing estates where tree canopy cover is low. Few open spaces have been planted or retrofitted to address thermal comfort or reduce urban heat.

- Flood resilience features such as swales, rain gardens, or permeable surfaces are not consistently integrated into parks, verges, or civic spaces.

- Connectivity across sites remains poor. Few open spaces are linked by green corridors or active travel infrastructure, reducing both ecological resilience and access equity.

- Many sites lack inclusive access, interpretation, or clear identity — making them less visible, less used, and less valued by local communities.

Functional gaps reduce the capacity of the existing GBI network to act as true infrastructure — delivering overlapping benefits to people and nature. Improving functionality will require both physical interventions and changes to maintenance regimes, encouraging more biodiverse, layered, and climate-ready landscapes.

7.3 Barriers to implementation or protection

While Castle Point benefits from a growing policy framework and increasing awareness of the importance of green and blue infrastructure (GBI), several practical and systemic barriers continue to hinder the full delivery and protection of its GBI network. These barriers can be broadly categorised into spatial, institutional, and funding-related challenges.

TAB.7 Barriers to implementation or protection

1. Land Ownership and Fragmentation

Much of Castle Point's green and natural land lies in private ownership, particularly Local Wildlife Sites and Green Belt land. This limits the scope for direct public intervention or ecological enhancement without extensive partnership working, negotiation, or incentivisation. In urban areas, the fragmented nature of open spaces—especially in South Benfleet and Hadleigh—further reduces the efficiency and functionality of green infrastructure networks.

2. Flood Risk and Development Constraints

Large parts of the Borough, notably Canvey Island, fall within Flood Zone 3, where planning and development are heavily constrained. While this increases the need for nature-based flood solutions, it also complicates delivery due to stringent regulatory frameworks, perceived development risk, and limited available space for multifunctional interventions.

3. Policy Delivery and Enforcement

Despite strong policies (e.g. SP1, ENV3, Infra4) in the emerging Castle Point Plan, there are still gaps in enforcement, coordination, and monitoring. Local Wildlife Sites, for example, are material considerations in planning but lack statutory protection, making them vulnerable to incremental degradation. Similarly, while Biodiversity Net Gain (BNG) is now a legal requirement, many smaller developments are exempt, and securing off-site delivery at scale remains difficult without a defined local offsetting framework.

4. Resourcing and Capacity

Delivering GBI projects requires skilled staff, sustained funding, and cross-departmental coordination. Castle Point, like many small local authorities, operates with limited capacity to manage complex environmental delivery—particularly across ecology, landscape, planning, and health. The availability of capital funding (e.g. CIL/S106) is uneven, and revenue budgets for ongoing management remain constrained

5. Community Engagement and Stewardship

While public interest in nature, wellbeing, and climate resilience has grown, sustained community involvement in the planning, stewardship, and long-term care of GBI assets is still emerging. More robust partnerships with schools, health organisations, and local volunteer groups will be essential to embed GBI in everyday life and create a culture of care and co-management.

8 Vision and GBI Strategy Framework

8.1 Emerging themes and objectives

Castle Point's Green and Blue Infrastructure (GBI) strategy sets out a vision to create a resilient, healthy, and biodiverse borough by embedding nature into the fabric of everyday life. This means designing a connected network of landscapes that serve both people and the environment—enhancing ecological function, supporting active and inclusive communities, and adapting the borough to climate risks.

This vision is underpinned by five core themes that reflect Castle Point's strategic priorities and its distinct coastal and urban geography. These themes provide a framework for coordinating investment and guiding project development at site and network scales.

1. Flood Resilience

Managing flood risk is a foundational goal. The Borough is exposed to both tidal and surface water flooding—particularly on Canvey Island and around Benfleet and Hadleigh. GBI plays a central role in supporting climate resilience by integrating Sustainable Drainage Systems (SuDS), enhancing wetland buffers, and restoring creekside margins. Opportunities have been identified to align GBI improvements with the Borough's wider flood strategy—delivering co-benefits such as biodiversity uplift, public amenity, and water quality improvements. For example:

- Use SuDS and naturalised drainage to manage surface water in Critical Drainage Areas.
- Create multi-functional open spaces in flood-prone areas like Canvey Island that can hold water during extreme events.

2. Health and Wellbeing

Access to high-quality green space supports mental and physical health and helps address local health inequalities. There is a particular need to upgrade underperforming greenspaces and provide inclusive facilities—especially in Canvey and South Benfleet. Investments in youth play, therapeutic landscapes, and walkable access to green space within 400m are prioritised to reach underserved populations and promote active lifestyles. For example:

- Upgrade play facilities for teens and young people.
- Leverage development funds (CIL/S106) for open space enhancement in priority wards.
- Invest in site management plans for major parks to ensure quality and safety.

3. Biodiversity Uplift

Castle Point is a critical link in the wider Greater Thames ecological network, and plays a vital role in supporting local wildlife through habitat creation, restoration, and connectivity. The strategy identifies key sites for Biodiversity Net Gain (BNG), and supports delivery of the Local Nature Recovery Strategy (LNRS) through actions such as:

- Establishing pollinator corridors in urban and peri-urban areas.
- Enhancing buffers around Local Wildlife Sites in Thundersley and Daws Heath.
- Improving hedgerow connectivity across the rural fringe and creek valleys.

4. Climate Adaptation and Urban Cooling

Urban greening is essential to reduce the urban heat island effect and improve air quality—especially in town centres, school zones, and around healthcare facilities. Increasing canopy cover and creating cooling corridors can enhance urban comfort, particularly for vulnerable groups. For example:

- Expand tree planting in low-shade areas, particularly in Benfleet and Hadleigh.
- Integrate pollinator planting and green roofs into new developments and public realm upgrades.

5. Active Travel and Access to Nature

A well-connected network of safe, green routes supports low-carbon mobility, social inclusion, and equitable access to nature. Opportunities identified in the LCWIP and local GBI assessments include:

- Improving wayfinding, signage, and walking infrastructure, especially in Hadleigh.
- Filling greenspace access gaps in underserved areas with small new sites.
- Linking destinations and habitats through green corridors and streetscape enhancements.

GBI Goals, Priorities, and Delivery Areas

The following pages set out the framework and spatial opportunities for delivering green and blue infrastructure across Castle Point. First, a summary table presents the overarching goals and objectives aligned with the five key themes of the strategy.

This is followed by a spread of short-term opportunities (possibly deliverable within 2.5 years), presented alongside a location map. The final spread outlines the long-term opportunities that support regional connectivity and SEEPark ambitions, accompanied by a comprehensive map showing the location of all identified projects across the Borough. Together, these pages provide a clear and phased pathway for GBI delivery.

Please note: A master list of all the Castle Point GBI opportunities is included in the Appendix, providing more detail about each one of the opportunities. The tables on the following pages only include summaries of each opportunity.

FIG.34 GBI Vision: Central Thames Marshlands

TAB.8 Goals and Objectives

GOALS	OBJECTIVES	Flood Resilience	Health & Wellbeing	Biodiversity Uplift	Climate Adaptation	Active Travel
Coordinate GBI Improvements With Flood Strategy	Reduce flood risk while increasing multifunctional green space	√			√	
Naturalised Drainage	Create SuDS and wetland buffers to regulate runoff and improve water quality.	√		√	√	
Enhance Key Nodes	Improved public space and landscape at key locations		√			√
Upgrade Amenity Greenspaces Rated Fair/Poor	Equity of access to quality spaces, especially in Canvey		√			√
Implement New Management Plans for Major Parks	Better site management aligned with public priorities		√	√		
Use CIL/S106 to Fund Targeted Site Improvements	Leverage development funds for open space upgrades		√			
Upgrade Play Facilities for Teens	Youth wellbeing, social inclusion, active lifestyles		√			√
Pollinator Corridors	Establish pollinator-friendly corridors in urban and peri-urban areas.		√	√	√	
Hedgerow Connectivity	Restore and connect fragmented hedgerows across landscape.			√	√	
Local Wildlife Site Buffers	Buffer and enhance priority LoWS in Thundersley and Daws Heath.			√		
Community Stewardship	Support local groups and NGOs in habitat management and engagement.			√		
Biodiversity Net Gain Opportunity Areas	Identify zones with high strategic significance for BNG delivery and funding.			√		
Urban Greening	Expand tree canopy and vegetation in low-shade urban zones.			√	√	
Incorporate GBI into All New Development	Promote landscape led development	√	√	√	√	
Improve Connectivity Across Multiple Sites	Linking destinations and habitats		√			√
Address Access Gaps with New Small Greenspaces	Fill 400m greenspace access gaps in underserved areas		√	√		√
Improve Wayfinding, Paths, and Signage	Encourage active travel and awareness of local GBI		√			√

FIG.35 GBI Vision: Woodland Arc

8.2 Early ideas for spatial principles and priorities

Short-term Opportunities (0–2.5 years)

The short-term opportunities identified in this strategy represent deliverable actions that can be implemented within approximately 2.5 years. These initiatives are considered feasible based on current land ownership, planning status, community readiness, and potential funding routes such as CIL, S106, or local authority programmes. Many build upon existing spaces, infrastructure, or policy commitments, allowing for rapid deployment and early benefits. By focusing on visible, local interventions—such as path upgrades, SuDS retrofits, pollinator planting, and small greenspace infill—these opportunities can catalyse broader support for green and blue infrastructure across the Borough.

Please note: There are a total of 32 opportunities identified. Some of these are listed on the short-term table, the remainder are included on the subsequent long-term table. (For example, no.1 is on the long-term table.) However, the corresponding maps for short and long-term opportunities have located all 32 opportunities for ease of reference. Opportunities no. 9 and 12 include both short and long-term opportunities, so they appear in both tables.

Also note: A master list of all the Castle Point GBI opportunities is included in the Appendix, providing more detail about each one of the opportunities. The table on this page provides only a summary of each opportunity

TAB.9 Short-term Opportunities

No.	Area	Location	Opportunity Description	Flood Resilience	Health & Wellbeing	Biodiversity Uplift	Climate Adaptation	Active Travel
3	Benfleet	Creekside (Benfleet Creek North)	Restore the estuarine fringe as a strategic site for BNG delivery	√	√	√		
4	Benfleet	Thundersley Glen, Jervis Wood Lane, to Shipwrights Wood	Improve management and biodiversity of these sites, that will also provide an important ecological and pedestrian network.			√		
5	Canvey	Benfleet Creek & Seawall	Restore grazing marsh and improve seawall buffer zone.	√		√		
7	Canvey	West Canvey	Ensure a landscape-led masterplan approach for this area.		√			√
9	Canvey	South Canvey Green Lung	Protect and enhance the Green Lung to connect ecological networks.			√	√	
10	Canvey	Canvey Lake	Enhance as a multifunctional green space, improving flood storage, recreational paths, habitat and biodiversity.	√	√	√		
11	Canvey	Canvey Island	Improve access to nature in central Canvey Island.		√			√
12	Canvey	West Canvey Marsh	Enhance biodiversity, water management, and flood storage.	√	√	√		
13	Canvey	Canvey Heights Country Park	Improve the park as a Strategic site for BNG delivery.		√	√		
15	Canvey	Limburg Road Open Space	Improve this area as a Strategic site of BNG delivery.		√	√		
16	Canvey	Canvey Wick SSSI Edge	Extend Canvey Wick into the Canvey Village Marsh and Northwick Farm areas for nature conservation purposes.			√		
17	Daws Heath	Daws Heath	Enhance ancient woodland and informal open space connectivity.		√	√		
19	Daws Heath	Daws Heath	Protect ecological transition zones near woodland and prevent urban sprawl and coalescence.			√	√	
22	Hadleigh	Hadleigh Marshes	Remediate and restore the ecology of the marshes, while also improving access.	√	√	√	√	√
25	Hadleigh	Hadleigh Castle BNG Site	Improve the park as a Strategic site for BNG delivery.		√	√		
26	Hadleigh / Thundersley	Connection between Hadleigh Downs and Coombe Wood	Create habitat links from Coombe Wood, along Jervis Wood Lane to Shipwright's Wood; enhance site interpretation.		√	√		
27	Two Tree Island	Two Tree Island	Improve as a Strategic site for BNG delivery.	√	√	√		
29	Thundersley	Thundersley	Promote green space connectivity for a multifunctional GBI network around Thundersley.		√	√		
32	Thundersley	Coombe Wood	Improve management to clear tipping. Control invasive species. Reconnect ancient woodland compartments.		√	√		

FIG.36 Short-term opportunities

8.3 Connection to SEEPark and regional aspirations

Long-Term Opportunities (2.5+ years)

The long-term opportunities identified in this strategy align with the broader vision of SEEPark and the ambition to deliver joined-up green and blue infrastructure at a regional scale. These projects typically require more time—beyond 2.5 years—to realise, due to their complexity, scale, or need for multi-agency collaboration. They include strategic interventions such as habitat restoration, green corridor extensions, floodplain reconnection, and cross-boundary connectivity that reinforce Castle Point's contribution to a wider network of resilient, biodiverse landscapes. By investing early in planning and partnership-building, the Borough can position itself as a key player in delivering SEEPark's regional aspirations while meeting local climate, nature, and health goals.

Please note: A master list of all the Castle Point GBI opportunities is included in the Appendix, providing more detail about each one of the opportunities. The table on this page provides only a summary of each opportunity. Opportunities no. 9 and 12 include both short and long-term opportunities, so they appear in both tables.

TAB.10 Long-term Opportunities

No.	Area	Location	Opportunity Description	Flood Resilience	Health & Wellbeing	Biodiversity Uplift	Climate Adaptation	Active Travel &
1	Benfleet	South Benfleet & Hadleigh	Support habitat creation and green infrastructure connectivity between Hadleigh Park and Benfleet Marshes.		√	√		
2	Benfleet	Benfleet Marsh	Improve stormwater management at South Benfleet Playing Fields, with connectivity to Creekside adjacent.	√	√			
6	Canvey	Canvey Island Seawall	Enhanced seawall, walking and cycling routes and waters edge ecology. New flood defences are planned by 2040.	√			√	
8	Canvey	Access to and Around Canvey Island	Enhance opportunities for active travel, access and circulation - incorporate green corridors, walking and cycling routes into any improved vehicle routes.		√			√
9	Canvey	South Canvey Green Lung	Consider creating a Country Park within the Green Lung utilising the area which do not have significant nature value to meet a need of green space provision for local residents.		√			√
12	Canvey	West Canvey Marsh	Improve visitor access in appropriate locations, and continue to improve wetland for flood storage and habitat gains.	√	√	√		
14	Canvey	Canvey Heights Country Park	Improve the park's flood resilience and play/recreation opportunities.		√	√		
18	Daws Heath	Daws Heath	Improve pedestrian access and crossings in Daws Heath; introduce further cycle routes to provide additional access to adjacent green spaces.		√	√		
20	Daws Heath	LoWs Buffers	Buffer and enhance priority LoWS in Daws Heath.			√		
21	Daws Heath	Daws Heath	Improve strategic connections to the larger SEEPark network - towards the Woodland Arc in Rochford and Southend-on-sea, as well as Hadleigh Park and the Central Thames Marshlands.			√		√
23	Hadleigh	Hadleigh Marshes	Consider long-term management options and longer-term remediation of the contaminated land.	√	√	√	√	√
24	Hadleigh	Hadleigh Castle Country Park	Improve visitor experience and undertake heritage landscape improvements with a biodiversity focus.		√	√		
28	Two Tree Island	Two Tree Island	Where appropriate, improve access and sensitive routes for people.	√	√	√		
30	Thundersley	Thundersley Great Common	Restore grassland and woodland; recreation and allotments could be included.		√			
31	Thundersley	LoWs buffers	Buffer and enhance priority LoWS in Thundersley.			√		

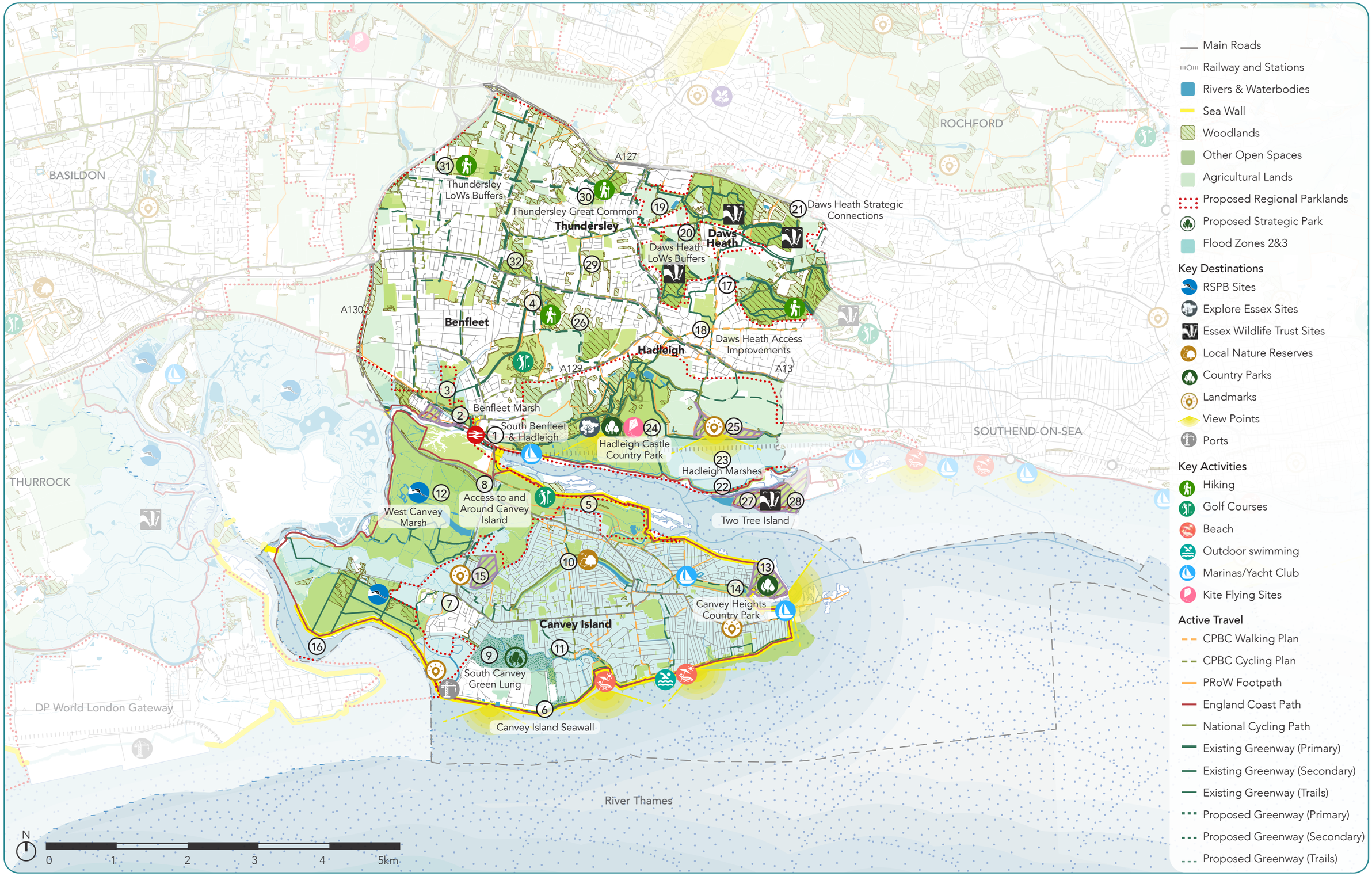

FIG.37 Long-term opportunities