# CASTLE POINT : GREEN AND BLUE INFRASTRUCTURE (GBI) STUDY UPDATE

The Castle Point Green and Blue Infrastructure (GBI) Study Update has been prepared on behalf of the Castle Point Borough Council.

Rev 00 - 02.07.2025

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# 1 Executive Summary

## Purpose and Scope

Castle Point Borough Council has undertaken an update to its Green and Blue Infrastructure (GBI) Study to ensure the borough's strategic planning reflects the latest evidence, environmental priorities, and delivery opportunities. This study builds on the 2020 South Essex GBI Study and aligns with national legislation, notably the Environment Act 2021, and regional initiatives such as the draft Essex Local Nature Recovery Strategy (LNRS) and the South Essex Estuary Park (SEEPark).

## Evidence Base and Datasets

The purpose of the update is to provide a clear, implementable framework for enhancing nature, resilience, health, and connectivity throughout Castle Point. It incorporates new data from the 2023 Castle Point Open Space Assessment, the 2023 Local Wildlife Sites (LoWS) Review, and the 2025 Strategic Flood Risk Assessment. The study offers practical proposals for delivering biodiversity net gain, addressing flood risk, and improving access to green and blue spaces across the borough.

## Environmental and Landscape Context

Castle Point's geography presents both challenge and opportunity. Over 55% of the borough lies within the Metropolitan Green Belt, creating a vital landscape buffer between urban areas. At the same time, large portions—particularly around Canvey Island, South Benfleet, and Hadleigh—are within Flood Zone 3, reflecting significant vulnerability to coastal and surface water flooding.

The borough contains a wealth of ecological assets, including internationally designated estuarine marshes, ancient woodlands, reedbeds, and brownfield habitats. These contribute not only to biodiversity and climate resilience but also to the health and wellbeing of local residents. The updated GBI strategy recognises the potential of these assets to support both local communities and regional ecological connectivity.

## A Regional Green Heart

Castle Point's landscapes play a pivotal regional role within the SEEPark vision—functioning as a green heart that connects the Central Thames Marshlands to the Woodland Arc. This study ensures that Castle Point's planning, investment, and delivery mechanisms actively support regional ambitions while responding to specific local needs.

## Strengths, Gaps and Priorities

Castle Point's green and blue infrastructure network is extensive, but uneven. While many residents enjoy proximity to parks or nature, others—particularly in urban areas like Canvey Island and northern South Benfleet—lack easy access to high-quality greenspace. The study reveals key statistics that highlight both the strengths and gaps in current provision:

- 311 individual greenspaces audited across the borough
- 41 Local Wildlife Sites, covering 875.6 hectares (nearly 20% of borough land)
- 570 hectares of natural and semi-natural greenspace
- 83% of residents live within 400m of greenspace, though ecological quality varies
- 46 public parks and gardens, with 69% rated as good or excellent

## Key Habitat Types and Locations

The study catalogues key habitat types and associated locations:

TAB.1 Key habitat types and associated locations:

| Habitat Type | Example Locations |
|---|---|
| Lowland Mixed Deciduous Woodland | Hadleigh Great Wood, Daws Heath woodland complex |
| Ancient Woodland | Hadleigh Great Wood, parts of Coombe Wood |
| Reedbeds | West Canvey Marshes, Canvey Wick |
| Saltmarsh and Intertidal Mudflats | Benfleet and Southend Marshes SPA, East Haven Creek |
| Coastal and Floodplain Grazing Marsh | South Canvey Marshes, West Canvey Marsh |
| Scrub and Hedgerows | Green lanes around Daws Heath and Benfleet Downs |
| Ponds and Freshwater Ditches | Canvey Wick ditch networks, Benfleet Creek margins |
| Brownfield Mosaic Habitats | Canvey Wick SSSI, parts of South Canvey industrial edge |
| Wet Woodland | Sections of Coombe Wood and damp woodland in Benfleet LoWS |
| Saline Lagoons | Coastal margins near East Haven Creek and saltmarsh fringe |

## Opportunity Types and Strategic Themes

Opportunities have been classified into short-term (≤2.5 years) and long-term delivery windows, each aligned with five strategic themes:

**Strategic Themes:**

- Flood Resilience
- Biodiversity Uplift
- Health and Wellbeing
- Climate Adaptation and Urban Cooling
- Active Travel

**Short-term opportunities** include enhancing South Benfleet Playing Fields, implementing SuDS in flood-prone estates, creating urban meadows, and upgrading green corridors. These are often located on public land or within current council programmes.

**Long-term opportunities** support regional-scale goals, including creek corridor restoration, large-scale rewilding of Canvey Island edges, and landscape-led integration into new masterplans. These will require partnership working and sustained investment.

## Spatial Inequalities and Implementation Challenges

The study identifies clear spatial inequalities. Canvey Island in particular faces a notable deficit in accessible natural greenspace. In parts of South Benfleet and Hadleigh, fragmented development patterns have resulted in a patchy network of smaller spaces that lack biodiversity or multifunctionality. Addressing these issues will be critical to ensuring health equity and ecological integrity.

Key pressures include habitat fragmentation, inadequate protection of LoWS, maintenance resourcing, and weak enforcement of long-term biodiversity commitments (e.g. BNG monitoring). These risks undermine the effectiveness of past investments and need targeted action.

## Policy Alignment and Infrastructure Role

The Castle Point Plan (Emerging Draft 2025) recognises GBI as essential infrastructure—on par with roads or utilities—in its contribution to resilience, public health, climate adaptation, and placemaking. The Study Update provides robust evidence to underpin policies across the plan, including:

- SP1, ENV1, ENV3: Protecting green space and securing biodiversity net gain
- SD3: Requiring SuDS integrated with GBI
- T3: Prioritising active travel and green corridors
- DH1, Thun4, Had2: Enhancing GBI connectivity in strategic neighbourhoods.

## Delivering Environmental Act and LNRS Goals

The strategy directly supports compliance with the Environment Act 2021, which mandates local authorities to embed biodiversity and nature recovery into spatial planning. It strengthens Castle Point's ability to:

- Embed the Essex Local Nature Recovery Strategy (LNRS)
- Identify and deliver Nature Recovery Opportunity Areas
- Achieve 10% biodiversity net gain through development
- Connect designated and non-designated habitats into coherent ecological networks

## Contribution to SEEPark and Regional Impact

Through its landscape-led approach, the GBI Strategy Update positions Castle Point as a key contributor to the South Essex Estuary Park (SEEPark)—helping deliver over 24,000 hectares of connected, climate-resilient green and blue landscapes across the region.

## Concluding Remarks

In conclusion, this Study Update equips Castle Point with a powerful tool: a strategic yet grounded blueprint for delivering nature recovery, community wellbeing, and climate resilience. It enables informed decision-making, partnership working, and prioritised investment—ensuring that the borough's landscapes continue to serve both people and nature for generations to come.

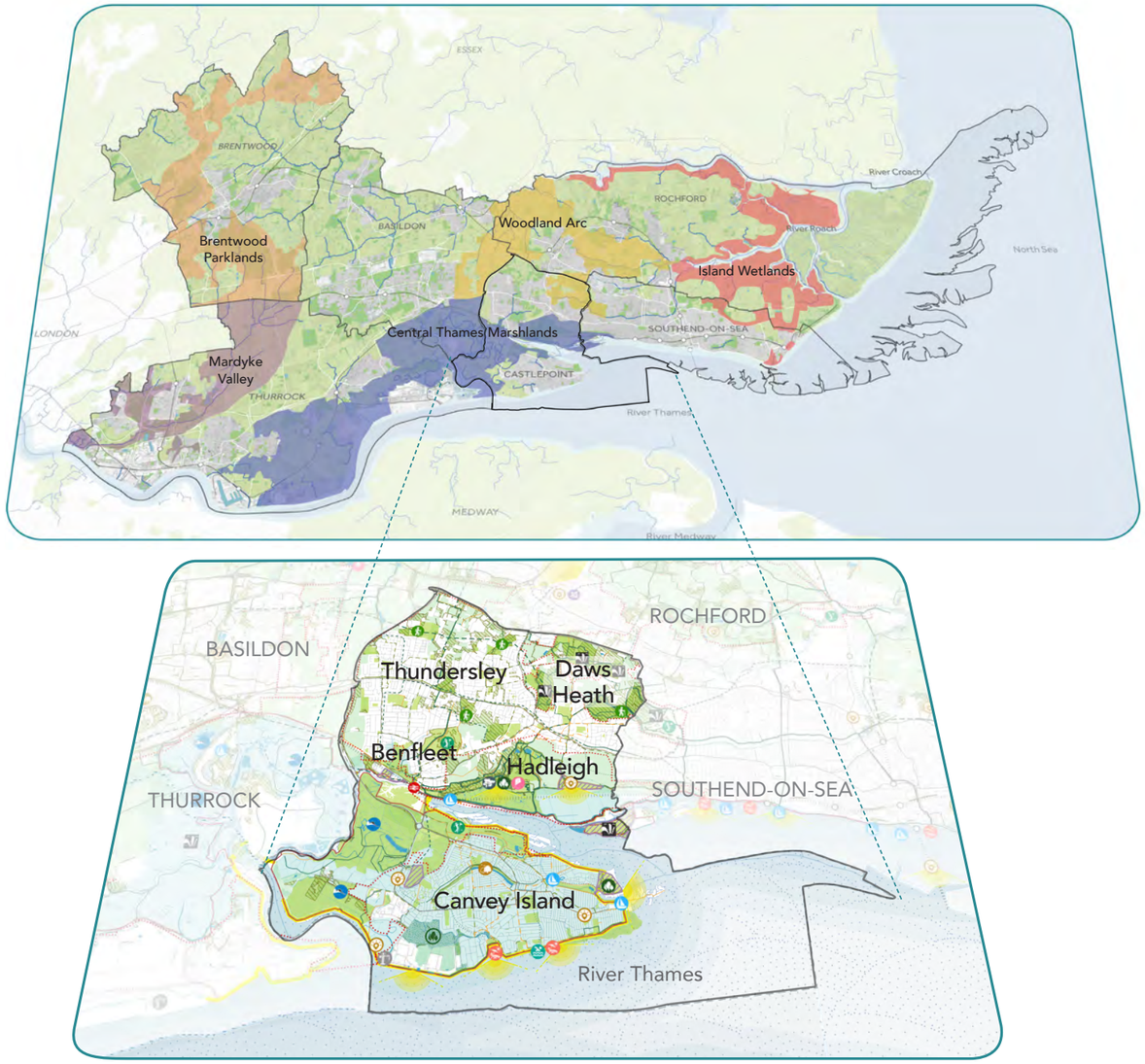



FIG.1 Within South Essex, Castle Point serves as a critical green heart — a vital connector of landscapes between the Thames Estuary and inland areas. (The upper image shows the SEEPark Strategy.)

# 2 Introduction and Planning Context

"Green infrastructure is critical to the character, resilience, and prosperity of Castle Point, providing essential environmental, social, and economic functions."
*-Castle Point Plan, Emerging Draft (2024)*

Castle Point Borough Council is committed to delivering high-quality, sustainable places that protect and enhance the natural environment while supporting the health, wellbeing, and resilience of its communities. Green and Blue Infrastructure (GBI) is central to achieving this ambition.

This *Castle Point GBI Study Update* refreshes and builds upon earlier work carried out as part of the *South Essex Green and Blue Infrastructure (SEGBI) Study*, ensuring alignment with current evidence, updated policy frameworks, and emerging opportunities for nature recovery, climate resilience, and placemaking.

The updated GBI Study will provide an important evidence base for the emerging *Castle Point Plan*, supporting delivery of the Council's environmental, social, and economic objectives. It will also contribute to wider regional strategies, including the *South Essex Estuary Park (SEEPark)* vision, the *draft Essex Local Nature Recovery Strategy (LNRS)*, and the requirements of the *Environment Act 2021*.

## Purpose and Methodology of the GBI Study Update

This Green and Blue Infrastructure (GBI) Study Update for Castle Point provides an up-to-date evidence base to inform the emerging Castle Point Plan and align with broader regional and national strategies. Its objectives are to review and enhance the Borough's understanding of its green and blue infrastructure network, assess progress since the 2020 South Essex GBI Study, and identify new opportunities to support climate resilience, biodiversity recovery, and equitable access to nature.

The update draws on the latest evidence and strategic policy context, including:

- Castle Point Open Space Assessment (2023)
- Castle Point Local Wildlife Sites Review (2023)
- Draft Essex Local Nature Recovery Strategy (LNRS, 2024)
- Castle Point Plan (Emerging Draft, 2025)
- Castle Point Borough Council Level 1 Strategic Flood Risk Assessment (2025)
- South Essex Estuary Park (SEEPark) Landscape Framework Plan: Draft Business Case (2022)
- Original South Essex GBI Study (2020)

Mapping and spatial analysis have been conducted using both legacy South Essex GBI Study data and updated datasets provided by the Council. These include new open space audits, biodiversity designations, habitat condition data, and local hydrological assessments. A structured gap analysis has been undertaken to identify weaknesses in the existing GBI network and pinpoint opportunities for multifunctional enhancement.

This study supports Castle Point's general biodiversity duty under the Environment Act and its wider role in contributing to the regional South Essex Estuary Park (SEEPark) vision.


FIG.2 Selection of policy and guidance documents referenced in this update

## Context and links to the South Essex GBI Study and SEEPark

The original *South Essex Green and Blue Infrastructure (SEGBI) Study (2020)* set out a visionary landscape framework for South Essex, identifying the critical role of GBI in tackling climate change, supporting nature recovery, enhancing community wellbeing, and enabling sustainable growth.

Castle Point was recognised within this study as a key coastal borough, contributing vital marshlands, estuarine habitats, and urban green spaces to the regional GBI network.

The *SEGBI Study* has since evolved into the *South Essex Estuary Park (SEEPark)* initiative — an ambitious programme to weave together 24,000 hectares of natural landscapes into a connected, world-class green and blue infrastructure network.

Castle Point's GBI strategy must directly support the realisation of SEEPark's objectives, particularly through its important contributions to the Central Thames Marshlands and the Woodland Arc.

This GBI Study Update ensures that Castle Point's policies and investment priorities remain strongly tied to the SEGBI and SEEPark frameworks, while also addressing the Borough's unique needs and emerging local evidence.

## Alignment with the LNRS and Environment Act

The *Environment Act 2021* introduces a statutory duty for local authorities to conserve and enhance biodiversity through strategic planning and decision-making.

This *GBI Study Update* has been prepared to directly support Castle Point's compliance with this duty by:

- Embedding the principles of the draft *Local Nature Recovery Strategy (LNRS)* into local GBI planning.
- Identifying Nature Recovery Opportunity Areas where habitat protection, creation, and enhancement should be prioritised.
- Promoting the development of connected ecological networks across urban and rural areas.
- Supporting delivery of at least 10% biodiversity net gain through development and green infrastructure investment.

This GBI Study is designed to directly support Castle Point's compliance with the Environment Act by:

- Embedding the priorities of the emerging Essex LNRS into local spatial planning.
- Identifying and enhancing the Borough's contribution to the Nature Recovery Network.
- Promoting nature-based solutions that deliver biodiversity uplift, flood resilience, and community wellbeing.

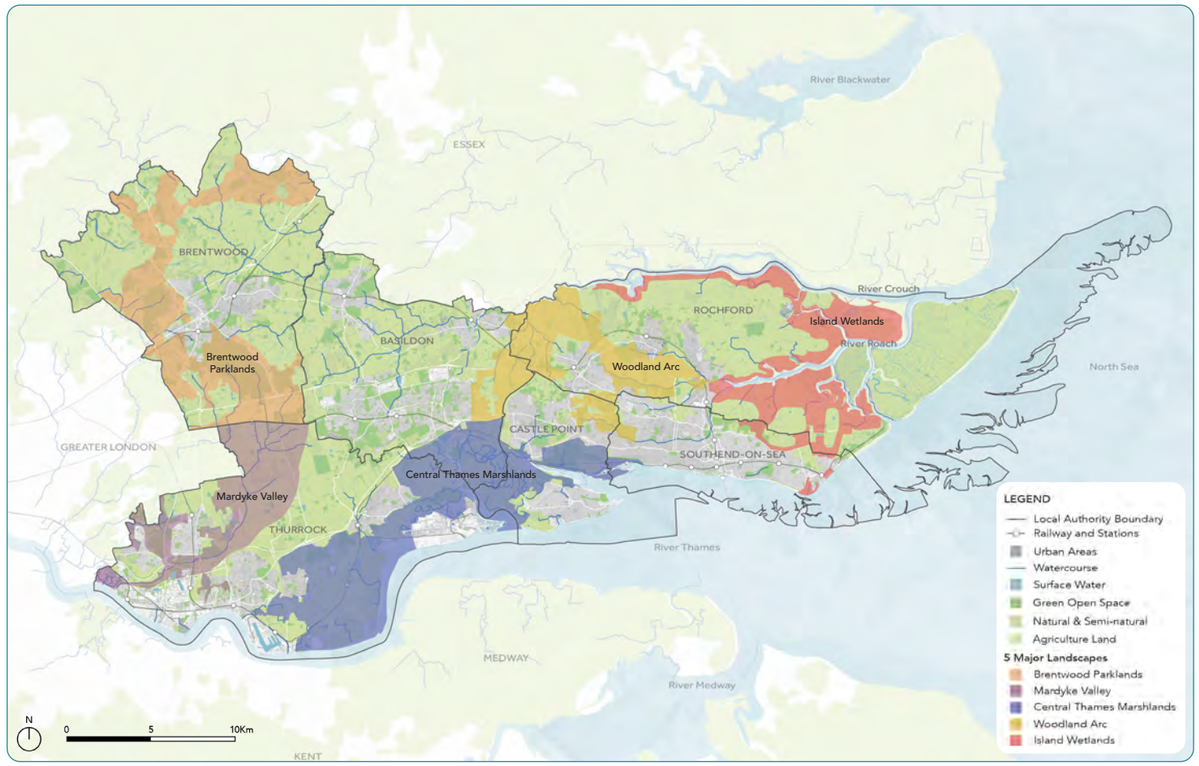


FIG.3 Two of the five major landscapes identified in the SEEPark strategy are included in Castle Point.

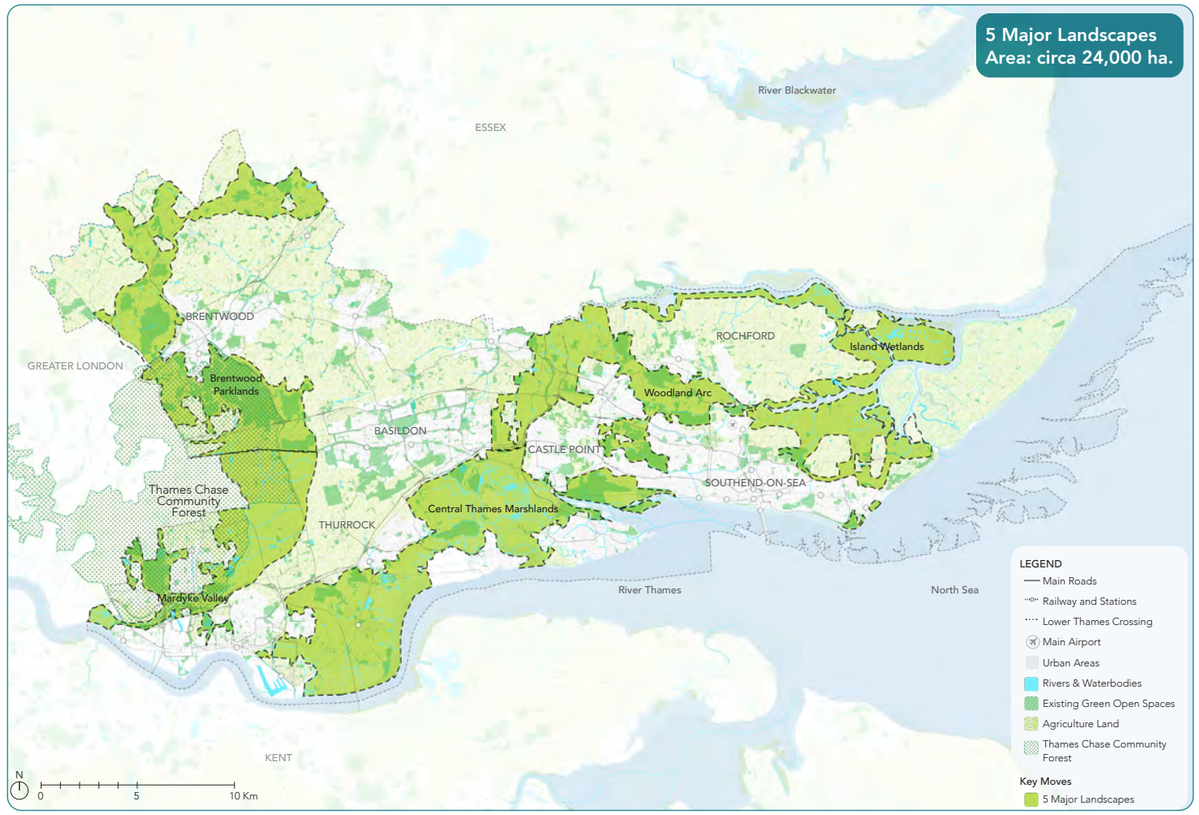


FIG.4 The resilient SEEPark landscape framework, as shown in the *SEEPark: Draft Business Case, 2022.*

## Strong Policy Basis for GBI

The *Castle Point Plan (Emerging Draft 2025)* provides a robust and supportive framework for green and blue infrastructure.

It recognises GBI not only as environmental assets but as essential infrastructure underpinning health, mobility, resilience, and prosperity.

The Plan links GBI to:

- Health and wellbeing improvements.
- Climate resilience and flood risk management.
- Biodiversity recovery and habitat creation.
- Placemaking, recreation, and economic vitality.

Castle Point's planning vision strongly reinforces the importance of investing in and expanding multifunctional green and blue infrastructure networks. Several emerging policies in the draft Castle Point Plan that are relevant to this GBI Update are included in TAB.1 GBI-Related Policies in the emerging Castle Point Plan.

TAB.2 GBI-Related Policies in the Castle Point Plan (Emerging Draft 2025)

| Policy | Relevance to GBI |
|---|---|
| SP1 – Supporting Enhancement of the Borough's Green Spaces | Protects and enhances GBI for biodiversity, climate resilience, health, and wellbeing. |
| ENV1 – Protecting and Enhancing the Landscape and Landscape Features | Requires development to protect and enhance landscape and natural features, including watercourses and ditches. |
| ENV3 – Securing Nature Recovery and Biodiversity Net Gain | Promotes biodiversity net gain and supports GBI network enhancements. |
| SD3 – Sustainable Drainage Systems (SuDS) | Mandates SuDS to integrate with GBI for multifunctional benefits. |
| C6 – The South Canvey Green Lung | Designates the Green Lung as a strategic GBI asset for ecological connectivity. |
| Thun4 – Green Space Connectivity in Thundersley | Protects green spaces in Thundersley as multifunctional GBI with connectivity focus. |
| DH1 – Green Space Connectivity in Daws Heath | Enhances green spaces in Daws Heath for their role in biodiversity and connectivity. |
| Had2 – Hadleigh Country Park, Hadleigh Farm and Benfleet & Southend Marshes | Supports habitat creation in line with GBI at key landscape and estuarine sites. |
| SD1 – Tidal Flood Risk Management | Safeguards land near flood defences for GBI and environmental enhancement. |
| Infra4 – Open Spaces | Protects open spaces and supports multifunctional GBI roles. |
| T3 – Active Travel Improvements | Promotes green corridors for walking, cycling, and recreation. |
| C4 – West Canvey | Requires integration of new development with surrounding GBI assets and ecological links. |
| B9 – South Benfleet Playing Fields | Land to be masterplanned as multifunctional green space for connectivity, recreation, water storage, and biodiversity |
| GB1 – Development Affecting the Green Belt | Supports use of Green Belt for biodiversity, landscape enhancement, and recreation. |
| SP2 – Making Effective Use of Urban Land and Creating Sustainable Places | Reinforces GBI integration in sustainable urban development. |
| Infra3 – Improving Health and Wellbeing | Improves public health by promoting access to green spaces. |
| ENV2 – Coastal & Riverside Strategy | Supports blue infrastructure and habitat enhancement in coastal and riverside zones. |
| ENV4 – Local Wildlife Sites | Adds protection for LoWS as part of ecological and GBI networks. |
| ENV5 – Design Features that Encourage Biodiversity | Encourages site-scale GBI features like swift boxes, bat roosts, and habitat corridors. |
| ENV6 – Best and Most Versatile Agricultural Land | Protect the best and most versatile agricultural land to support food production, the economy, preserve food security and mitigate against the impacts of climate change. |

## Strategic Regional Role

Within South Essex, Castle Point serves as a critical green heart — a vital connector of landscapes between the Thames Estuary and inland areas.

The Borough's coastal marshes, parks, green wedges, and river corridors are essential to achieving the SEEPark vision of an interconnected, climate-resilient regional landscape.

Castle Point's Green and Blue Infrastructure must be planned not only to serve local communities but also to contribute to regional ecological connectivity, flood resilience, and health and wellbeing networks across South Essex.

The GBI Strategy must therefore deliver benefits at multiple scales: local, borough-wide, and regional.

## Environmental and Spatial Context

Castle Point's landscape presents a distinctive mix of environmental assets and sensitivities that shape the Borough's green and blue infrastructure priorities. Over half of the Borough — approximately 55% — lies within the Metropolitan Green Belt, offering not only landscape continuity but also significant opportunities for biodiversity enhancement, climate resilience, and accessible nature.

Large areas of the Borough, particularly around Canvey Island, South Benfleet, and Hadleigh, fall within Flood Zone 3. This classification, as defined by the Environment Agency, refers to land with a high probability of flooding—either a 1 in 100 year chance of fluvial flooding or a 1 in 200 year chance of tidal flooding in any given year. In these areas, green and blue infrastructure plays a critical role in natural flood management, coastal buffering, and community safety.

The Borough is also home to several nationally and internationally designated ecological sites, including the Benfleet and Southend Marshes SPA and Ramsar Site, as well as over 40 Local Wildlife Sites (LoWS). These habitats support species-rich reedbeds, saltmarshes, ancient woodlands, and rare invertebrate populations, reinforcing the ecological value of both coastal and inland landscapes.

Historic landscapes, ancient woodlands, and estuarine environments further define Castle Point's unique identity. From the medieval earthworks and elevated vistas around Hadleigh Castle, to the biodiversity-rich habitats of Hadleigh Great Wood and the intertidal flats of Benfleet Creek, these landscapes reflect a deep interaction between natural processes and cultural history.

FIG.5 Thames Marshes, Two Tree Island

FIG.8 Oikos Jetty, Hole Haven

FIG.6 Hadleigh Country Park view towards Thames Estuary

FIG.9 Hadleigh Castle Vista

FIG.7 England Coast Path along the sea wall, Canvey Island

FIG.10 Tewkes Creek, Canvey Island

# 3 Castle Point Today: Green and Blue Infrastructure Context

## 3.1 Landscape character and key features

"The landscapes of South Essex are not only vital to our environment — they are the foundation of our communities, our health, and our resilience."
— *SEEPark Landscape Framework Business Case (2022)*

### Coastal Landscapes and Natural Features

Castle Point's landscape is shaped by its low-lying coastal setting, its relationship with the Thames Estuary, and a centuries-old balance between settlement, agriculture, marshland ecosystems, and coastal defence.

It is a borough where land and water meet visibly and dramatically, giving rise to a distinctive landscape character within South Essex.

Key features of the landscape include:

- Coastal marshes, saltmarshes, and mudflats stretching along the southern edge, offering critical biodiversity and stunning natural beauty.
- Urban greenspaces interwoven with historic villages and suburban settlements, with important centres such as Benfleet, Hadleigh, and Canvey Island.
- Protected Green Belt lands wedging between built-up areas, preserving green corridors, openness, and separation between settlements.
- Small but significant areas of ancient woodland, notably around Daws Heath and Hadleigh Downs, providing pockets of historic landscape character and vital biodiversity refuges.
- Historic flood defence infrastructure, including sea walls, tidal barriers, and raised embankments, distinctive features of the Borough's coastal edge.

### Historic Landscapes and Conservation Areas

Castle Point's landscape is deeply layered with historic character.

The Borough contains a number of designated Conservation Areas, including:

- Hadleigh Conservation Area, centred around the ruins of Hadleigh Castle, a nationally significant Scheduled Monument commanding sweeping views across the Thames Estuary.
- Benfleet Conservation Area, preserving the historic village core with medieval street patterns and a riverside setting.
- Canvey Island's Historic Core, containing remnants of early 20th-century seaside development and flood defence heritage.

Historic landscapes, medieval field systems, parklands, and engineered flood defences all contribute to the Borough's distinct identity, offering a tangible connection to centuries of adaptation to coastal life.

However, the historic marshland and grazing landscapes of the coast have been severely reduced and often neglected since the 1930's.

Castle Point also carries traces of its industrial legacy, particularly on Canvey Island, where former petrochemical sites and light industrial areas remain part of the landscape, now increasingly integrated with restoration and nature recovery efforts.

### Views and Visual Identity

Perhaps most striking are the spectacular views across the Thames Estuary, particularly from elevated points such as Hadleigh Castle and Hadleigh Downs.

From these vantage points, one can see sweeping panoramas over tidal flats, winding creeks, restored wetlands, and expansive skies — a constant reminder of Castle Point's intimate relationship with water, resilience, and renewal.

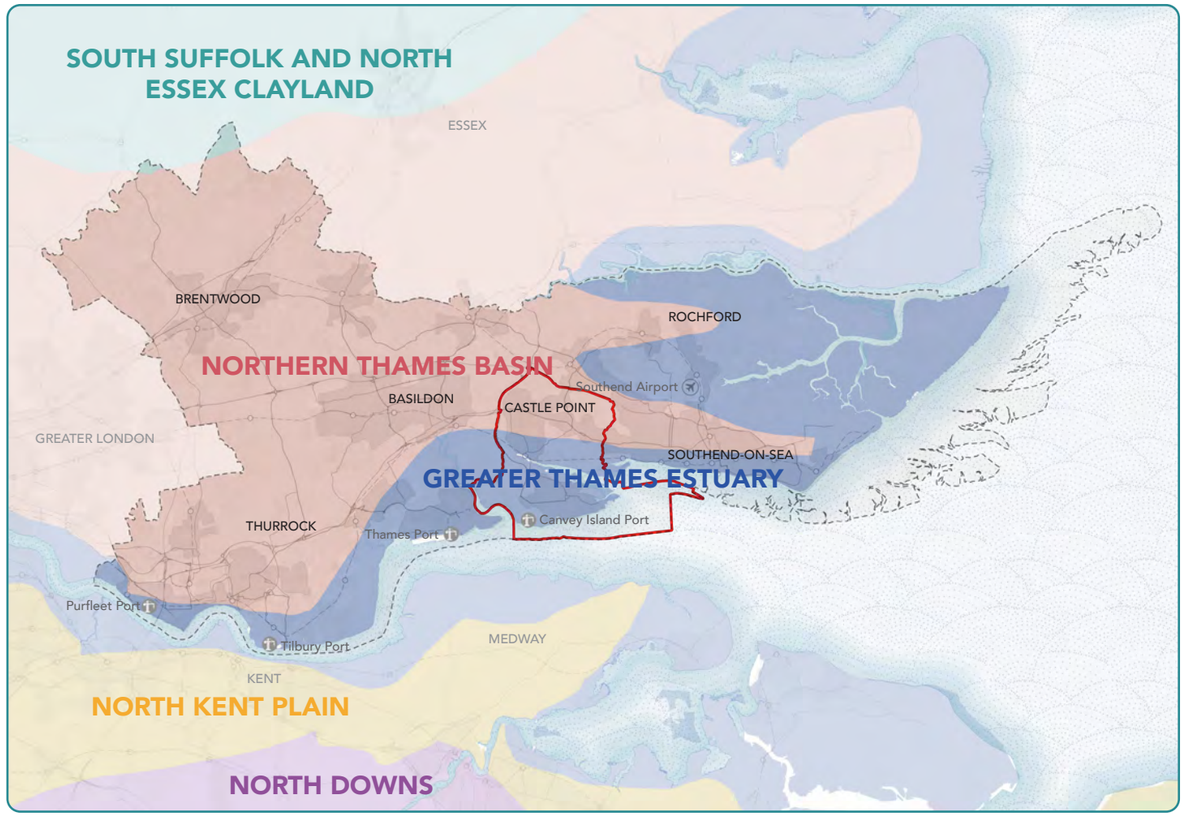
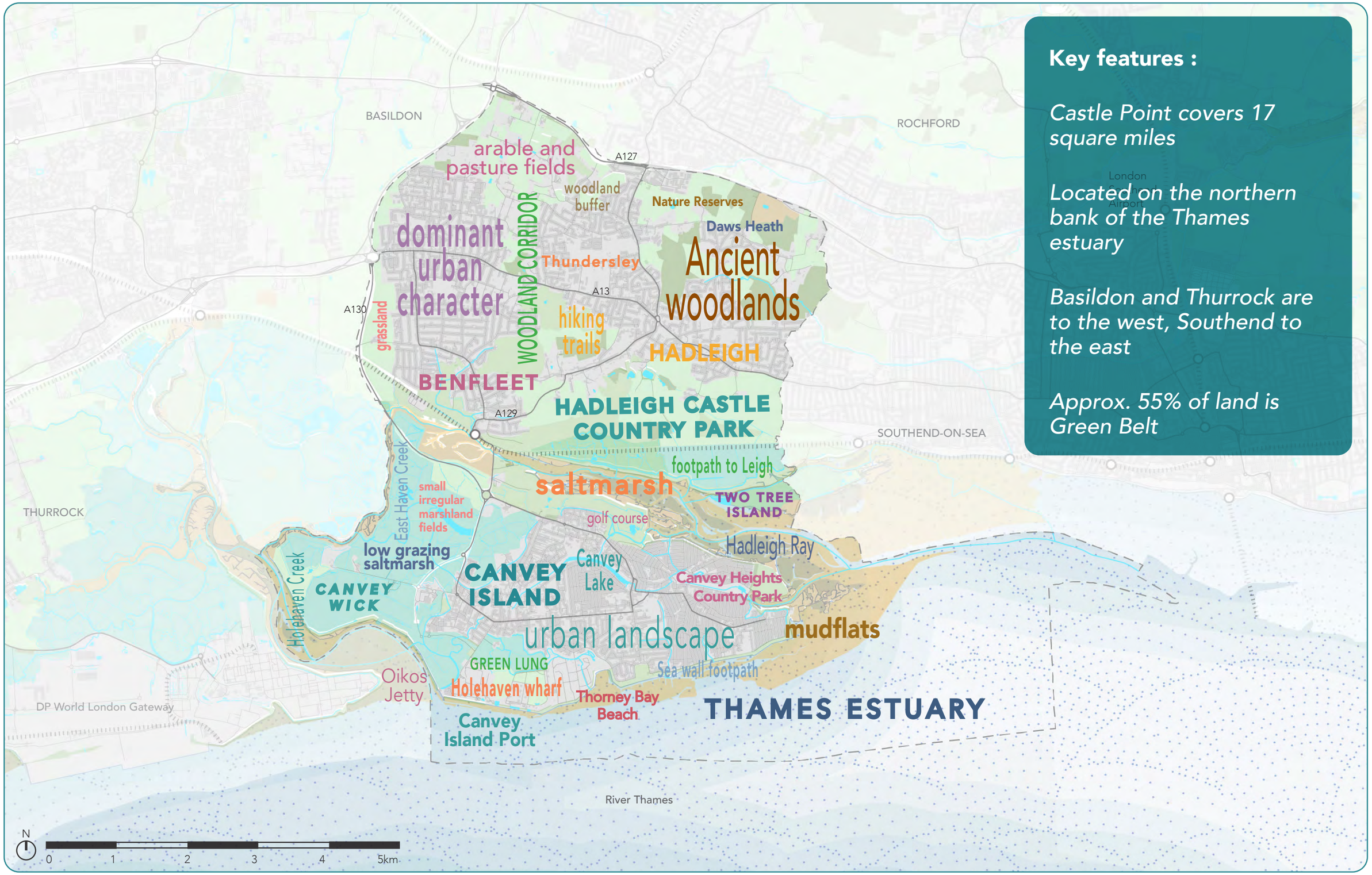



FIG.11 The region falls under the Greater Thames Estuary (81) and Northern Thames Basin (111) Regional Character Areas defined by the Countryside Agency, English Nature and English Heritage Character Map of England.




**Key features :**

*Castle Point covers 17 square miles*

*Located on the northern bank of the Thames estuary*

*Basildon and Thurrock are to the west, Southend to the east*

*Approx. 55% of land is Green Belt*

FIG.12 Landscape Characters and Key Features in Castle Point

# 3.2 Natural assets and ecosystems

"Protecting and expanding our natural assets is not just an environmental imperative — it is essential for creating healthy, resilient, and thriving communities."
— *Draft Essex Local Nature Recovery Strategy (2024)*

Castle Point contains a rich array of natural assets, supporting both biodiversity and human wellbeing. Despite its compact size, the Borough boasts significant ecological value within the wider South Essex landscape.

According to the *Castle Point Local Wildlife Sites Review (2023)*, key natural assets include:

- 41 Local Wildlife Sites (LoWS) covering approximately 875.6 hectares, representing 19.4% of Castle Point's land area.
- Internationally protected areas, including parts of the Benfleet and Southend Marshes SPA and Ramsar Site, vital for migratory and overwintering birds.
- Urban parks and green spaces, with 311 individual spaces surveyed across the borough, many offering multifunctional roles for recreation, biodiversity, and climate resilience.
- Country parks and restored brownfield sites such as Hadleigh Country Park, West Canvey Marsh, and Canvey Wick SSSI, which together form critical habitat stepping stones.
- Ancient and semi-natural woodlands, including pockets near Hadleigh and Daws Heath.

Castle Point's ecosystems span saltmarshes, mudflats, grazing marsh, freshwater ponds, woodlands, and urban green corridors. They support a wide diversity of species — from internationally important bird populations to specialist plants and invertebrates adapted to coastal and estuarine environments.

Biodiversity within the Borough faces pressure from urbanisation, climate change, and sea-level rise, but opportunities for enhancement and restoration — particularly through the emerging *Local Nature Recovery Strategy (LNRS) and SEEPark strategy* — are significant.

TAB.3 Key Habitat Types in Castle Point and Example Locations

| Habitat Type | Example Locations |
|---|---|
| Lowland Mixed Deciduous Woodland | Hadleigh Great Wood, Daws Heath woodland complex |
| Ancient Woodland | Hadleigh Great Wood, parts of Coombe Wood |
| Reedbeds | West Canvey Marshes, Canvey Wick |
| Saltmarsh and Intertidal Mudflats | Benfleet and Southend Marshes SPA, East Haven Creek |
| Coastal and Floodplain Grazing Marsh | South Canvey Marshes, West Canvey Marsh |
| Scrub and Hedgerows | Green lanes around Daws Heath and Benfleet Downs |
| Ponds and Freshwater Ditches | Canvey Wick ditch networks, Benfleet Creek margins |
| Brownfield Mosaic Habitats | Canvey Wick SSSI, parts of South Canvey industrial edge |
| Wet Woodland | Sections of Coombe Wood and damp woodland in Benfleet LoWS |
| Saline Lagoons | Coastal margins near East Haven Creek and saltmarsh fringe |

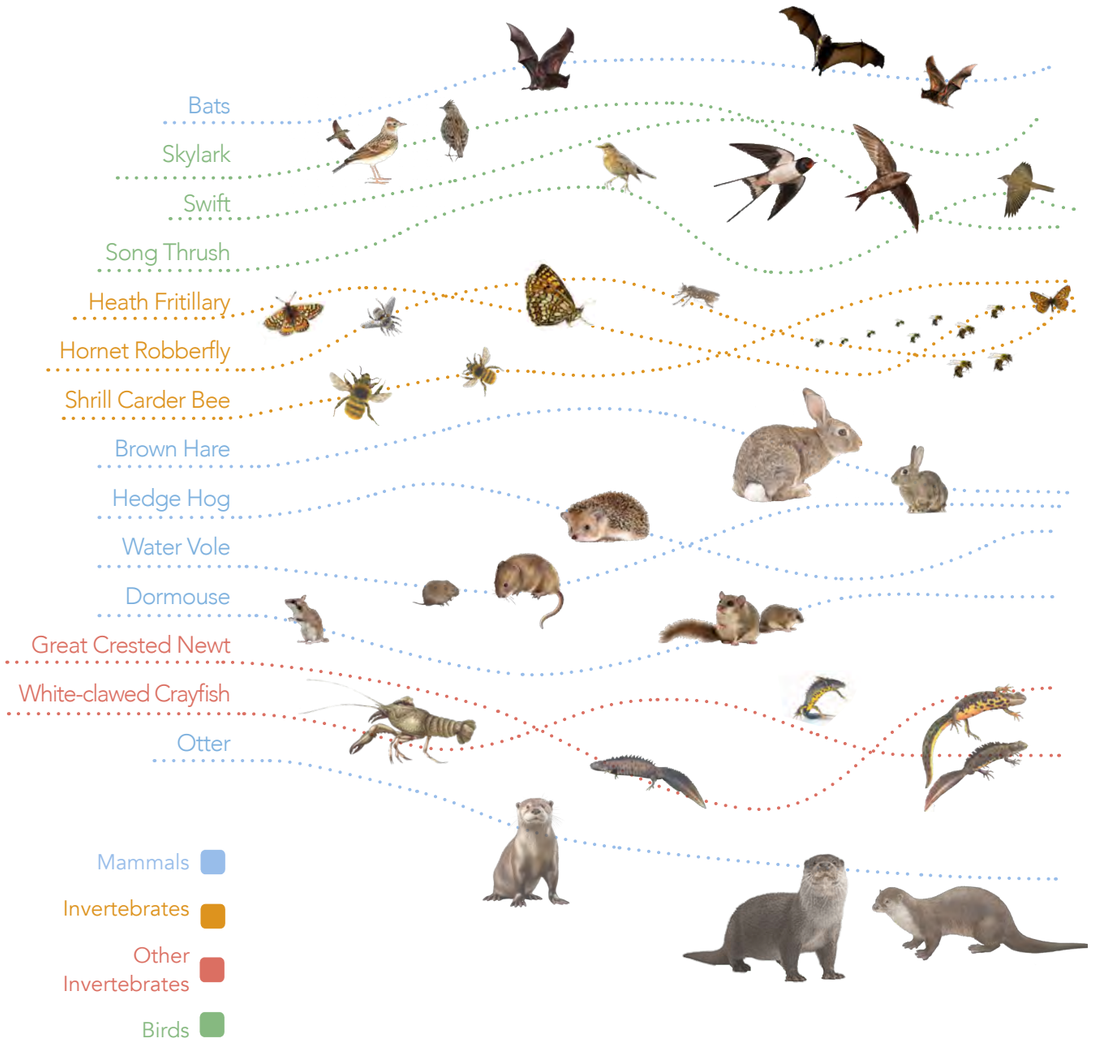



FIG.13 Key Protected Species and Invertebrate Species Examples found in Castle Point

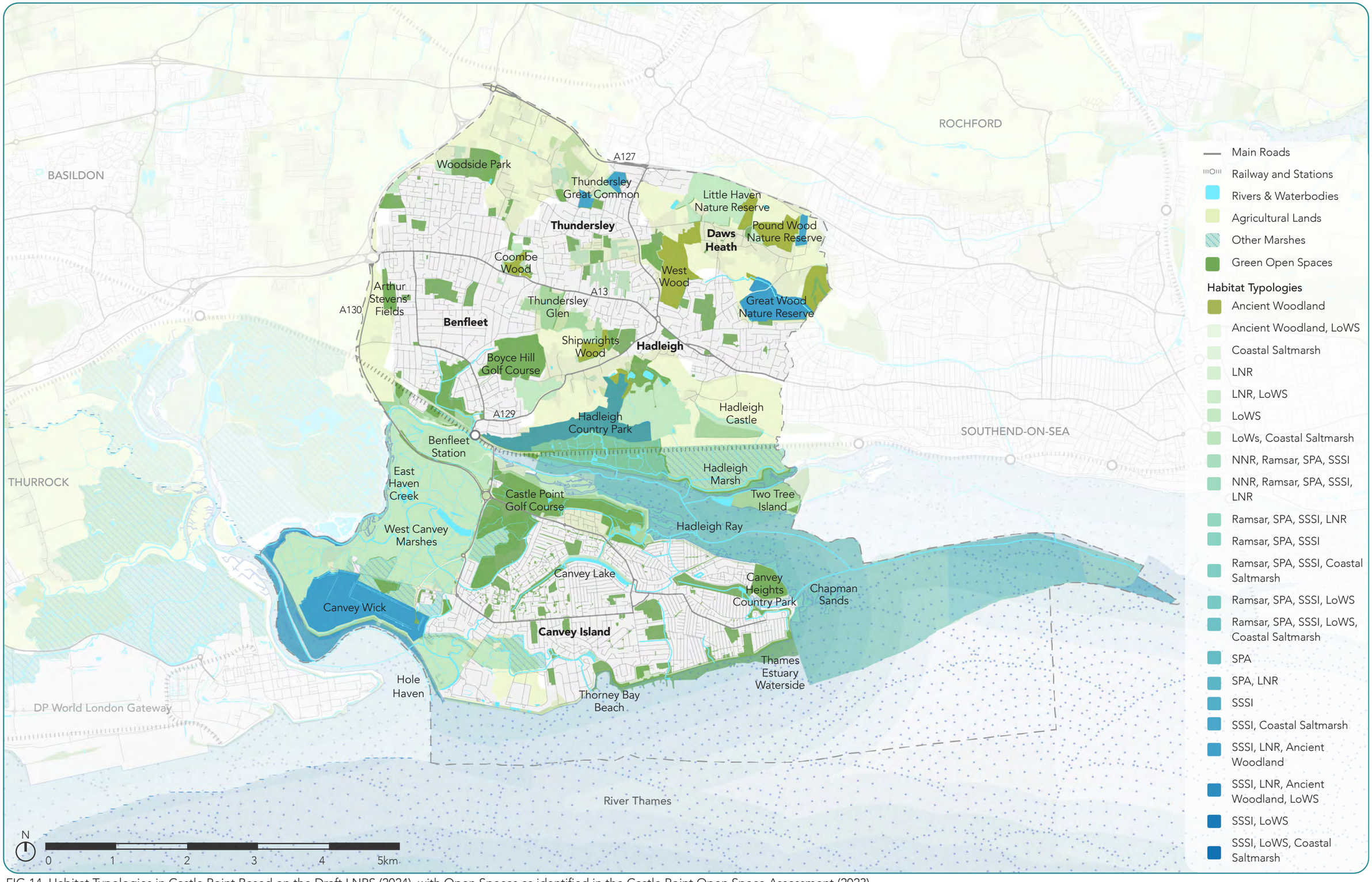



FIG.14 Habitat Typologies in Castle Point Based on the Draft LNRS (2024), with Open Spaces as identified in the Castle Point Open Space Assessment (2023)

# 3.3 Hydrological systems and blue infrastructure

"The natural environment — including rivers, wetlands, and coastal waters — must be conserved, enhanced, and managed sustainably to secure resilience to climate change and benefits for people and nature."
— *Environment Act 2021, Section 1: Environmental Principles*

Water defines Castle Point's geography, ecology, and risks. The Borough's hydrological systems are heavily shaped by the Thames Estuary, tidal marshes, and a complex network of natural and engineered drainage systems, all of which are increasingly critical in the context of climate change and sea-level rise.

Key components of Castle Point's blue infrastructure include:

- Over 15 km of tidal frontage along the Thames Estuary, protected by seawalls and embankments.

- Major flood risk areas, particularly on Canvey Island, South Benfleet, and Hadleigh, with large portions falling within Flood Zone 3 (land having a 1 in 100 or greater annual probability of river flooding; or land having a 1 in 200 or greater annual probability of sea flooding.)

- Extensive ditch, creek, and pond networks, which historically managed surface and tidal water, and today retain significant biodiversity value.

- Managed realignment and wetland restoration sites, such as West Canvey Marsh, which now deliver flood storage alongside habitat benefits.

- Urban drainage infrastructure under growing pressure from more frequent heavy rainfall and surface water flooding.

Castle Point's relationship with water is also a relationship with risk. The Borough's vulnerability was most starkly demonstrated during the Great Flood of 1953, when a catastrophic tidal surge overwhelmed sea defences, leading to the deaths of 58 people on Canvey Island alone and the evacuation of thousands. The memory of this event continues to shape local attitudes toward flood management and coastal resilience today.

Since then, flood management has significantly evolved. Canvey Island is identified as a Policy P4 area in the Environment Agency's Thames Estuary 2100 Plan (TE2100), which means defences will be maintained and upgraded in line with climate change projections. Indeed, more than £80 million in improvements have recently been completed on the Southern Shoreline Revetments, placing Canvey's tidal defences in strong condition through to at least 2070.

However, challenges remain elsewhere. The defences through Benfleet and the Southend Marshes fall under Policy P3 in TE2100, which anticipates occasional overtopping or breaching as sea levels rise. While no residential properties are at risk in these areas, critical transport infrastructure — notably the London to Shoeburyness railway line — could be exposed to future flooding.

Alongside engineered infrastructure, national policy increasingly recognises the need for nature-based solutions to complement and strengthen flood resilience. The Environment Act 2021 and updated planning guidance promote the restoration of natural hydrological systems.

Castle Point's blue infrastructure is therefore not only a vital defence mechanism — it is a platform for delivering multiple co-benefits: nature recovery, public access, biodiversity uplift, and climate adaptation. In its uniquely dynamic coastal setting, the Borough has an opportunity to lead by example in shaping water-sensitive urban and landscape systems.

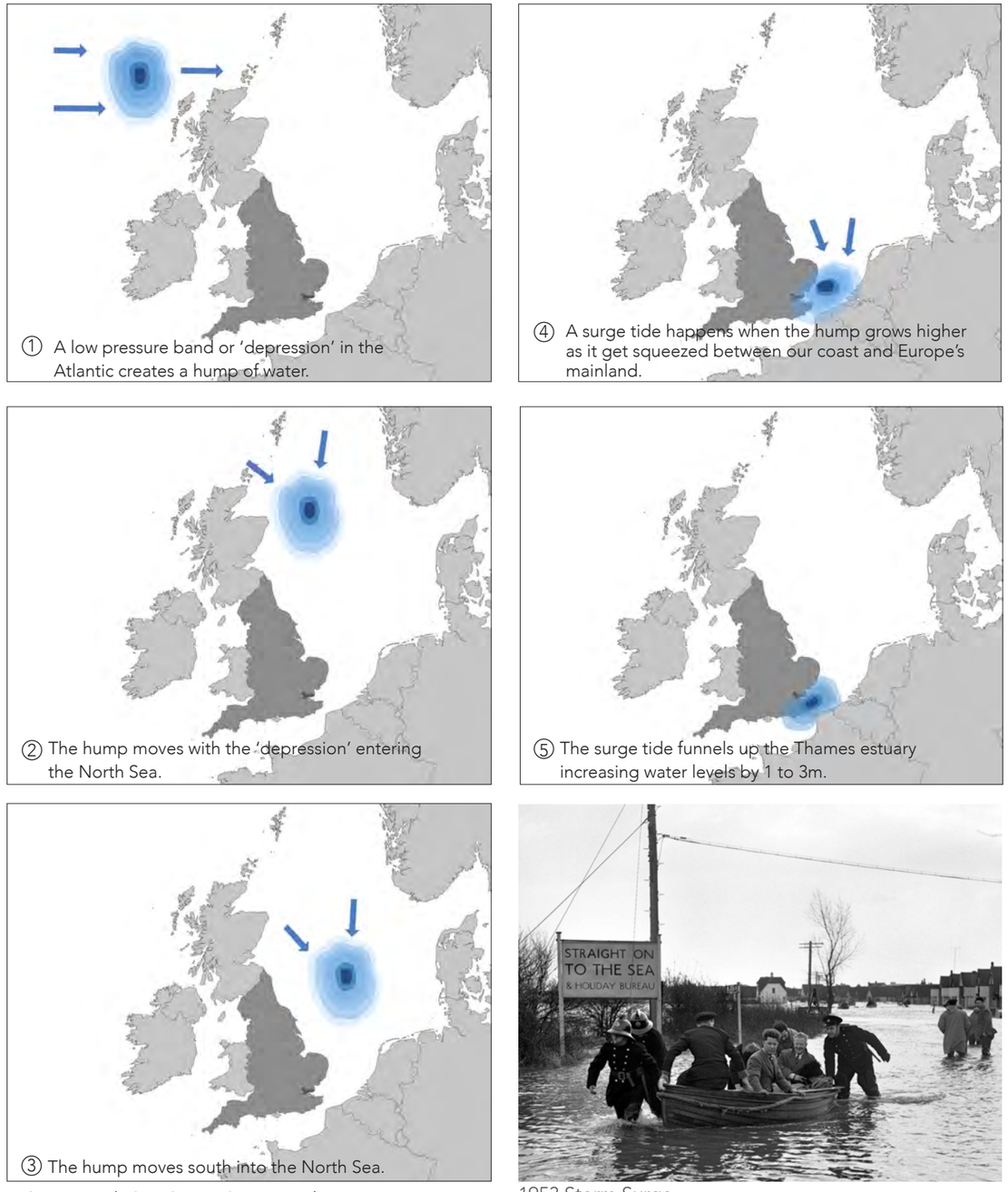



FIG.15 North Sea Storm Surge in Thames Estuary




1953 Storm Surge

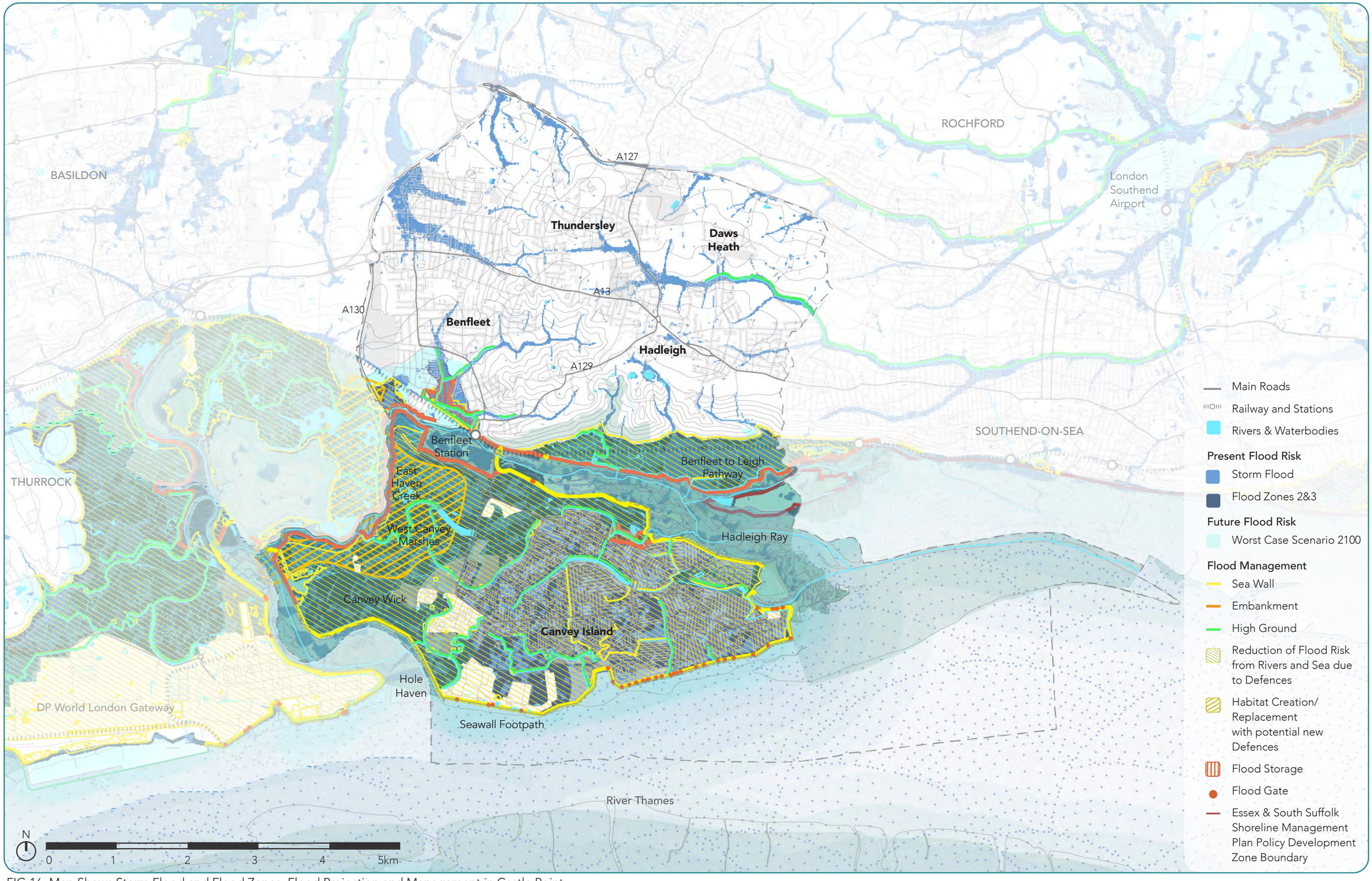



FIG.16 Map Shows Storm Flood and Flood Zones, Flood Projection and Management in Castle Point

# 3.4 Health and Wellbeing

"The natural environment is a vital resource for maintaining and improving mental health, physical wellbeing, and community resilience."
*— Natural England & Public Health England, "Improving Access to Green Space" (2020)*

## Active Travel and Physical Health

Active travel — walking, cycling, and moving through natural landscapes — is vital for both physical health and sustainable urban living.

Castle Point's network of footpaths, cycleways, and green corridors — including the Canvey Island Coastal Path, Benfleet Creek trails, and routes through parks such as Hadleigh Country Park — offers opportunities for exercise, mobility, and connection with nature.

Active travel infrastructure supports:

- Physical activity, helping to reduce obesity, heart disease, and diabetes risks.
- Reduced carbon emissions and better air quality by encouraging alternatives to car travel.
- Social cohesion, linking communities with each other and with key natural destinations.

To support and expand these benefits, Policy T3 – Active Travel Improvements in the *emerging Castle Point Plan* requires that:

- All new developments maximise opportunities for walking, cycling, and wheeling, embedding active travel into the core of site layouts and masterplans.
- Where necessary, developers must provide financial contributions or highway works to improve active travel connectivity in line with the Borough's Infrastructure Delivery Plan.
- Active travel routes should be multifunctional, integrating movement through green spaces and enhancing links to the Borough's network of parks, coastline, and ecological assets.
- Infrastructure must also be inclusive, safe, and environmentally sensitive, supporting biodiversity as well as health and access.

The policy aligns with the Local Cycling and Walking Infrastructure Plan (LCWIP), which identifies priority active travel routes across Castle Point. Developments are expected to enhance or connect to this network, reinforcing the importance of green infrastructure in supporting healthy, low-carbon lifestyles.

Castle Point's approach recognises that landscape and infrastructure are interconnected. By integrating active travel with GBI, the Borough can promote more resilient, equitable, and health-supportive environments.

## Therapeutic Landscapes and Mental Wellbeing

The therapeutic value of landscapes is profound. Spending time in green and blue spaces has been shown to: reduce stress and anxiety, lower blood pressure, improve mood, and enhance both cognitive function and emotional resilience. Castle Point's estuary edges, woodlands, parks, and wetlands — from the wide views at Hadleigh Castle to the intimate wooded paths of Daws Heath — offer diverse settings where people can find calm, connection, and renewal. These experiences are particularly beneficial for vulnerable groups, including children, older adults, and individuals experiencing mental ill health.

Emerging health policy at both national and local levels increasingly recognises this connection. Policy Infra3 of the draft *Castle Point Plan* promotes healthier, more inclusive communities through enhanced access to nature, while the *Open Space Assessment 2023* cites Public Health England research linking high-quality greenspace with improved mental and physical wellbeing, especially in disadvantaged communities. Green and blue infrastructure doesn't just support individual health outcomes — it contributes to community resilience, reducing the burden on healthcare systems and creating more equitable urban environments.

Importantly, therapeutic landscapes are most effective when they are safe, accessible, and nature-rich. Features such as biodiverse planting, water elements, quiet walking routes, and spaces for reflection or gentle activity should be embedded into public realm design. In Castle Point, enhancing underused spaces, improving access to estuarine margins, and investing in inclusive design can help deliver these benefits. The GBI strategy therefore has a critical role to play in positioning the Borough's landscapes not just as aesthetic or ecological assets — but as active contributors to public health and wellbeing.

The *Open Space Assessment (2023)* highlights gaps in access to natural greenspace, particularly within Canvey Island and parts of South Benfleet.

Addressing these inequalities through strategic improvements to:

- Greenway networks,
- Nature-rich urban parks, and
- Accessible recreational facilities,

is essential to ensuring that all communities in Castle Point can benefit equally from the health and wellbeing advantages of green and blue infrastructure.

In an age of environmental and social change, investment in accessible, high-quality natural spaces is not a luxury — it is a vital foundation for community resilience, preventive healthcare, and a thriving future.

Chapter 4 delves deeper into the subject of access and provision.


FIG.17 Active Travel Routes, Key Outdoor Destinations and Recreational Activities in Castle Point

# 4 Open Space Assessment Summary

## 4.1 Natural and semi-natural greenspaces

"Our natural spaces are vital reservoirs of biodiversity, offering refuge for species and solace for communities alike."
— *Draft Essex Local Nature Recovery Strategy (2024)*

### Current Provision

According to the *Castle Point Open Space Assessment (2023)* - carried out in-line with the NPPF and PPG 17 - the borough contains approximately 570 hectares of natural and semi-natural greenspace.

This accounts for a significant proportion of the borough's open space provision, reflecting Castle Point's important role within the broader South Essex ecological network.

Key natural and semi-natural spaces include:

- Hadleigh Park and Hadleigh Great Wood (ancient woodland and chalk grassland mosaics).
- West Canvey Marsh and Canvey Wick Nature Reserve, offering restored marshland habitats of high ecological value.
- Benfleet Creek Saltmarshes and other tidal wetlands, supporting internationally important bird populations.
- Daws Heath Woodland Complex, a remnant ancient landscape supporting rich biodiversity.

Many of these spaces are designated for their ecological significance, including SSSIs, Local Wildlife Sites (LoWS), and areas contributing to the emerging Nature Recovery Network (NRN).

The Assessment highlights that natural greenspaces are generally well-distributed across the borough's periphery but are less accessible within more urbanised areas, particularly on Canvey Island.

### Quality and Functionality

The majority of assessed natural greenspaces are of good or excellent quality, particularly those under active management by conservation organisations (e.g., RSPB West Canvey Marsh, Essex Wildlife Trust sites). However, there remain challenges in:

- Improving public access to sensitive natural sites without compromising ecological integrity.
- Enhancing connectivity between fragmented habitats, particularly across the built-up areas of Benfleet and Hadleigh.
- Managing visitor pressure and balancing recreation with biodiversity objectives, especially in estuarine environments.

### Strategic Importance

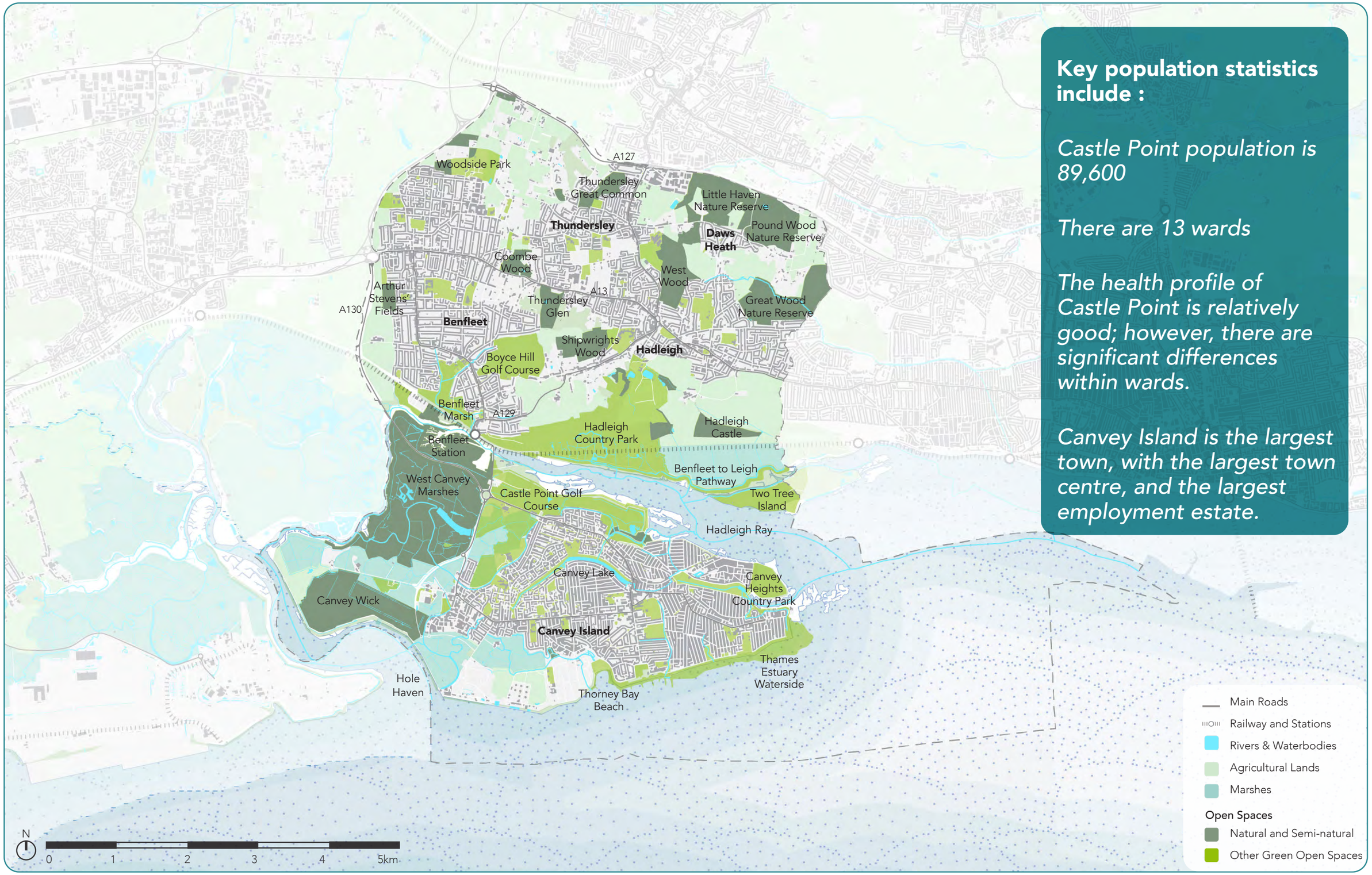
Natural greenspaces in Castle Point are not only critical for biodiversity conservation, but also for climate adaptation, flood resilience, and community wellbeing.

They contribute to carbon storage, urban cooling, mental health benefits, and nature-based tourism, supporting local economic resilience.

Protecting, enhancing, and expanding natural and semi-natural greenspaces is a key opportunity for Castle Point to deliver against the priorities of the draft Essex Local Nature Recovery Strategy, the South Essex SEEPark vision, and the Environment Act 2021 biodiversity duty.

TAB.4 Open Space Assessment 2023 Summary

| Topic | Statistic | Notes |
|---|---|---|
| Total Open Space Audited | 311 Sites | Comprehensive borough-wide survey. |
| Natural and Semi-natural Greenspace Provision | Approx. 570 hectares | Major contribution to overall open spaces. |
| Access to Open Space | 83% residents live within 400m of a park or greenspace | A good access rate - but with local gaps. |
| Open Space Distribution | Canvey Island has the lowest natural greenspace provision per capita | A key inequality issue to address. |
| Quality Assessment | 64% of sites rated "Good" or "Excellent" | Positive overall, but room for improvement. |
| Areas with Deficiencies | Canvey Island, South Benfleet (north and east) | Noted priority areas for future investment. |
| Public Parks and Gardens | 46 parks and formal gardens across the borough | High usage for recreation and community events. |
| Natural England ANGSt Standard | Only partially met borough-wide | Access to large natural greenspaces is uneven. |
| Flood Risk Areas and Open Space | 38% of open spaces located in areas with some flood risk designation | Importance of climate resilience for parks and greenspaces. |




**Key population statistics include :**

*Castle Point population is 89,600*

*There are 13 wards*

*The health profile of Castle Point is relatively good; however, there are significant differences within wards.*

*Canvey Island is the largest town, with the largest town centre, and the largest employment estate.*

FIG.18 Castle Point Natural and Semi-Natural Open Spaces and Other Types of Open Spaces as identified in the Castle Point Open Space Assessment (2023)

# 4.2 Parks, gardens and civic spaces

"Parks and gardens form the everyday heart of green infrastructure, providing spaces where people and nature meet in daily life."
— *South Essex Green and Blue Infrastructure Study (2020)*

## Current Provision

Parks, gardens, and civic spaces are essential components of Castle Point's green infrastructure, providing accessible environments for recreation, community gatherings, physical activity, and nature connection within the urban and suburban fabric of the borough.

These spaces support not only health and wellbeing but also biodiversity, climate resilience, and local placemaking.

According to the *Castle Point Open Space Assessment (2023)*, the Borough has a strong provision of parks and civic green spaces, including:

- 46 public parks and formal gardens across Castle Point.
- Approximately 115 hectares of parks, gardens, and amenity greenspaces collectively.
- Parks range from large multifunctional spaces, such as Hadleigh Country Park and Waterside Farm Recreation Ground, to smaller neighbourhood parks embedded within residential areas.

Importantly, around 83% of Castle Point residents live within 400 metres (approximately a 5-minute walk) of an accessible greenspace, aligning closely with national accessibility targets.

This high proximity is a major asset in promoting active lifestyles and community engagement.

## Quality and Usage

The Assessment found that:

- 69% of parks and gardens surveyed were rated as Good or Excellent in terms of quality, reflecting strong local maintenance and community value.
- Amenities such as benches, play areas, and sports pitches are widely available, particularly in larger parks like Waterside Farm and Woodside Park.
- Biodiversity enhancements — such as pollinator planting, tree planting schemes, and naturalised play spaces — have been introduced in several sites over the past decade.

However, some challenges persist:

- Smaller parks and civic spaces in older urban areas (especially parts of South Benfleet and Canvey Island) sometimes suffer from limited facilities, aging infrastructure, and restricted biodiversity features.
- Formal parks tend to be better resourced than informal civic greenspaces, such as pocket parks and highway verges, which present opportunities for future enhancement.

## Strategic Importance

Parks and civic spaces are critical for:

- Public health — supporting physical activity, mental wellbeing, and social interaction.
- Urban biodiversity — offering opportunities for habitat creation in built-up areas.
- Community resilience — providing gathering spaces and cooling effects during heatwaves.
- Climate adaptation — acting as green lungs and potential locations for Sustainable Drainage Systems (SuDS).

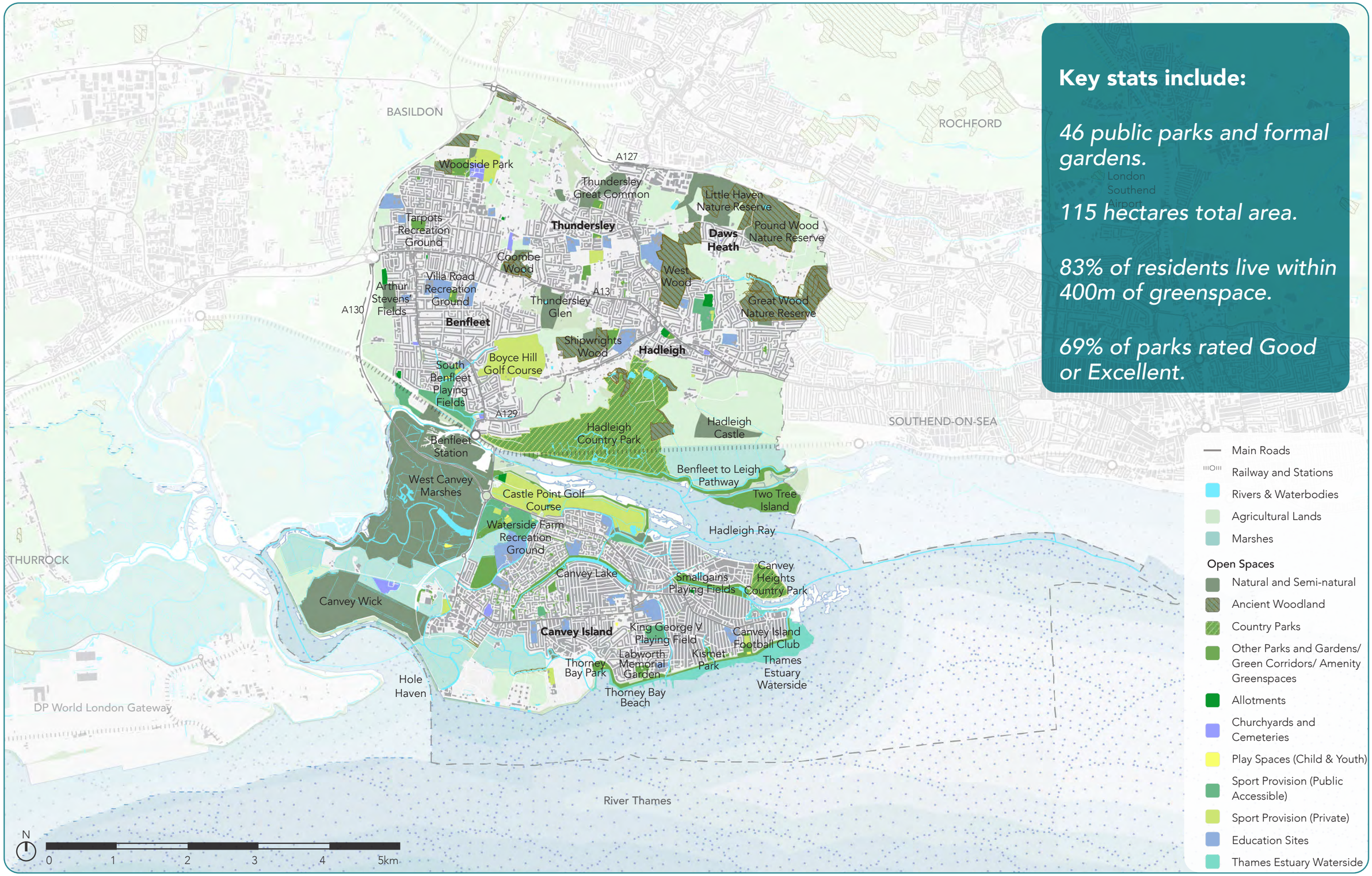
In alignment with the *Green Infrastructure Standards for England (2023)*, Castle Point's parks play an important role in achieving the Accessible Greenspace Standard (S2), ensuring residents have local access to quality open spaces.

Future priorities will include:

- Enhancing the multifunctionality of parks and civic spaces.
- Improving accessibility, especially for people with disabilities.
- Embedding biodiversity uplift and nature-based solutions within formal civic settings.

FIG.19 Woodside Park

FIG.20 Thorney Bay Park




**Key stats include:**

*46 public parks and formal gardens.*

*115 hectares total area.*

*83% of residents live within 400m of greenspace.*

*69% of parks rated Good or Excellent.*

FIG.21 Categorised Open Spaces as identified in the Castle Point Open Space Assessment (2023)

# 4.3 Key gaps, overlaps and spatial distribution

"Access to quality green space is fundamental to wellbeing, yet too often, provision remains unequal and fragmented."
— *Green Infrastructure Standards for England (2023)*

## Key Findings: Gaps in Provision

The *Castle Point Open Space Assessment (2023)* identifies several spatial inequalities in the provision, accessibility, and quality of greenspaces across the Borough. While the overall quantity of accessible natural green space and parks and recreation grounds is broadly sufficient, there are shortfalls in other types — particularly allotments, amenity greenspace, and children's and youth play space. These shortfalls are not uniform and vary significantly by ward.

- Canvey Island shows some of the most significant gaps, particularly in access to natural greenspace within walking distance (e.g. 400–720m). Although major assets like West Canvey Marsh exist, much of the residential area lacks easy access to multifunctional or biodiverse open space.

- In South Benfleet, especially the northern and eastern neighbourhoods, development patterns have led to a fragmented network of greenspaces. This results in a shortage of larger, connected parks and natural areas within accessible range.

- Hadleigh's urban core is similarly underserved. While the nearby Hadleigh Castle Country Park is a regional asset, the town itself lacks smaller, everyday greenspaces that are walkable and support informal recreation and wellbeing.

The study also finds that many residents, while technically having access to some form of open space, are often served only by small amenity greenspaces — which lack the ecological quality or multifunctionality of larger parks or semi-natural spaces.

## Spatial Overlaps and Uneven Distribution

Conversely, some areas of Castle Point exhibit a concentration of multiple open spaces, leading to overlaps in provision:

- South Hadleigh and parts of Benfleet near the creek benefit from close proximity to parks, gardens, and estuarine natural greenspaces.

- East Canvey Island has multiple amenity green spaces but fewer designated natural greenspaces, resulting in an uneven balance between quantity and ecological quality.

Although 83% of residents live within 400m of some form of greenspace, this broad measure masks the underlying variability in type, quality, and user value. Many residents have access only to small amenity greenspaces rather than larger, biodiverse parks or natural areas.

## Alignment with Green Infrastructure Standards

The *Green Infrastructure Standards for England (2023)* (specifically, the Accessible Greenspace Standard - S2) recommend that:

- Every resident should have access to at least a small greenspace (0.5 hectares or more) within a 5-minute walk (400m).

- Larger parks and semi-natural spaces should also be accessible within reasonable walking or cycling distances, a 15-minute walk (720m).

Castle Point performs relatively well in meeting the baseline 400m standard, but falls short in providing equitable access to larger, nature-rich spaces, particularly in Canvey Island, northern South Benfleet, and parts of Hadleigh. The Assessment's recommended access standards range from 480m (for play and amenity spaces) to 720m (for parks, natural spaces, and allotments), offering a more granular basis for addressing gaps.

Addressing these gaps by creating new pocket parks, enhancing green corridors, and restoring urban natural spaces will be vital to ensuring that the benefits of green infrastructure are shared fairly across the Borough.

TAB.5 Open Space Accessibility Shortfalls

| Open Space Type | Access Standard | Key Shortfall Areas |
|---|---|---|
| Parks and Recreation | 720m | Northern South Benfleet, Hadleigh urban centre |
| Amenity Green Space | 480m | Canvey Island, some urban estates |
| Accessible Natural Green | 720m + NE ANGSt | Canvey Island, South Benfleet |
| Play Space (Children) | 480m | Borough-wide, particularly Canvey |
| Play Space (Youth) | 720m | Borough-wide |
| Allotments | 720m | General shortfall across borough |

### Priorities Highlighted by the Community

*as in the Castle Point Open Space Assessment (2023)*

- The category highlighted by the largest number of households as a high priority for potential improvement/new provision was woodlands, wildlife area and nature reserves (68%).

- Other notable high priorities for improvement include footpaths, bridleways, and cycle path provision (62%) and parks and recreation grounds (57%).

- Children's play areas also score quite highly as a priority need (a combined high/medium priority choice for 68% of households - 36% high/32% medium). Youth facilities were rated similarly (a combined high/medium priority choice for 57% of households - 25% high/32% medium).

- Improving access at existing facilities was not deemed particularly significant across any typology except for allotments (26%).be accessible within reasonable walking or cycling distances, a 15-minute walk (720m).

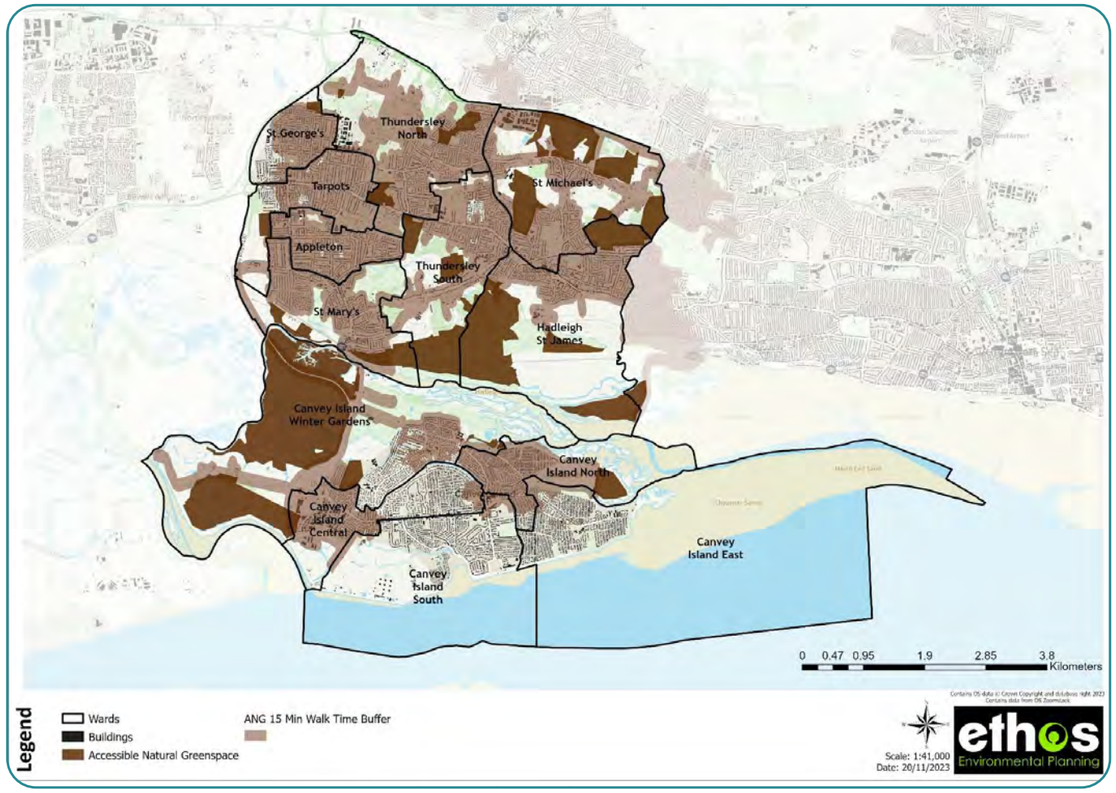



FIG.22 Access to accessible natural greenspace (15 min. walk time) (Map by ethos, *Castle Point Open Space Assessment (2023)*

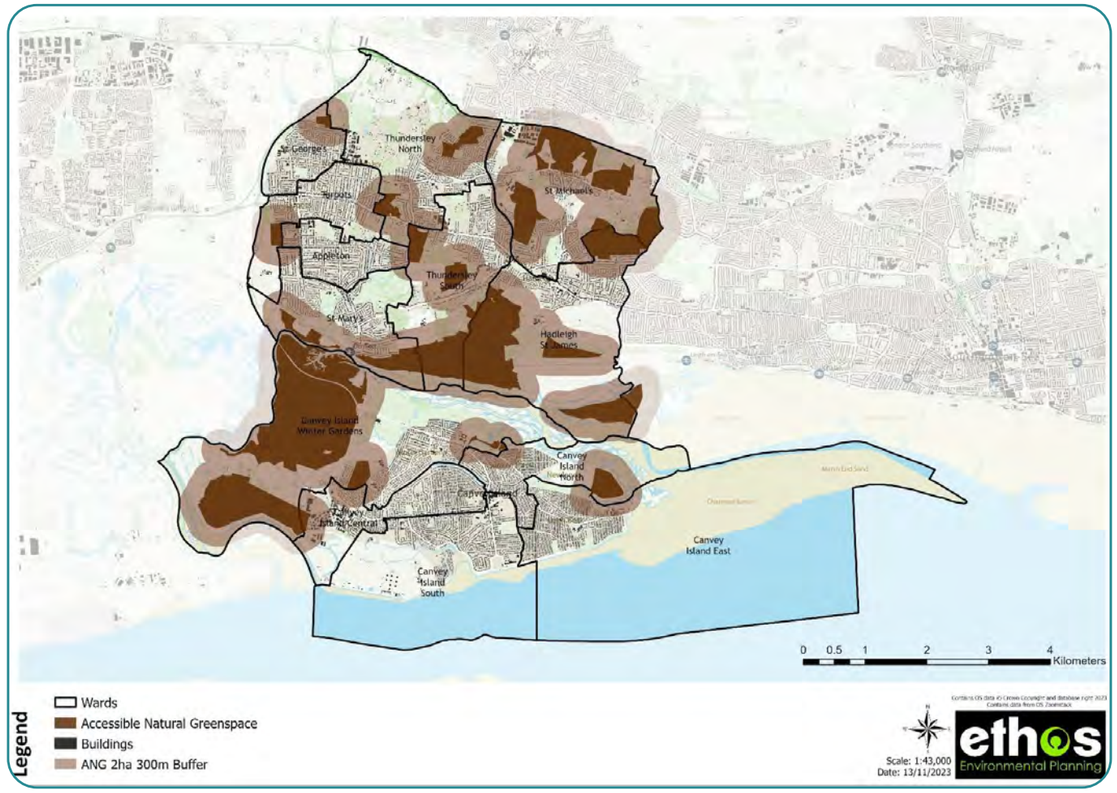



FIG.23 ANGSt Standard: Access to 2ha+ sites within 300m (Map by ethos,*Castle Point Open Space Assessment (2023)*

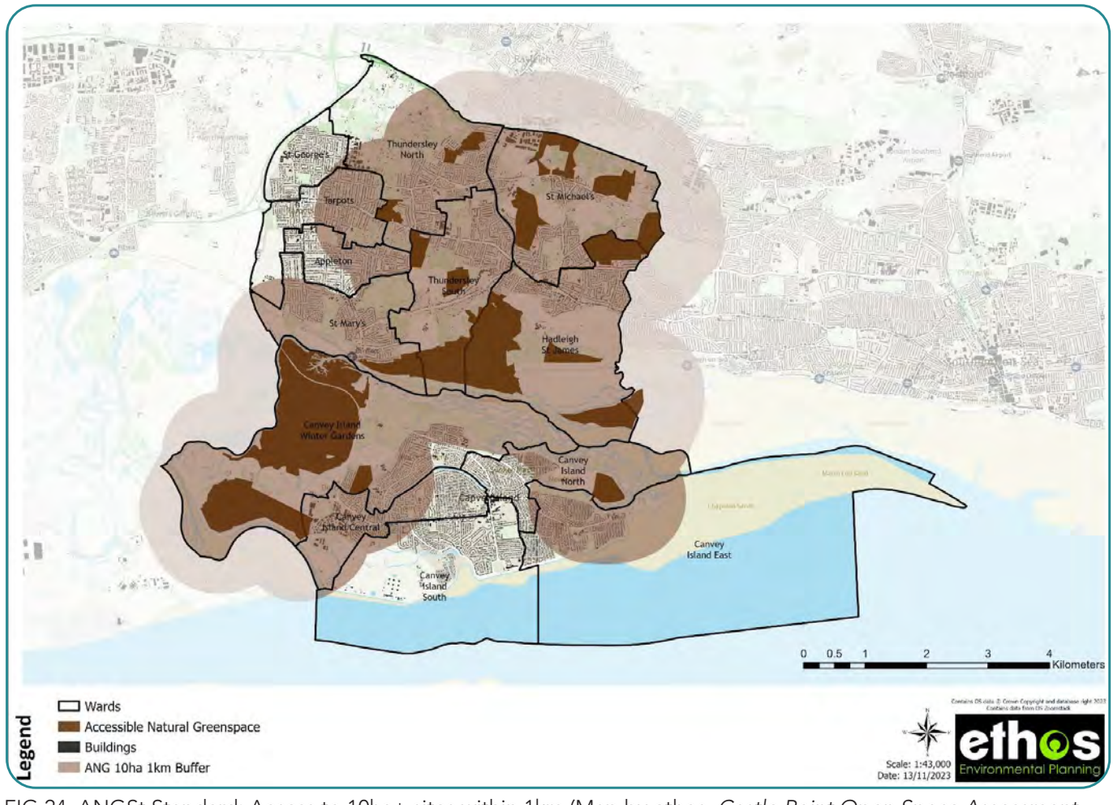



FIG.24 ANGSt Standard: Access to 10ha+ sites within 1km (Map by ethos, *Castle Point Open Space Assessment (2023)*

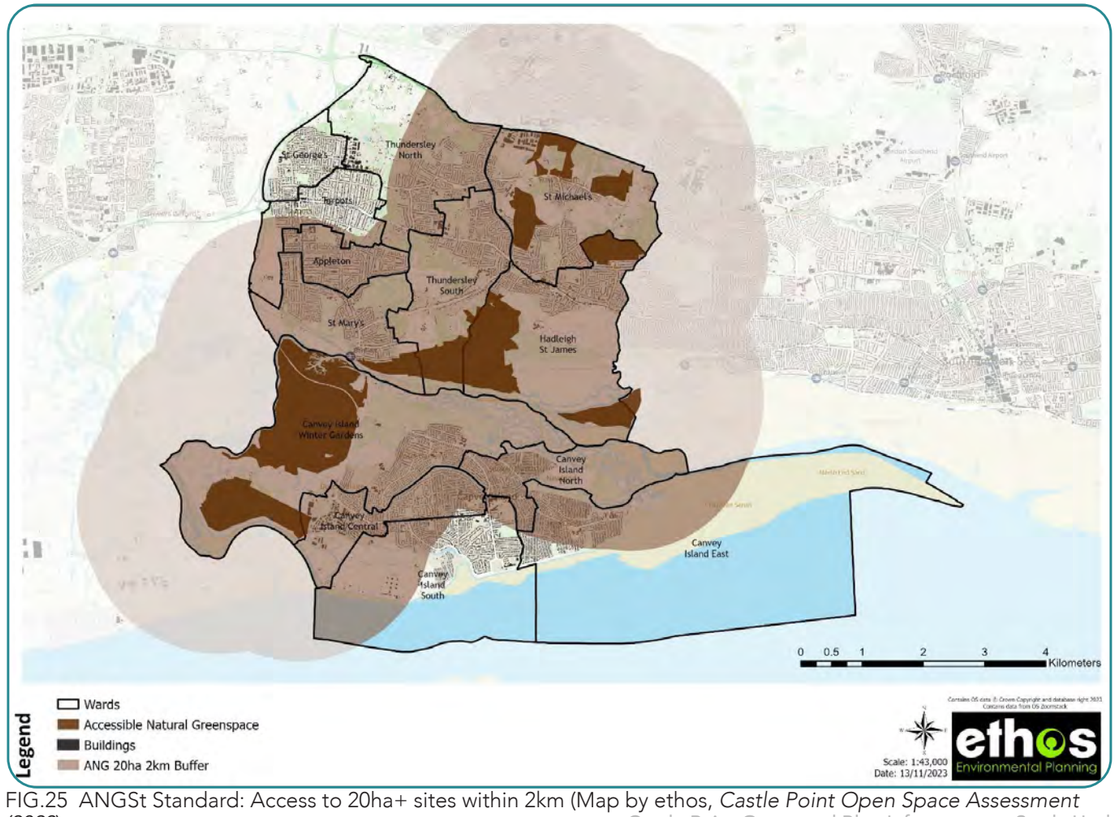



FIG.25 ANGSt Standard: Access to 20ha+ sites within 2km (Map by ethos, *Castle Point Open Space Assessment (2023)*

# 4.4 Comparison with previous assessments and national standards

"Green infrastructure must be planned and delivered to evolving needs, ensuring resilience, accessibility, and multifunctionality over time."
— *Natural England, GI Framework Guidance (2023)*

## Progress Since the 2012 Appraisal

The *Castle Point Open Space Appraisal (2012)* set out key objectives to improve the quality, accessibility, and diversity of open spaces across the Borough.

At that time, priority actions included:

- Increasing the quantity and quality of accessible natural greenspaces.
- Enhancing provision in underserved areas, particularly on Canvey Island.
- Improving the amenity value of existing parks and civic spaces through upgrades to facilities, signage, and landscaping.
- Promoting community engagement in park management and maintenance.

Comparing these aims with the *Castle Point Open Space Assessment (2023)* shows clear progress over the intervening years:

- Public parks and gardens have been expanded and upgraded, with major sites like Waterside Farm Recreation Ground and Hadleigh Country Park offering high-quality recreational facilities.
- Natural greenspaces have been enhanced significantly through projects such as the restoration of West Canvey Marsh and the creation of accessible routes at Canvey Wick.
- The proportion of sites rated Good or Excellent has increased, reflecting sustained investment in open space quality.
- Overall access to some form of open space has risen, with 83% of residents now living within 400m of a greenspace.

However, persistent challenges identified in 2012 remain relevant today, particularly:

- Deficiencies in access to larger natural spaces in urban cores (e.g., Canvey Island, South Benfleet).
- The need to enhance the ecological functionality of smaller parks and civic greenspaces.

## Alignment with National Green Infrastructure Standards

The *Green Infrastructure Standards for England (2023)* establish more detailed and ambitious expectations for open space provision, focusing on:

- Accessibility — ensuring greenspaces are reachable within a 5-minute walk.
- Quality — promoting multifunctionality, biodiversity, and climate resilience.
- Equity — closing gaps in provision between different communities.

*Castle Point's 2023 Open Space Assessment* shows strong alignment with the basic accessibility standard (S2), achieving good proximity to greenspaces for the majority of residents.

However, full alignment with the spirit of the GI Standards — providing high-quality, multifunctional, and biodiverse spaces across all communities — remains an ongoing opportunity.

In particular:

- Expanding access to larger natural greenspaces.
- Enhancing biodiversity value within urban parks.
- Integrating nature-based solutions into civic spaces and flood-prone areas.

The Borough's efforts over the past 15 years have laid a strong foundation.

By aligning future green infrastructure planning more explicitly with the GI Standards, Castle Point can ensure that its open spaces deliver maximum environmental, social, and economic benefits in a changing climate.

### Index of Multiple Deprivation in Castle Point

The figure on the facing page shows relative levels of deprivation across Castle Point, based on the Index of Multiple Deprivation (IMD) 2019. The IMD ranks small geographic areas (Lower Layer Super Output Areas) using indicators across seven domains: income, employment, education, health, crime, housing, and living environment.

In this map, red areas indicate higher levels of deprivation, while green areas show lower levels of deprivation. The most deprived areas are concentrated in eastern and central Canvey Island, particularly in neighbourhoods such as Winter Gardens, South Canvey, and Central Canvey, where socio-economic challenges are more acute. In contrast, areas like Daws Heath, Thundersley, and parts of Hadleigh display lower levels of deprivation.

This spatial pattern highlights the need for targeted green and blue infrastructure investment in more deprived communities, where access to high-quality greenspace may be limited and environmental health inequalities more pronounced.

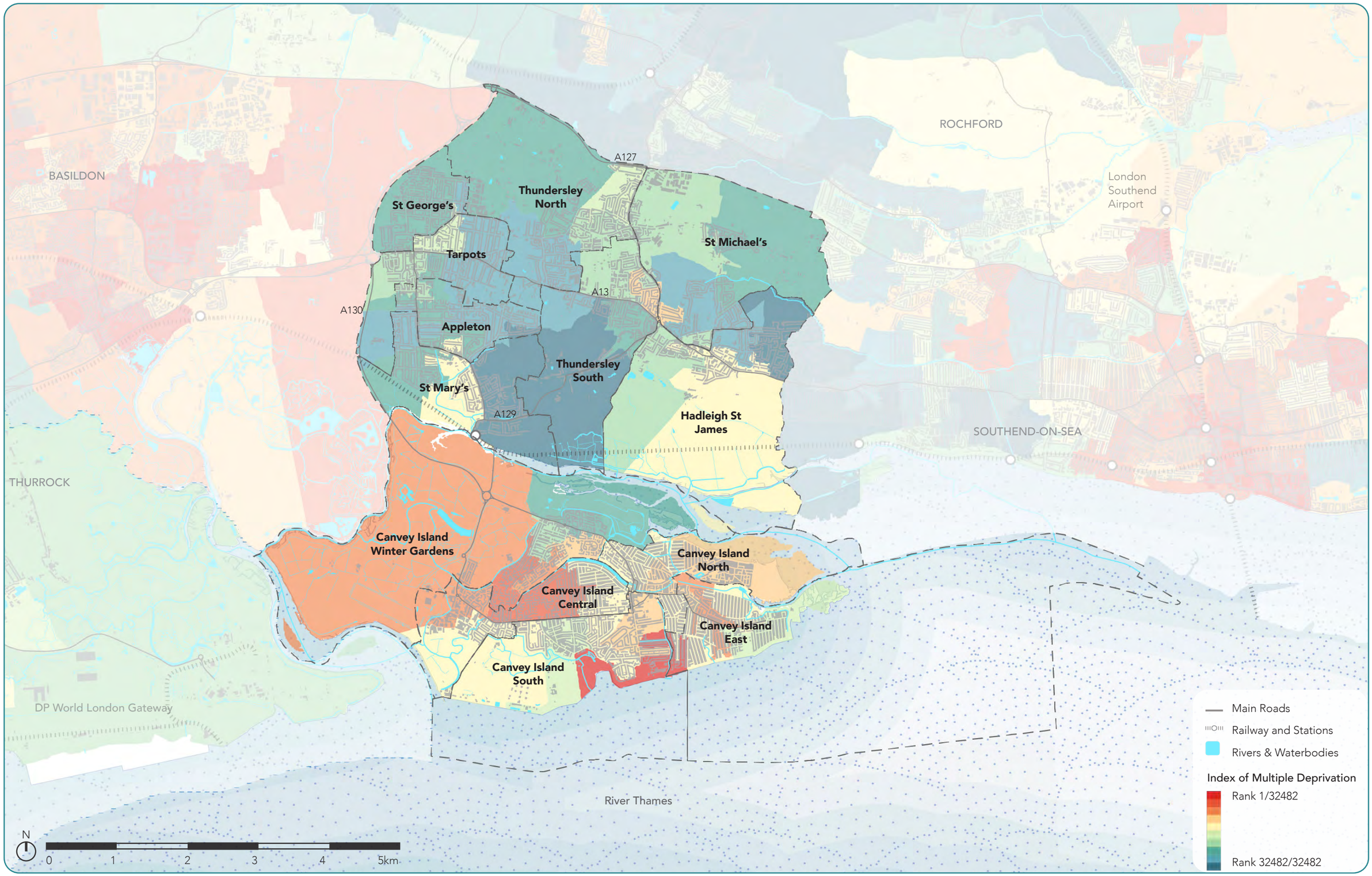



FIG.26 Castle Point Index of Multiple Deprivation 2019

# 5 Biodiversity and Ecological Connectivity

## 5.1 Designated and non-designated sites

"Every square inch of Essex represents an opportunity for nature recovery...But we also know that our current "good" sites for nature are fragmented, and if we expand and better connect them, the impact on nature recovery will be greater, and the purpose of the opportunity maps is to give a focus to our nature recovery efforts."
*— Dr Simon Lyster, Essex Local Nature Recovery Strategy (Draft 2024)*

Castle Point's biodiversity is supported by a diverse network of designated and non-designated nature sites, reflecting the borough's unique mix of estuarine, wetland, woodland, grassland, and brownfield habitats. Together, these sites form the ecological foundation of Castle Point's green and blue infrastructure and represent significant assets for biodiversity conservation, climate resilience, and community wellbeing.

This chapter draws on multiple evidence sources, including:

*The Castle Point Local Wildlife Sites Review (2023); The Castle Point Open Space Assessment (2023); The Emerging Essex Local Nature Recovery Strategy (LNRS, 2024); The South Essex GBI Study (2020) and the SEEPark Landscape Framework; Relevant policies and designations from the Castle Point Plan (Emerging Draft, 2025).*

In this context:

**Designated sites** are formally recognised for their conservation value under national or international frameworks, such as Sites of Special Scientific Interest (SSSIs), Special Protection Areas (SPAs), and Ramsar Sites. These carry statutory weight in the planning system.

**Non-designated sites** are not protected by law but are recognised for their local ecological, landscape, or community value. This includes Local Wildlife Sites (LoWS), small woodlands, green corridors, and informal greenspaces that support biodiversity and ecological connectivity.

### Designated Sites

**Benfleet and Southend Marshes SPA and Ramsar Site**: This internationally designated site forms the southern boundary of Castle Point and supports overwintering populations of avocet, redshank, dunlin, and brent goose. The site's extensive saltmarsh, intertidal mudflat, and grazing marsh habitats provide critical feeding and roosting areas for migratory and estuarine bird species.

**Canvey Wick SSSI and Nature Reserve**: A nationally important example of brownfield biodiversity, this former oil storage site supports over 1,400 species, including 30 Red Data Book invertebrates. The site is recognised as one of the most important invertebrate hotspots in the UK and is co-managed by the RSPB and Buglife.

**Hadleigh Great Wood SSSI**: A significant ancient woodland habitat located near the borough's western boundary, this site includes veteran trees and a rich ground flora indicative of long-standing ecological continuity. It also supports bat roosts, dormice, and several woodland bird species.

**West Canvey Marshes**: These wetland reserves, RSPB sites, have been restored from former industrial and agricultural land and now function as both nature reserves and flood storage areas. They are crucial in demonstrating how multifunctional landscapes can deliver biodiversity net gain, water management, and community access.

The above locations provide a snapshot of designated sites. The map on the facing page provides a comprehensive picture of designated sites.

### Non-Designated Sites

In addition to formally designated sites, the borough contains a range of non-designated spaces — including urban parks, roadside verges, hedgerows, small woodlands, and private green areas — that contribute significantly to connectivity, biodiversity, and urban cooling. Several of these spaces were assessed as part of the *2023 Open Space Assessment* and include sites with native planting, pollinator corridors, and semi-natural features.

The borough is home to 41 Local Wildlife Sites (LoWS), covering approximately 875.6 hectares — equivalent to nearly 20% of the total land area of Castle Point. These sites were assessed and updated in the *2023 Castle Point Local Wildlife Site Review,* which confirmed their ongoing value against habitat-specific criteria and national standards set by the Greater Thames Marshes Nature Improvement Area. Designated at the local level, these sites support coastal grasslands, ancient woodlands, reedbeds, saline lagoons, and species-rich brownfields. While non-statutory, they are a material consideration in planning and play a vital role in the borough's ecological network.

It is important to distinguish between ecological value and public accessibility. While several designated sites in Castle Point offer public access and visitor infrastructure, the majority of LoWS are in private ownership and do not permit public entry, aside from existing Public Rights of Way. These sites are designated for their ecological value rather than recreational use. As such, future strategies should carefully balance biodiversity protection with appropriate public engagement and access.

### Pressures and Considerations

While many of Castle Point's designated and non-designated sites are in good ecological condition, several face increasing threats from development, disturbance, and invasive species. For instance, fragmentation of LoWS across Hadleigh and South Benfleet limits ecological resilience and restricts species movement. Likewise, encroachment and recreational pressure have been identified as management concerns on some coastal and marshland sites, particularly in proximity to growing urban edges.

Castle Point's biodiversity network — though relatively compact in scale — is highly diverse, ecologically rich, and strategically significant. It supports priority habitats such as coastal and floodplain grazing marsh, ancient woodland, reedbeds, and saline lagoons. Key protected species found across the borough include great crested newts, dormice, water voles, otters, bats, swifts, and a broad range of estuarine birds and invertebrates.

To protect and enhance these sites, future GBI planning will need to:

- Reinforce buffer zones and ecological margins.
- Strengthen planning protections for LoWS and non-designated assets.
- Enhance monitoring, management, and public awareness.
- Integrate nature recovery targets into local development and stewardship.

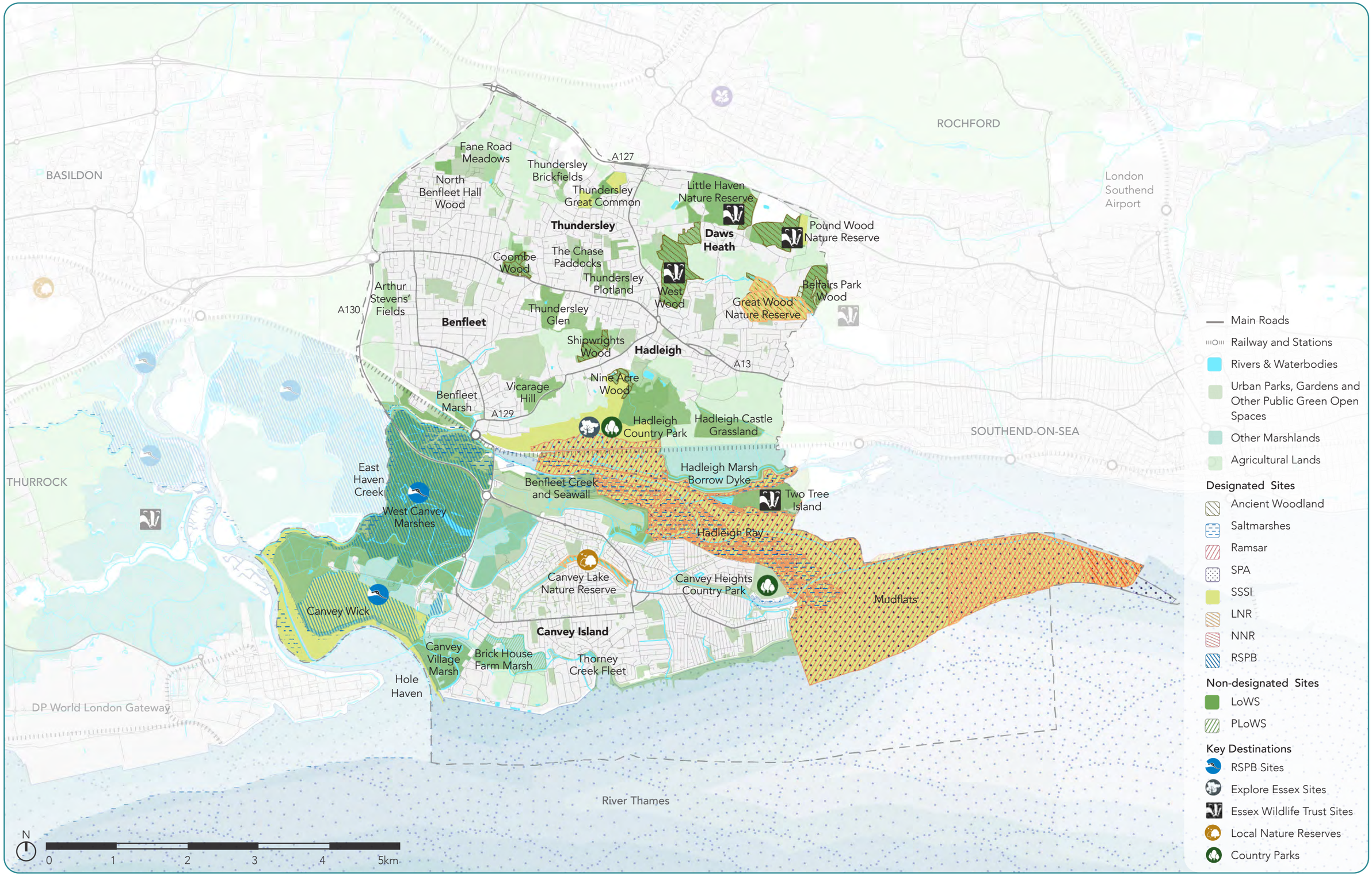



FIG.27 Designated and Non-designated Sites in Castle Point Based on the Draft LNRS (2024) and Castle Point LoWS Review (2023)

# 5.2 Ecological corridors and habitat patches

"We need more space for nature. Our wildlife sites are too small, and too isolated. We must restore ecological connections to create a resilient and coherent ecological network across England."
— *Sir John Lawton, Making Space for Nature (2010)*

## Key Corridors and Habitat Networks

The value of Castle Point's designated sites is significantly enhanced when they are viewed not as isolated patches but as part of a wider ecological network.

The ability of species to move, forage, reproduce, and adapt across the landscape depends on the availability of connected, semi-natural spaces and habitat corridors. This is especially critical in a borough characterised by urban intensification, flood risk, and climate pressure.

Castle Point contains several important ecological corridors that support regional and local connectivity:

**Benfleet Creek and East Haven Creek corridors** form the southern ecological spine of the Borough, linking the intertidal marshes of the Thames Estuary to inland grazing marshes, reedbeds, and wetlands.

**The Daws Heath woodland complex** forms a secondary inland corridor of ancient and semi-natural woodland. Though fragmented, this area supports dormice, bats, and woodland bird populations, and connects to neighbouring habitat areas beyond Castle Point.

**The Canvey Island ditch network** and associated marshland buffers function as micro-corridors for wetland species such as great crested newt, water vole, and wading birds.

These existing corridors represent critical assets for maintaining biodiversity, enabling species movement, and enhancing landscape-scale ecological resilience.

## Barriers, Gaps and Opportunities for Connectivity

Despite these assets, Castle Point's ecological connectivity remains highly constrained by its compact geography, infrastructure, and development pressures.

The *2023 Local Wildlife Sites Review* highlighted that:

- Only 22 out of 41 Local Wildlife Sites are physically or functionally connected to other high-value sites.
- Several LoWS, particularly in Benfleet and northern Hadleigh, are isolated within residential or road-dominated settings, reducing their resilience and ecological value.
- Major barriers to connectivity include the London to Shoeburyness rail line, A130 and A13 corridors, and expanding urban areas.

In addition to these physical barriers, land-use fragmentation has weakened the borough's ecological "web."

The loss of hedgerows, degradation of grasslands, and the dominance of low-diversity amenity landscaping in urban environments further contribute to habitat disconnection, particularly for pollinators, birds, amphibians, and small mammals.

Opportunities to restore and strengthen ecological connectivity across the Borough include:

- Enhancing riparian buffer zones along Benfleet Brook, East Haven Creek, and Prittle Brook.
- Developing linear green infrastructure along disused transport routes and road verges.
- Integrating hedgerow restoration and native planting across parks, school grounds, and public housing estates.
- Creating or enhancing stepping-stone habitats within urban environments, such as ponds, wildflower meadows, and SuDS (Sustainable Drainage Systems) with ecological functions.

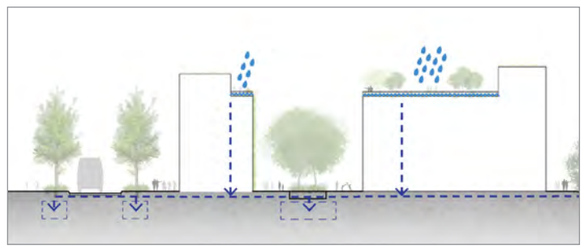
The draft Essex Local Nature Recovery Strategy identifies Castle Point as a focus area for corridor restoration and urban ecological permeability.

Strengthening connectivity will be essential to achieving a resilient and thriving Nature Recovery Network across South Essex.

Castle Point's future GBI planning must therefore prioritise closing the gaps, restoring movement pathways, and ensuring that fragmented green spaces are reconnected into a coherent, functioning ecological system.

Transforming roadside verges into wildflower meadows to create habitats where pollinators can thrive. Including wildlife tunnels to enable safe crossings beneath busy roads.

Shallow stream with native, marginal aquatic plants on the embankment, with passive water recreation. Intertidal habitat zones are encouraged throughout the abundant marshlands.



Sustainable Drainage Systems (SuDS) reduce run-off and store water close to where it falls, managing water at source to lower flood risk downstream whilst also providing pleasant open space to enhance the amenity of an area. They can help support water quantity, improve biodiversity and also reduce the consumption of energy used for cooling by reducing the urban heat island effect.

FIG.28 Habitat Creation Opportunities

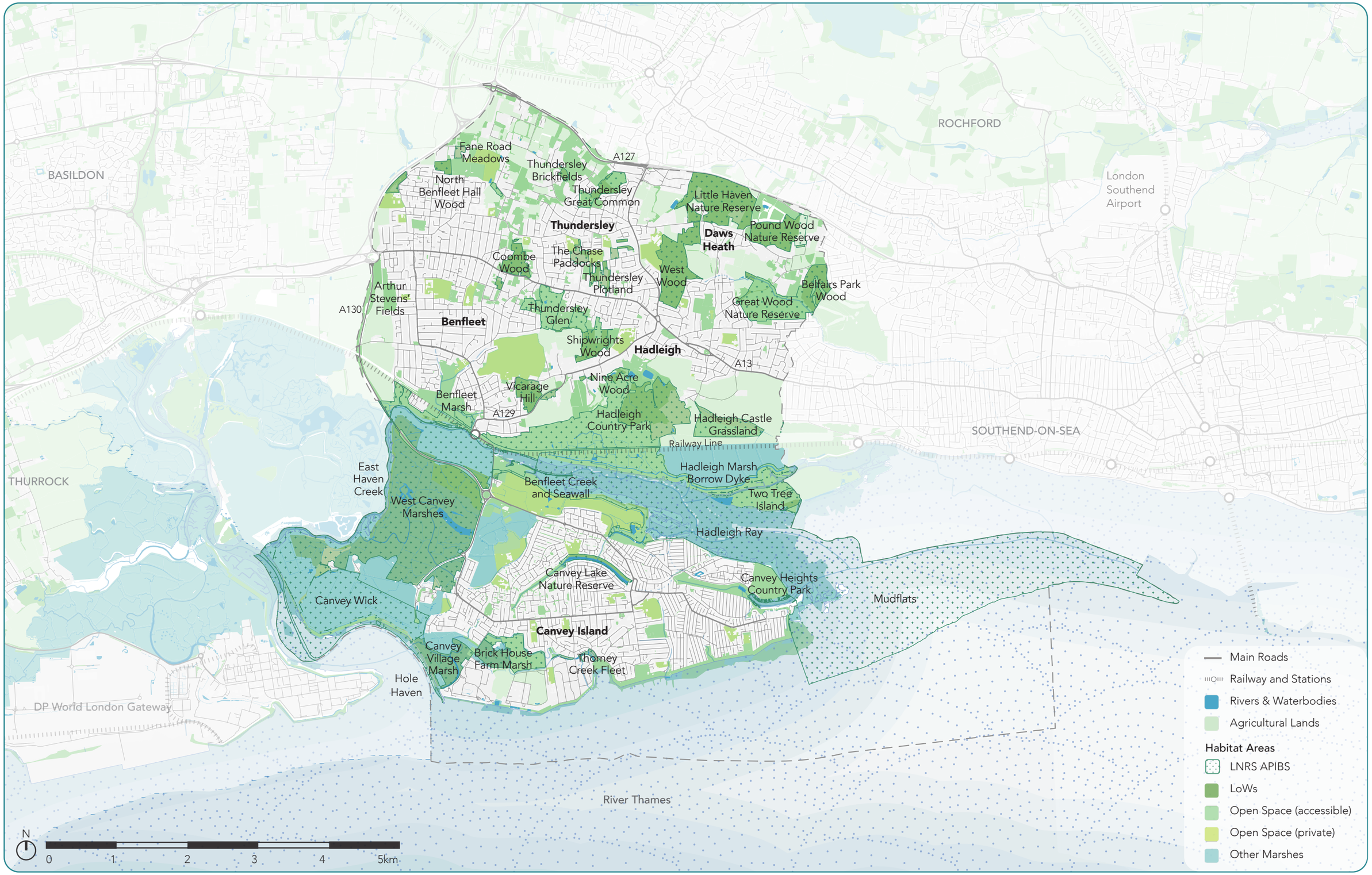



FIG.29 Ecological Corridors and Habitat Patches Base on the Draft LNRS (2024), Castle Point LoWS Review (2023), and Castle Point Open Space Assessment (2023)

# 5.3 Integration with the LNRS priorities

"The Essex LNRS aims to tackle the biodiversity crisis and develop a route to ensure nature's recovery."
— *Essex Local Nature Recovery Strategy (Draft 2024)*

Castle Point has a critical role to play in delivering the ambitions of the draft *Essex Local Nature Recovery Strategy (LNRS)* — a new statutory framework introduced under the Environment Act 2021 to coordinate biodiversity action across local authority boundaries. The draft LNRS aims to restore nature across the county by identifying priority habitats, spatial opportunity areas, and local delivery mechanisms. As a borough with rich estuarine, wetland, and woodland landscapes — and significant development and flood resilience challenges — Castle Point is one of the most strategically important areas for nature recovery in South Essex.

The draft LNRS's vision is to create a connected, resilient ecological network across Essex by:

- Protecting and restoring priority habitats.
- Expanding and reconnecting fragmented ecological networks.
- Embedding biodiversity uplift into development, infrastructure, and land management.
- Enabling local authorities to meet their "general biodiversity duty" under the Environment Act.

Castle Point contributes to several of the draft LNRS's Priority Habitat Zones, including:

- Coastal and Floodplain Grazing Marsh
- Lowland Meadows and Pasture
- Ancient Woodland and Traditional Orchards
- Reedbeds and Saline Lagoons
- Intertidal Mudflats and Saltmarsh

The borough also lies within a Nature Recovery Opportunity Area along the Thames Estuary, identified for wetland restoration, habitat creation, and coastal realignment. The draft LNRS outlines specific ambitions for this zone, including:

- Enhancing existing SSSIs and Local Wildlife Sites for climate resilience and species richness.
- Strengthening ecological corridors between Hadleigh Downs, Benfleet Creek, and Canvey Marshes.
- Embedding nature into urban regeneration areas, including via biodiversity-led SuDS, tree planting, and species-rich green corridors.
- Managing visitor pressure and disturbance in sensitive estuarine zones.

The emerging Castle Point Plan policies (e.g. ENV3) already align with draft LNRS principles by requiring Biodiversity Net Gain, habitat enhancement, and sustainable flood management. However, the GBI Study provides the spatial framework to operationalise these policies by identifying:

- Gaps in ecological networks
- Restoration and rewilding zones
- Potential delivery projects for LNRS priorities

For example, enhancing the ditch networks on Canvey Island, restoring green buffers along Prittle Brook, and creating new pollinator corridors in Hadleigh are all aligned with draft LNRS goals. These interventions would not only support wildlife, but also provide cooling, flood mitigation, and mental health benefits for residents.

By integrating draft LNRS priorities into local spatial planning, Castle Point can position itself as a nature-positive planning authority, delivering measurable outcomes for biodiversity, climate, and community wellbeing.

This strategic alignment also opens the door to new funding streams, regional partnerships, and a clear case for investment through the SEEPark framework and Defra's Environmental Land Management Schemes (ELMS).

## Opportunities for Biodiversity Net Gain

As the Environment Act 2021 introduces a legal requirement for most developments to deliver a minimum 10% Biodiversity Net Gain (BNG), identifying strategic sites for ecological uplift becomes essential. BNG must be measured using the Defra biodiversity metric, which assesses both the quantity and quality of habitats present, and predicts the ecological value of proposed enhancements.

The *Castle Point Open Space Assessment (2023)* undertook a detailed BNG opportunity analysis using this metric across key publicly owned green spaces. The assessment found that five sites, in particular, offer significant potential for biodiversity enhancement based on existing baseline habitat value, spatial extent, and feasibility of targeted interventions.

1 **Canvey Heights Country Park** shows the highest individual uplift potential, with a projected gain of nearly 40 biodiversity units through habitat enhancement and creation.

2 **Hadleigh Castle Country Park**, a historic and ecologically rich site, could deliver an uplift of over 36 units, reinforcing its dual role as a heritage and ecological asset.

3 **Creekside**, located near Benfleet Creek, offers a gain of almost 19 units, illustrating the opportunity to enhance estuarine fringe habitats.

4 **Limburg Road Open Space**, a smaller site within the urban fabric, was also highlighted as having notable potential, particularly through wildflower meadow creation and hedge planting.

5 **Two Tree Island,** a large, ecologically rich site of reclaimed saltmarsh and intertidal habitat near Leigh-on-Sea, with an uplift of 81 units.

These sites are especially valuable because they are already in public or charitable ownership, making delivery more feasible and offering potential for funding through BNG offset markets, Section 106 agreements, or nature recovery partnerships. The total projected uplift across these five locations is 215.47 biodiversity units.

Integrating these locations into the GBI Strategy supports multiple policy goals, and the Borough can deliver tangible community and biodiversity benefits together.

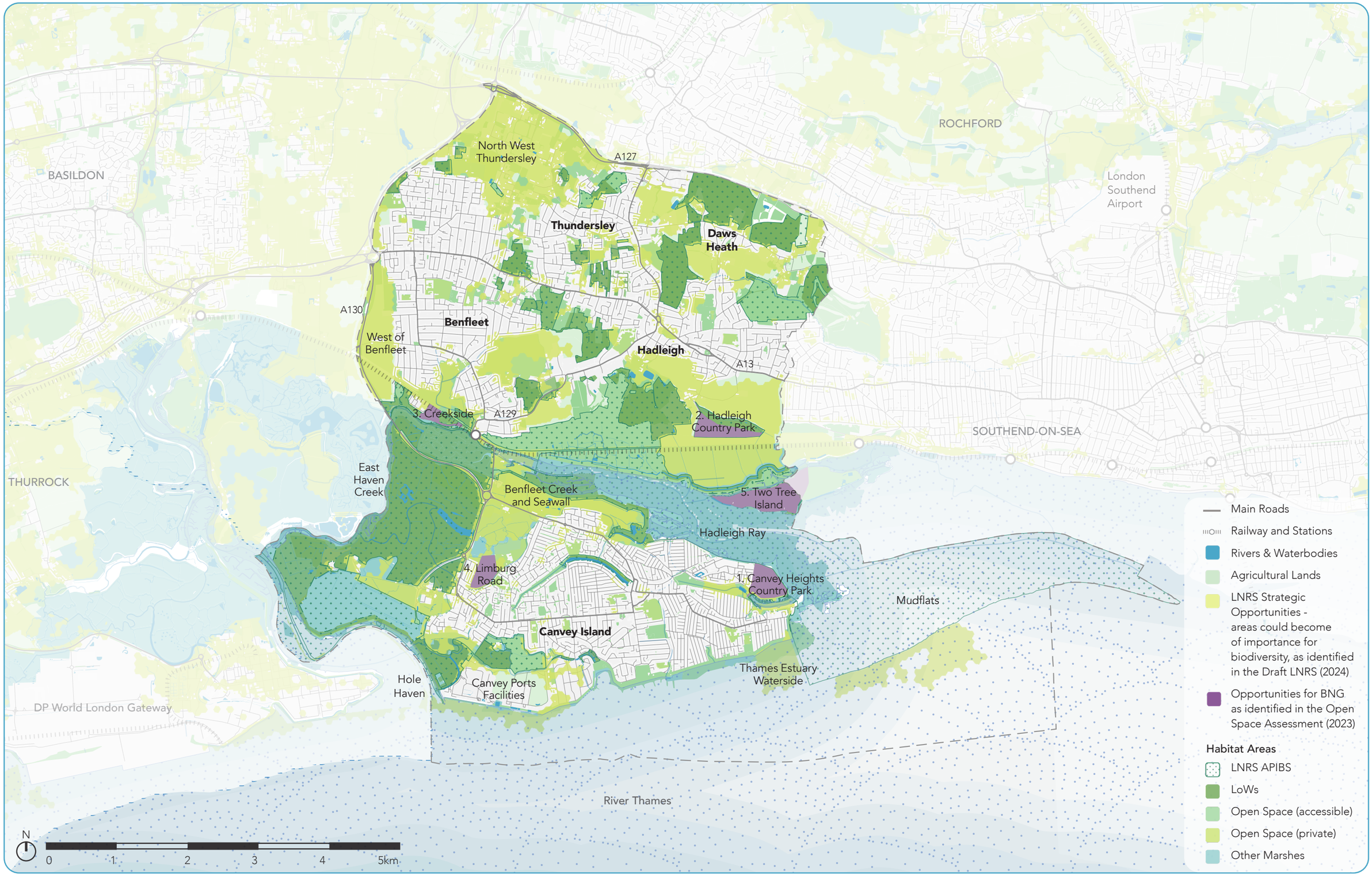



FIG.30 Opportunities for BNG Based on the Castle Point Open Space Assessment (2023) and LNRS Strategic Opportunities Based on the Draft LNRS (2024)