Green and Blue Infrastructure Study

Elmbridge
Borough Council
... bridging the communities ...

May 2022

Contents

About this study

This Green and Blue Infrastructure Study is intended to sit alongside and support the delivery of the Local Plan and the Council Plan. Well- planned, managed and delivered green and blue infrastructure is vital to the health and wellbeing of the Borough's residents and physical environment. This study provides an overview, at a strategic level, of the green and blue infrastructure network which currently exists in Elmbridge. This study also draws together the diverse range of legislation, policies and guidance which impact on the existence and delivery of green and blue infrastructure within the Borough. Like the green and blue infrastructure network, this study will evolve to ensure understanding of this important resource and to effectively address the Borough's changing needs.

Elmbridge is located in the south-east of England, within the County of Surrey and approximately 17 miles south-west of Central London. The River Thames is the Borough's northern boundary, separating Elmbridge from the London Borough of Richmond-upon-Thames. To the east lies the Royal Borough of Kingston-upon-Thames. The remaining boundaries are shared with the Boroughs of Guildford, Runnymede, Spelthorne and Woking and the District of Mole Valley.

Covering 9,636 hectares and with a population of approximately 136,600, Elmbridge is characterised by a plentiful and diverse range of green and blue infrastructure, valued by local residents and visitors alike. The benefits of large areas of woodland, common land, parkland, rivers and reservoirs are well-recognised, but the high-quality green and blue infrastructure that weaves though the urban area as a network of smaller spaces also makes an invaluable contribution. Approximately 800 hectares of the green and blue infrastructure within the Borough is owned and managed by Elmbridge Borough Council and is accessible to members of the public.

How this document works

- Introduction and Policy Overview

- The benefits of green and blue infrastructure

- An overview of the existing network in Elmbridge

- The Vision and Strategic Priorities

- Objectives and Opportunities

- Overview of the existing network in each of the local areas, identified needs and opportunities

A full glossary of the terms and abbreviations used in this document can be found on page 59.

What is Green and Blue Infrastructure?

A diverse and complex network of environmental features make up green and blue infrastructure. These range from parks, green spaces and common land to private gardens, school grounds and church yards as well as rivers and ponds. Whilst not all of this network is publicly accessible, it all makes a valuable contribution by providing wildlife corridors or other habitat and playing an important part in landscape character.

Each part of the Borough's green and blue infrastructure has the potential to deliver wide-ranging benefits to the whole community and when strategically planned, with the spaces well-connected, the benefits are more fully realised. Effective planning and management of the network allows it to contribute to the prosperity, health and wellbeing and natural environment of Elmbridge, making the Borough an attractive and sustainable place to live, work and visit.

The National Planning Policy Framework (NPPF) defines Green infrastructure as:

"A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities."

National Planning Policy Framework (2019)

- natural and semi-natural rural and urban Green spaces – including woodland, scrub, grassland, heath, wetland and open and running water (Blue infrastructure), brownfield sites, coasts
- parks and gardens – urban parks, country parks, formal and private gardens, institutional grounds (e.g. schools and hospitals)
- amenity Green space – recreation spaces, play areas, outdoor sports facilities, community and roof gardens, village Greens, commons, hedges, civic spaces, highway trees and verges
- allotments, orchards and farmland
- cemeteries and churchyards
- Green corridors – rivers, canals, road verges, rail embankments, cycling routes, rights of way
- nature conservation sites – designated sites and statutory and non-statutory nature reserves
- Green space designations (selected for historic significance, beauty, recreation, wildlife, or tranquility)
- archaeological and historic sites
- functional Green space such as sustainable drainage schemes (SuDS) and flood storage areas
- built structures – living roofs and walls, bird and bat boxes, roost sites

Green and Blue Infrastructure: the national policy context

National Planning Policy Framework (2019)

The NPPF sets out the expectation that strategic policies included in local plans will set out an overall strategy and make sufficient provision for the conservation and enhancement of green infrastructure (paragraph 20), and to take a "strategic approach to maintaining and enhancing habitats and green infrastructure" (paragraph 150).

The NPPF emphasises the benefits of green infrastructure in enabling and supporting healthy lifestyles and advises that place-making should provide for safe and accessible green spaces (paragraph 91). Green infrastructure can improve air quality and mitigate the impact of pollutants, and this should be considered at the plan-making stage (paragraph 181) along with traffic and travel management. Green infrastructure also plays an important role in mitigating and adapting to climate change and should be incorporated into development proposals to future-proof them (paragraph 150).

Planning Practice Guidance

The Planning Practice Guidance (PPG) includes a list of types of green infrastructure asset and outlines the importance of it as a natural capital asset with benefits for communities, biodiversity, climate change and managing flood risk (004 ref ID: 8-004-

20190721; 005 ref ID: 8-005-20190721). The PPG emphasises the planning goals that Green infrastructure can help to achieve in an area, including:

- **Building a strong, competitive economy** – through helping to create a high-quality environment sought by businesses and investors;

- **Achieving well-designed places** – enhancing the built environment through Green features and proximity to open space, gardens, parks and woodland.

- **Promoting health and safe communities** – improving well-being through providing opportunities for recreation, exercise, social interaction and experiencing and caring for nature.

- **Mitigating climate change, flooding and coastal change** – Green infrastructure contributes to carbon storage, cooling and shading, species migration to other habitats and can be an integral part of multifunctional sustainable drainage and natural flood risk management.

- **Conserving and enhancing the natural environment** – Green infrastructure networks can facilitate,

ecological connectivity and biodiversity net gain and nature recovery networks (006 ref ID: 8-006-20190721).

The PPG outlines the strategic approach that can be taken to green infrastructure provision, by producing an evidence base and assessment of the quality of existing green infrastructure and identifying any gaps.

National Design Guide (2019)

The National Design Guide (2019) forms part of the Government's library of planning guidance and builds on the NPPF's aims to achieving high-quality places and buildings. The document advises how well-designed spaces can be recognised, and sets out ten key characteristics:

- Context – enhances the surroundings
- Identity – attractive and distinctive
- Built form – a coherent pattern of development
- Movement – accessible and easy to move around
- Nature – enhanced and optimized
- Public spaces – safe, social and inclusive
- Uses – mixed and integrated
- Homes and buildings – functional, healthy and sustainable
- Resources – efficient and resilient
- Lifespan – made to last

It is expected that these 10 characteristics will be incorporated into local design guides, codes or policy. Each of the ten characteristics are set out in detail in the guidance and accompanying each is a section on 'looking forward'. The guide expects "continuing change as a consequence of climate change, changing home ownership models and technological changes". Planning policies are expected to consider the issues identified in looking forward and how these could be addressed.

Since the publication of the Guide, the Government has produced a draft National Model Design Code for consultation. This expands on the ten characteristics of good design and contains detailed guidance on the production of local documents to promote successful design. The Government has also awarded funding to ten local authorities across the country to pilot the introduction of local design codes.

25 Year Environment Plan (2018)

The 25 Year Environment Plan sets out the Government's intended actions to help the natural world regain and retain good health. It aims to deliver cleaner air and water in cities and rural landscapes, protect threatened species and provide richer wildlife habitats, reduce the risk from environmental hazards such as flooding and drought, and enhance the beauty, heritage and engagement with the natural environment. In addition to these goals, it seeks to manage pressure on the environment by mitigating and adapting to climate change, minimising waste, managing exposure to chemicals and enhancing biosecurity. The Plan embeds "an environmental net gain

principle for development, including housing and infrastructure".

Chapter 3, "Connecting people with the environment to improve health and wellbeing", sets out ambitions for green infrastructure:

- Creating more, and more accessible, green infrastructure;
- Focus on accessible green infrastructure and links to communities and health and well-being;
- Design a Framework of Green Infrastructure Standards, against which local authorities can assess proposals;
- Greening towns and cities; and
- Incorporation of the 25 Year Environment Plan into national planning guidance and policy.

Environment Bill 2020

The Environment Bill proposes the creation of a world-leading system for environmental governance and the creation of a new public body: the Office for Environmental Protection. Specific environmental areas covered by the Bill are air quality, sustainable water sources, waste and resource efficiency and restoring and enhancing nature and green spaces. The Bill also includes provision for mandatory biodiversity net gain in new developments.

Climate Change Act 2008

The Climate Change Act 2008 put into statute ambitious CO_2 emission reduction targets of 80 per cent by 2050 and at least 26 per cent by 2020 (measured against a 1990 baseline). The 2020 target was amended to 34 per cent in 2009. While there is no specific emissions reduction target that we need to meet locally, the NPPF requires the Council to have regard to the objectives of the Act.

Building partnerships for Nature's recovery (2020)

This document sets out Natural England's mission to work with a range of individuals and organisations to protect designated sites and create new spaces for people to enjoy nature. They seek to adopt nature-based solutions to respond to the challenge of climate change, and to connect people to their natural environment. The document advises that nature must be recognised as an essential part of our needs, rather than an unnecessary luxury. Natural England intends to review its pre-application advice service to ensure that nature can be considered at the earliest design phase, ensure that all developments deliver biodiversity net gain, and overcome social inequalities by bringing Nature "to everyone's doorstep".

Nature for People, climate and wildlife (2021)

This policy paper affirms the Government's commitment to leading a global green recovery from the COVID-19 pandemic. It commits to protect and restore nature, using nature-based solutions as an important part of the approach to addressing climate change. It also refers to a commitment to reverse biodiversity loss, by introducing a legally-binding target for species abundance by 2030. The document precipitates the publication of a Green Paper later in 2021 to set out the Government's ambitions in more detail, and how the existing protections framework can better deliver on these. The policy paper

is supported by two action plans: one dealing with tree planting, and the other addressing peatlands.

Green and Blue Infrastructure: the local context

Council Plan 2021/2022

The Council Plan sets out the vision and priorities for the Council in the short and medium term. These include working towards a target of becoming carbon-neutral by 2030. The Plan also seeks to ensure that 80% of residents and businesses feel that the environment is safeguarded and that 80% of residents are satisfied with the management of parks, green spaces and common land.

Core Strategy (2011)

Policy CS14 (Green Infrastructure) sets out a variety of measures to protect, enhance and manage the Borough's network of accessible multifunctional green infrastructure, including:

- Giving a high level of protection to suitable alternative natural green space (SANG) and sites designated for their biodiversity value;
- Securing developer contributions towards green infrastructure;
- Improving the biodiversity value of the network;
- Encouraging the dual use of school facilities where appropriate;
- Developing green links within and across Borough boundaries;
- Safeguarding important trees, woodlands and hedgerows.

Elmbridge Open Space and Recreation Assessment (2014)

The Open Space and Recreation Assessment was undertaken in 2014 by the consultants Atkins. The assessment identified the quantity of open space across the Borough and appraised its quality, value and accessibility. It found that natural or semi-natural green spaces represent the largest share of total open space in Elmbridge, and there is a good coverage of natural green space across the borough. There was no additional requirement in terms of accessibility.

The study found that 22% of the open spaces assessed were of high quality and of high value to the community. However, many of the high-quality spaces with low value represent mono-functional open spaces which only contribute to the community in a limited way. It identified areas deficient in public open space and children's play provision and recommended that public park provision should increase by 6ha. The remaining deficiencies could be met by improving the facilities within existing open spaces.

The assessment identified individual spaces that had scope for improvement, and how this could be done. The assessment concluded that projected population growth will place increasing pressure on existing open spaces and recreational facilities as the

number of users increase. In addition, existing facilities may face increasing pressure to be re-developed for alternative uses.

Local Green Space Designation Study (2020)

This study sets out the methodology used for the assessment of areas proposed for designation as Local Green Spaces. Designation offers a high degree of protection to areas of importance to the local community. Areas might be selected because of the wildlife they are home to, their beauty, their cultural or heritage significance, the tranquility they provide or their recreational value.

As a result of consultation with the community, 170 areas were suggested as potential Local Green Spaces. Some of these sites were excluded from consideration as they were protected from development by an existing piece of legislation or policy (e.g. Sites of Special Scientific Interest (SSSI)), were below the site size threshold set by the Council or had planning permission for an alternative form of development. Following more detailed assessment of the remaining sites, 44 areas which meet the selection criteria have been identified. The results will be used to inform the preparation of the Local Plan, which will identify the areas to be designated.

Physical Activity Strategy 2015-2020

This document seeks to increase levels of physical activity and promote healthy lifestyles. The Strategy focuses on outdoor activities and notes the possibility of providing way-marked walks within the Borough to encourage adults to build activity into their everyday lives.

Play Strategy 2021-2026

The Play Strategy sets out a framework for the Council to advocate for children's right to play. The second part of the Strategy focuses on the Council's fixed play assets: it provides an overview of existing facilities within the Borough and sets out a detailed plan for maintenance and capital investment up to 2026. The Strategy also provides a high-level overview of the funding for and delivery of new and improved facilities to meet the needs of a growing population, along with guidance on best practice in the design of play spaces.

There are a number of additional fixed play assets accessible to local residents that are not addressed by the Strategy as they are not within the Council's ownership.

Surrey's Climate Change Strategy (2020)

This document sets out the collective commitment of the County Council and the Borough and District Councils to tackle climate change. It establishes the approach for working together to put the county on the path to net zero carbon emissions by 2050.

The strategic priorities and accompanying actions will deliver against the emissions reduction targets, identified through the creation of a science-based carbon neutral pathway. These actions have been developed to create a comprehensive and co-ordinated response to the climate emergency. The strategic priorities and the

accompanying emissions reduction targets will be revisited every five years to consider the potential for acceleration, with an annual progress report.

organisation by 2030. It highlights the need for a greener active travel network to reduce the number of journeys carried out by private vehicle and promotes additional tree planting to capture carbon dioxide emissions. It also references the new Local Plan as a key driver of improvements to green and blue infrastructure and notes the possibility carbon offsetting measures, if needed.

Surrey's 2050 Place Ambition (2019)

This shared vision and set of strategic priorities seeks to facilitate growth within the County which should be proportionate and sustainable, support overall improvements to the health and wellbeing of residents, is supported by the necessary investments in infrastructure (including green infrastructure, delivers high-quality design, increases resilience to the impacts of climate change and acknowledges the need for working across administrative boundaries, whilst supporting a locally-planned approach. The contribution of Surrey's natural resources to growth is to be maximised by improving the quality and accessibility of green and blue infrastructure within and between urban areas, proactively managing existing Biodiversity Opportunity Areas, using developer contributions to secure new provision and making better use of non-operational land within public ownership.

Carbon Reduction and Management Plan 2020 - 2030

This document sets out the actions that the Council intends to take in order to ensure it meets its target of becoming a carbon-neutral

Surrey's New Tree Strategy (2020)

This document expands on the target set by the Climate Change Strategy for the planting of 1.2million new trees by 2030. The benefits of tree planting are highlighted, as well as the need to maintain the County's existing trees and woodland: Surrey is already the most wooded county in England. The Strategy emphasises the importance of planting the right tree in the right place and protecting existing landscapes in which tree planting would be inappropriate. The County Council will work in partnership with central and local government, businesses, schools and landowners, will lead by example by planting on its own estate and will advocate for best practice in planting and aftercare.

A Developer's Guide to Biodiversity (2005)

The Guide, produced by Surrey County Council, sets out how developers can reflect the importance of biodiversity within development proposals. A new Green Infrastructure Guide is currently being written to replace this document, focusing on sustainable solutions for development within urban areas. This is expected to be published later in 2021.

Natural Capital Investment Plan for Surrey (2018)

This document sets out a new way of achieving investment from both the public and private sectors in Surrey's natural assets, recognising the link between the County's economic prosperity and a healthy natural environment. The transformative approach explained within the Plan relies on a pipeline of investible projects being identified and matched with investors, with an expectation of both financial and non-financial returns.

Thames Landscape Strategy

The Thames Landscape Strategy is a not-for-profit partnership which seeks to conserve and promote the special character of the river corridor between Weybridge, Hampton and Kew. Launched in 1994 and updated in 2012, the Strategy originally sought to restore a network of neglected historic vistas and avenues along and across the river but has evolved to design and implement a range of

initiatives concerning recreation, land management, nature conservation, flood risk management, habitat creation, historic.

River Thames flood alleviation scheme

The scheme addresses the risk of flooding from the Thames between Egham and Teddington, which is part of the largest undefended, developed floodplain in England. Alongside the engineering works required to reduce flood risk, the scheme aims to contribute to a vibrant local economy, enhance the social and environmental value of the river and create new green spaces and opportunities for recreation. In Elmbridge, it is proposed to create a new habitat on Desborough Island to ensure that there is no net loss in biodiversity. Planning permission for the scheme is expected to be sought via the Development Consent Order process, with pre-application engagement with the affected local authorities and statutory consultees currently ongoing.

Green and Blue Infrastructure: emerging policy

Shaping Elmbridge: A New Local Plan (2021)

The draft Local Plan has protecting and enhancing the Borough's environment as its first principle.

Draft Policy ENV1 (Green and Blue Infrastructure) commits the Council to protecting, maintaining and enhancing the existing network and acknowledges the biodiversity, recreational, accessibility and health and wellbeing benefits provided by it. The policy places green and blue infrastructure as an integral part of development proposals. It further provides for seeking contributions to the network, on-site or as a financial contribution in exceptional circumstances.

Draft Policy ENV3 (Local Green Spaces) affords areas designated as Local Green Space special protection from development, other than when the development is to enhance the Space's existing function, or where very special circumstances to deviate from that protection can be demonstrated.

Draft Policy ENV5 (Protecting, enhancing and recovering biodiversity) requires that development incorporate new natural areas, or restore and enhance habitats, with a particular focus on sites close to areas designated for their nature conservation importance and/or within Biodiversity Opportunity Areas. The policy requires a minimum net gain for biodiversity of 10% on all sites. It

also requires the preservation of species which are legally protected or in decline, as well as irreplaceable habitats. It requires that, where an impact on biodiversity is identified, the mitigation hierarchy is followed and advises that permission will not be granted unless the benefits of the proposal outweigh the impact on biodiversity.

Draft Policy ENV6 (Energy efficiency, renewable and low carbon energy) requires that proposals are sustainably designed and constructed in order to mitigate the effects of climate change.

Draft Policy ENV8 (Environment Quality) includes provision for the improvement in quality of watercourses, groundwater and drinking waters supplies, and the protection of contamination from surface run-off.

Draft Policy INF3 (Play and informal recreation space) ensures that children and young people have access to good quality play and informal recreation provision, by protecting existing play areas and facilities and requiring on-site or nearby replacement if the site is re-developed. The policy also sets out a requirement for new external play space on developments beyond a size threshold. Development schemes must also include accessible routes to allow children and young people to access existing play areas and facilities safely and independently.

Draft Policy INF5 (Sustainable transport) seeks to maximise the use

of sustainable transport modes, including walking and cycling. Existing walking and cycling routes to local facilities and public transport nodes should be improved, and new routes should include priority for pedestrians and cyclists over other forms of traffic. All development proposals must include cycle parking facilities.

Policy INF6 (Managing flood risk) protects the natural function of the flood plain and requires that sustainable drainage systems are used for the management of surface water.

Policy INF7 (River usage) supports opportunities to increase the use of rivers for tourism, recreation and leisure activities. It requires that proposals for development in riverside locations take account of navigation, biodiversity, flood risk and landscape setting. The provision of new links across rivers, which support active and sustainable modes of travel as well as leisure opportunities, is promoted within the policy.

Green and Blue Infrastructure and Sustainable Development

Paragraph 7 of the NPPF summarises the sustainable development as 'meeting the needs of the present without compromising the ability of future generations to meet their own needs'.

Paragraph 8 outlines the three overarching and inter-dependent objectives: an economic objective, a social objective and an environmental objective. It goes on to highlight that they must be 'pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives)'.

Green and blue infrastructure plays a pivotal role in supporting sustainable development in Elmbridge. A high-quality network provides multiple benefits, in many cases contributing to more than one of the objectives of sustainable development. These benefits and linkages are explored in more depth in the following section.

Carbon Sequestration and Storage

Biodiversity Net-gain

Enhance Ecological Networks

Climate Change Adaptation and Mitigation

Flood Risk Management

Natural Environment

Enhancing Air Quality

Improve Water Quality

Add Image Here

Enhance Landscape Character

Passive Irrigation

Inward Investment and Economic Regeneration

Urban Cooling and Shading

Enhance Acoustic Quality

Prevention of Soil Erosion

The Benefits of Green and Blue Infrastructure

Green and blue infrastructure can provide multiple environmental, social and economic benefits. Research, particularly over the last decade, is helping to refine an approach whereby people, wildlife and businesses can all benefit simultaneously. The design and management of the Borough's green and blue infrastructure network will directly impact on the Council's ability to continue to deliver sustainable development.

Environmental benefits

Natural interventions (for both mitigation and adaptation) are increasingly being recognised as an important tool in addressing the challenges of climate change, as they deliver multiple benefits. The careful management of green infrastructure can increase the amount of carbon stored and reduce greenhouse gas emissions.

Green infrastructure can prevent or slow down floodwaters reaching mains drainage or sewerage. In the event of heavy rainfall and flooding events, sustainable drainage can reduce the amount of surface water run-off, which in turn reduces the risks of flooding in a locality and downstream in a river catchment area.

Green infrastructure can improve stormwater quality by acting as a filtration system, reducing the load of sediment, unwanted minerals and other contaminants which can be carried in the runoff from impermeable surfaces. Designing green infrastructure so that stormwater is directed to irrigate the associated landscaping and trees reduces the need for manual watering and increases soil moisture, reducing maintenance cost.

Trees provide significant reductions in urban temperatures. Large trees with good soil moisture can reduce local temperature through shading and evapotranspiration and can reduce air temperatures in parks by as much as 2 – 8 °C. Incorporating trees in the built environment is also well established as a method of reducing the energy consumption required for building cooling.

The careful planning and delivery of green and blue infrastructure is fundamental to strengthen the Borough's ecological network. This will allow for species to adapt to the changing climate, providing functional connectivity between habitats and therefore making it easier for populations of species to move across the landscape in response to environmental change.

Green and blue infrastructure also helps to maintain, restore and enhance landscape character and is essential to ensure that new development relates to, and integrates with, the character of an area.

Social benefits

A well-connected green and blue infrastructure network provides opportunities for people to walk or cycle, rather than relying on the car as a method of travel, particularly on short local journeys to school, the local park or local shops. The use of green corridors for active travel provide safer, cleaner and more tranquil routes for journeys allowing both physical and mental health benefits to be realised, as well as contributing positively to sustainable transport targets.

There are well-established links between green and blue infrastructure and improved physical and mental health in people of all ages. In part this stems from physical activity, whether that be in the form of a gentle stroll, a more vigorous workout or practical conservation work. In addition, the opportunity to spend time quietly in relatively tranquil spaces with the sights and sounds of nature is also of significant value. Evidence suggests that improving the landscape and biodiversity richness of a previously-uninteresting open space can increase its level of use. Access to green spaces has been associated with reduced blood pressure and body mass index, as well as reduced risk of a stroke, cardiovascular disease and obesity. These benefits combine to increase life expectancy. Visibility of green spaces from the home has been shown to reduce depression and fatigue.

Poor air quality has a negative impact on both human health and on sensitive habitats. Vegetation (particularly species with a large leaf surface area) traps pollutants and is effective in reducing the greenhouse gases in the atmosphere.

Green and blue infrastructure has been shown to improve social cohesion: its presence increases the likelihood of informal interactions and promotes a sense of ownership and of community spirit. The establishment of community gardens and the participation of residents in 'In Bloom' events are testament to this spirit. Evidence suggests that crime rates are lower in greener areas.

Green and blue infrastructure acts as an educational resource: children are the future custodians of the natural environment and can better appreciate the value of nature when they have exposure to it. Improvements to the quality of school recreation grounds have been associated with an increase in active play and improved attitudes to learning.

Economic benefits

The presence of green infrastructure has been shown to enhance the aesthetic value of an area and is associated with an increase in property prices. The attractiveness of an environment is linked to securing inward investment, which can in turn generate employment opportunities: investment in the green infrastructure network alone can create and maintain employment in forestry, land management and conservation, but an increase in investment in other industries has been shown to be positively-correlated with the quality of the physical environment. A greener setting can improve the productivity of the workforce and is associated with reduced workplace sickness absence and increased staff retention rates.

Most of the Borough's visitor attractions are directly related to the provision of green and blue infrastructure, and by preserving and enhancing these, the Borough can continue to welcome tourism and the associated spending benefits of this. Where green infrastructure addresses the effects of climate change (such as reducing flood risk) there is a benefit from the prevention of lost spending associated with flood events.

The Green and Blue Infrastructure Network in Elmbridge

All green and blue infrastructure, from an individual back garden to the River Thames, are important to the integrity of the overall network. The Borough's existing assets have been mapped and this has identified a wide range of green and blue infrastructure types, as well as indicating some variance in distribution in terms of quantity and quality across Elmbridge.

The importance of small-scale items of green and blue infrastructure such as street trees and private residential gardens is often overlooked, but these are integral to the Borough's character and contribute to environmental, social and economic benefits. Elmbridge is the 7th-most tree-covered area in the country: making sure that the Borough has the right species of trees for a changing climate is essential to ensure that they can continue to be an important part of the local character.

Elmbridge benefits from large areas of well-established green and blue space, focused particularly on the parks and common land as well as the River Thames and its tributaries. Outside the town centres, green infrastructure coverage is generally high and is made up of a combination of assets in public ownership and privately-owned spaces. Improving active travel links will make more of this network accessible to residents of, and visitors to, the Borough.

While Elmbridge benefits from a wide range of high-quality green and blue infrastructure, a changing climate and increasing population will mandate interventions to improve and add to the existing network in order to support the Borough's sustainable growth.

Elmbridge's Existing Green and Blue Infrastructure Overview Map

Blue Infrastructure
Green Infrastructure

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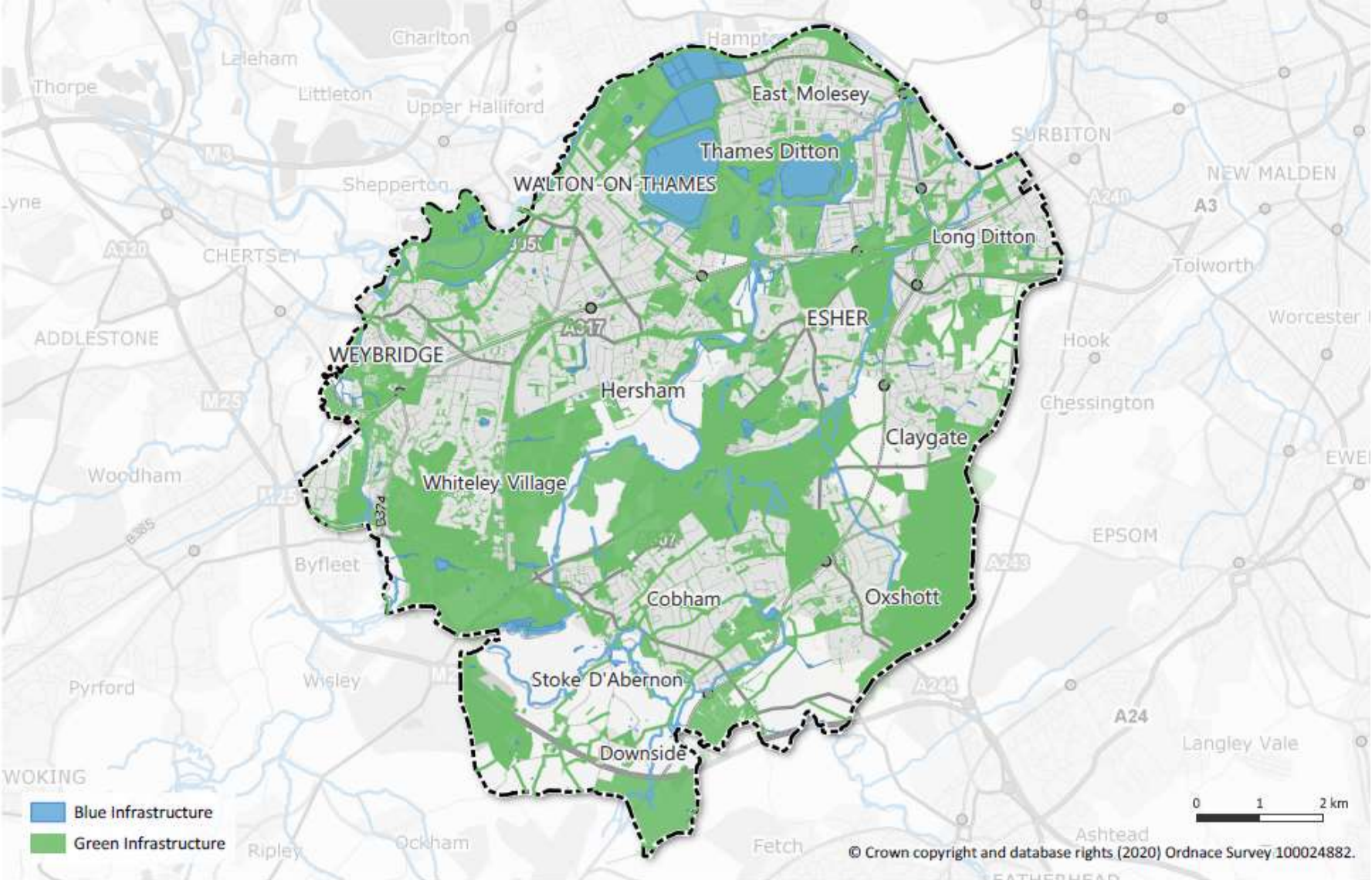
Recreation and Amenity Space

Natural and Semi Natural Green Space

This may include areas of natural heathland or natural woodland, wetland, scrubland, unimproved meadows and informal grassland, as well as water. This type of space is the most plentiful within the Borough, representing 70% of the total open space. The largest of these is Princes Coverts in Oxshott, which occupies 297ha. Overall, Cobham, Oxshott, Stoke D'Abernon and Downside have the largest natural green space area, but there is a good coverage across the Borough.

Public Parks

These may provide for sports courts and playing pitches, as well as children's play spaces and sitting-out areas. There is a large variation in size, with 'town parks' (such as Elmgrove Recreation Ground) as the largest type offering the widest range of facilities, with 'pocket parks' of up to 0.4ha (such as Lower Green Open Space) the smallest. The Borough has 0.9ha of public park per 1,000 population, on average. Some areas of existing informal green space could be improved to provide a more multi-functional role as a public park.

Allotments

These are defined as open spaces on which the primary use is gardening. Elmbridge residents benefit from a total of 1,394 allotment plots spread over 35ha. Interest in allotments has increased as environmental issues achieve more prominence, and they have a high value to the communities in which they are located. Allotments provide access to affordable fresh vegetables, physical exercise and social interaction. Whilst the largest group of users falls within the over-50 demographic, there is an increasingly younger user base.

Cemeteries and Churchyards

This type of open space occupies around 28ha of the Borough's land and is sometimes used for informal recreation and relaxation as they are generally tranquil spaces (especially where they are located outside of the town and village centres). The trees and hedges within these areas can provide a valuable refuge for wildlife, and within the urban area can act as a stepping stone to different habitats.

Amenity Green Spaces

This category includes green spaces in and around areas of housing, as well as domestic gardens. The functionality and catchment for this type of space is generally limited, but they play an important role in greening the urban environment. Small open spaces provided as part of a residential development usually fall into this category, as do town and village greens. This group also includes large landscaped areas, such as Painshill Park.

Play Areas

These are formally-laid out spaces which have been specifically designed for children's play, catering for those up to around 12 years of age. Play areas contribute to the development of physical and social skills, as well as having a positive impact on health. Hersham currently has the largest provision of formal play space, with 1.6sq.m. per child.

Outdoor Sports Facilities

This category includes sports facilities which are not located within a public park, and where the primary role is to provide formal recreation space. These sites may include tennis courts, bowling greens, sports pitches, golf courses and athletics tracks as well as school playing fields.

Institutional Grounds

This includes open space located within the grounds of hospitals, universities and other institutions which are accessible to the public. This definition also includes educational sites where there is only hard surfacing, or amenity open space (i.e. no formal outdoor sports provision, such as marked pitches).

Rivers, Lakes and Ponds

The Borough benefits from the presence of the River Thames and its tributaries, and the recreational opportunities provided by these including the Thames Path and the towpath along the Wey Navigation as well as rowing, canoeing and angling clubs. The Borough's lakes are relatively small, one of the most notable being at Painshill Park, a Grade-I registered historic landscape in Cobham. Many of sites registered as Common Land benefit from ponds and their associated biodiversity and aesthetic benefits.

Reservoirs

Elmbridge has four large reservoirs. Island Barn Reservoir is located in West Molesey and hosts a sailing club, as well as being a popular destination for bird-watchers. Queen Elizabeth II Reservoir is located to the west in Walton-on-Thames and hosts more than 23,000 floating solar panels. The Knight and Bessborough Reservoirs to the north are designated as a Site of Special Scientific Interest for their bird population and also form part of the South West London Waterbodies Special Protection Area.

Recreation and Amenity Space

Waterways
Town Parks
Local Parks
Pocket Parks
Allotments
Natural Green Spaces
Children Play Areas
Amenity Greenspace
Outdoor Sports Facilities
Cemetery, Religious Grounds
Institutional Grounds

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Elmbridge has a wealth of sites containing important biodiversity resources including parts of two internationally-designated Special Protection Areas (SPAs), three nationally-recognised Sites of Special Scientific Importance (SSSIs), twenty Sites of Nature Conservation Importance (SNCIs) and five Local Nature Reserves (LNRs). As well as these formally-designated locations, the Borough benefits from a range of habitat types:

Heathland

Heathland is characterised by low growing shrubs, such as heather and gorse, and sandy, infertile soil. Most heathlands contain a mosaic of habitats and there may be clumps of trees and shrubs, areas of bracken and patches of bare ground. Heathlands are a historic habitat. They developed during or after the Stone Age, in areas of poor soils where trees were removed and burning, or grazing prevented their regrowth. Today heathland is a rare and threatened habitat. It supports many rare plants and animals, some of which depend on heathland for their survival. The largest area of heathland in Elmbridge is found on the Esher Commons, which contains some rare species including the Silver Studded Blue butterfly.

Woodland

Elmbridge has a mix of woodland types including ancient and secondary. Ancient woodland is woodland that is known to have been present on the site since 1600. Ancient woodlands have developed over a long period and so they often have plants and animals that depend upon the stable conditions the woodland provides, such as wood anemone. Secondary woodland is woodland that has developed on land previously cleared of trees. It is does not usually contain the variety of plants and animals that can be found in ancient woodland. The woodlands found in Elmbridge can also be mainly divided into broadleaved and coniferous. Broadleaved woodland contains tree species with leaves which are broad in shape and are usually deciduous. Coniferous woodlands contain tree species with needle like leaves. In Elmbridge the coniferous woodlands are plantations dominated by Scots Pine, which were planted in the twentieth century.

Freshwater

Rivers, streams, lakes and ponds are all freshwater habitats. Ponds are some of the richest habitats in the UK and contain many rare, specialist species, such as the rare Starfruit plant which is found in the ponds on West End Common. Many ponds in Elmbridge are ephemeral, meaning they dry up in summer and this can actually be beneficial to the variety of life in the pond.

Grassland and Meadows

Grasslands are dominated by grass species, but they also contain many other plants, such as cow parsley and ox-eye daisy. Grasslands are an important habitat for a huge number of invertebrates, including solitary bees.

Biodiversity Opportunity Areas

Biodiversity Opportunity Areas (BOAs) have been identified as places in which there are the best opportunities for habitat creation and restoration, allowing resources to be focused where they will be most effective in order to establish larger habitat areas and networks of wildlife habitats. In Elmbridge, these areas include Esher and Oxshott Commons, Molesey and Hersham, and the River Thames (towpath and islands). Whilst BOAs are useful to direct efforts, they are not the only places where biodiversity can be improved.

Habitats and Biodiversity Overview Map

Rural Verges
Local Nature Reserve
Sites of Special Scientific Interest
Biodiversity Action Plan Habitat
Thames Basin Heath SPA
Commons and Open Spaces
Ancient Woodland
Sites of Nature Conservation Interest
SANG
RAMSAR
Biodiversity Opportunity Areas
Borough Boundary

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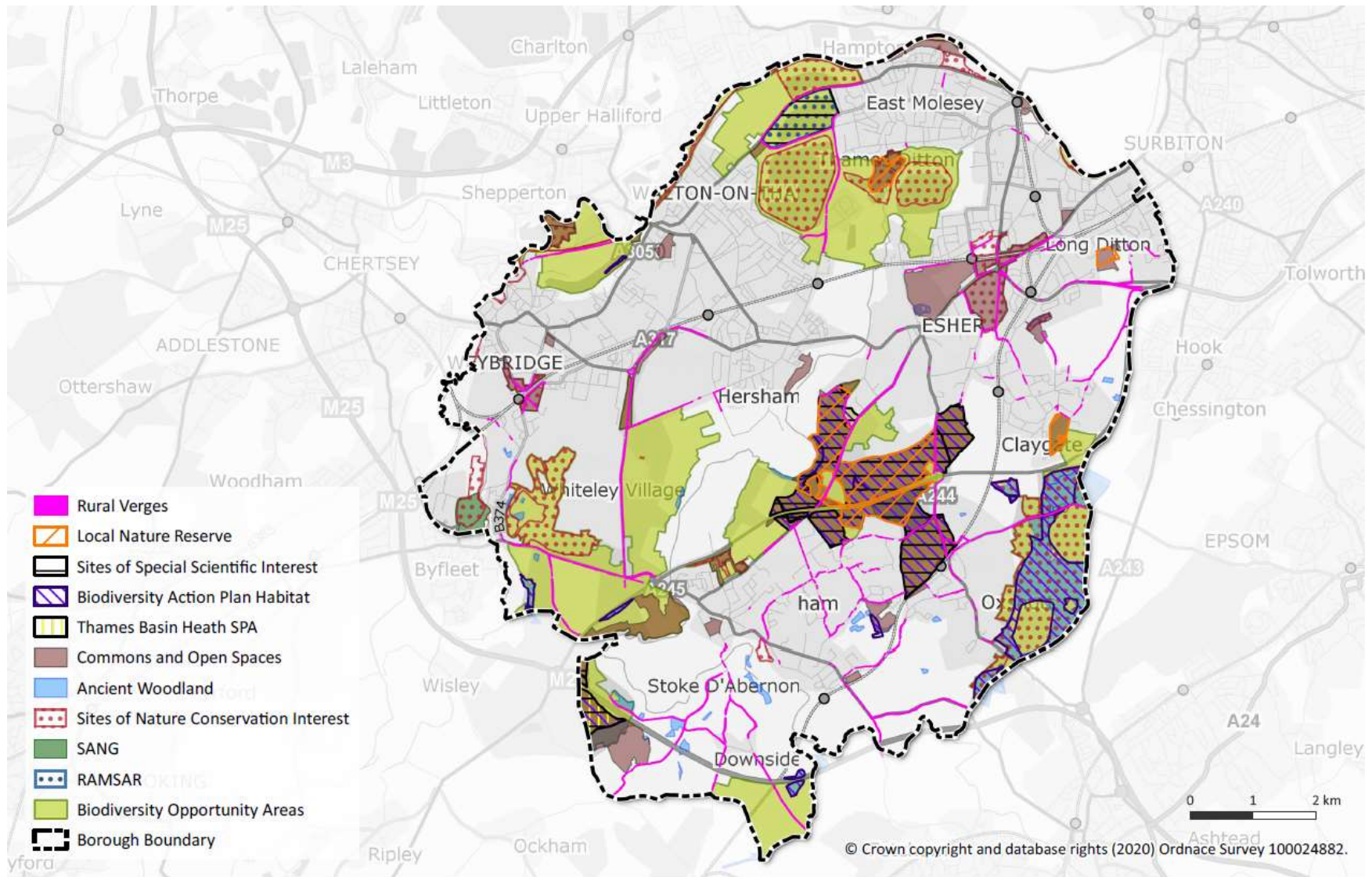
Habitats and Biodiversity – Management of Council-owned sites

Elmbridge Borough Council owns and manages twenty countryside sites, which cover approximately 550 hectares. The planned management of this estate is summarised below:

Woodland

Much of the land is wooded and requires careful management to ensure it is safe for use by residents whilst providing the maximum benefit for biodiversity. Management of woodland for wildlife conservation and to enhance broad-leaved and mixed secondary woodland is through a programme of widening and rotationally managing the rides and woodland edges. This is achieved through thinning the canopy, selective felling, coppicing and use of natural regeneration. Invasive species are tackled using approved treatments.

Heathland

Areas of heathland are managed to provide a mosaic of vegetation which allows all heathland features to flourish including pioneer heath and bare ground for the benefit of invertebrates, birds, reptiles and plants. Areas of heathland may be grazed if appropriate and rotationally cut scrub and bracken will be managed.

Ponds and water bodies

Water bodies are enhanced by periodic management, to ensure willow carr (wet woodland) development does not occur. Managing the margins by scrub control and reed cutting where appropriate ensuring current water levels by periodic de-silting control of invasive species and woodland management to prevent over shading.

Meadows and Grasslands

Meadows and grassland are enhanced to provide different types of vegetation, with a mixture of grasses and wildflowers to provide best possible biodiversity in the area. Rotational cutting or grazing is undertaken, as well as scrub control though cutting and invasive species management. Woodland edge will be restricted to ensure over shading does not occur and some bare ground is to be encouraged.

Sustainable Planting

The Council works in partnership with other organisations to support tree-planting following accepted best practice. Tree planting on low-grade arable and pasture land can be supported, but it is important not to plant on areas with existing important habitats which would be adversely affect by such planting. One of our biodiversity priorities is for planting native hedgerows, as well as more street and urban

trees. These can provide connectivity between wildlife habitats and can be planted by residents as well as the Council. Wherever possible, new trees will be incorporated into projects led by the Council and where trees are removed due to their age or condition, new trees will be planted to replace them.

The Active Travel Network

Connectivity is stifled by the presence of major roads (particularly the A3), as well as railway lines. The south and east of the Borough is particularly affected, worsened by the prevalence of private residential estates in these areas. National, regional and county level planning policies encourage a modal shift away from motorised means of transport, and the Borough's active travel network will require improvement and expansion to facilitate this shift.

Existing opportunities for active travel are provided by the footpath and bridleway network. The south of the Borough is best-served by rights of way, with the west having very limited access to these routes. Cycle infrastructure is limited and is mainly confined to the north of the Borough. In conjunction with the County Council, the Council has commissioned a Local Cycling and Walking Infrastructure Plan. In the long term, this Plan will identify preferred routes and core zones for further development, as well as a prioritised programme for investment in new cycling and walking infrastructure.

In the shorter term, the creation of a shared path for walkers and cyclists along the Seven Hills Road will help to link Weybridge and Cobham, while the creation of a similar path along Copsem Lane will link Esher and Oxshott. Both of these schemes have funding and will assist in overcoming the connectivity barrier created by the A3.

To succeed in reducing the number of vehicle journeys through and across the Borough, it will be essential to link cycling and walking routes with public transport provision. The Surrey Rail Strategy is currently under review and will identify proposals for improvements to the rail network, which could include improvements to accessibility. The Council will encourage the provision of cycle storage for all new residential units, and at a greater scale in key locations such as public transport hubs. Within larger development schemes, works to the existing highways and internal travel networks will be encouraged to consider the needs of pedestrians and cyclists.

Improvements in air quality will encourage residents to make greater use of the active travel network. The greening of routes will make

these more pleasant places to be and will provide an additional benefit in the form of wildlife corridors. Lighting these routes and providing quality signage will encourage users to feel safe, but will need to be balanced against the potential impact on biodiversity in previously dark areas of the Borough. The Council will support the addition of lighting where the impacts have been carefully considered and it has been found to be appropriate.

Active Travel Links

Legend:

Railway Stations
— A3
— Tow Paths (2014)

Cycle Routes (2020)
----- Cycle Lane
----- Cycle Track
····· Greenway
····· Signed Advisory Route

Public Rights of Way (2019)
— Bridleways
— Footpaths
— Byways
☐ Commons and Open Spaces
☐ Strategic Employment Land
☐ Retail Centres
☐ Borough Boundary

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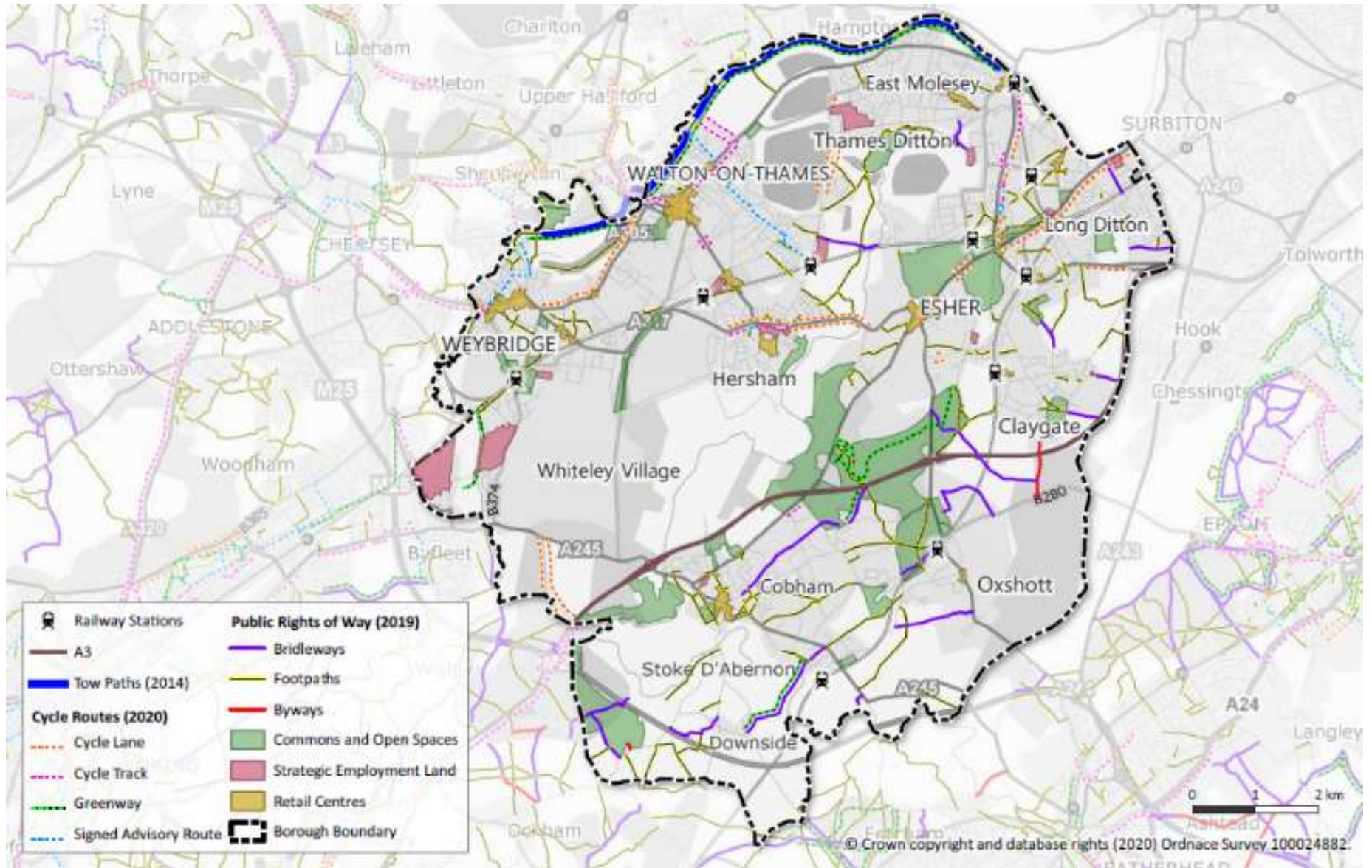
Green and Blue Infrastructure: Vision, Strategic Priorities and Objectives

The Green and Blue Infrastructure Vision for Elmbridge

To deliver a high-quality, integrated and multifunctional Green and Blue infrastructure network for Elmbridge that connects our communities and authorities beyond through active travel means and supports the natural environment, the health and well-being of our residents and a prosperous economy.

Green and Blue Infrastructure Strategic Priorities

Natural Environment

- Identify opportunities to address the climate emergency
- Enhance ecological network by improving green and blue corridors
- Continue sustainable habitat management
- Carry out a tree and hedgerow planting programme

Health and Wellbeing

- Improve air quality
- Improve quality of open spaces and play spaces
- Improve existing and provide new active travel routes

Prosperous Economy

- Carry out street greening to realise visual amenity, biodiversity, air quality and flood mitigation benefits
- Improve active travel opportunities to encourage the use of local businesses

Fit for the Future

- Ensure new major developments enhance the existing network either on- or off-site
- Work with homeowners to deliver enhancements as part of all householder and minor developments

Delivery

- Delivery of the projects required to meet the current and future needs of the Borough will be addressed in a number of ways:
  - Capital Investment in the areas owned by the

Council

- The use of Community Infrastructure Levy funding by the Council and partners to fund identified improvements
- On- and off-site provision relating to development proposals

Objectives

The objectives set out in this document are based on a high-level analysis of the Borough's existing green and blue infrastructure assets, as well as an understanding of the multiple benefits of the network. Each of the four objectives outlined below are supported by key opportunities identified in the following section. Whilst the opportunities identified are not intended to be an exhaustive list, they act as a starting point for discussion, project planning and negotiation and will allow stakeholders to play an active part in the delivery of both new and improved green and blue infrastructure.

The key to realising our Vision and Strategic Priorities for the Borough lies with the input of a range of stakeholders. In order to achieve our Vision we must:

- Enhance the quality and function of our existing network, optimising its potential to deliver the identified benefits for our community as a whole;
- Incorporate new green and blue infrastructure as a key

component of all new development, ensuring that it is appropriate to the location and nature of the scheme, to maximise the benefits to new and existing communities and support the Borough's sustainable growth;
- Improve connectivity of and accessibility to green and blue infrastructure for all; and
- Promote the benefits of the green and blue infrastructure network to stakeholders.

Objective 1: Optimising Existing Green and Blue Infrastructure

While Elmbridge benefits from a wide range of existing green and blue Infrastructure, the pressure of challenges including climate change and the need for housing mean it is critical to optimise the benefits realised from our existing assets so that we can continue to meet the needs of residents, the economy and the environment.

The quantity, quality and accessibility of the existing green and blue infrastructure varies across the Borough, meaning a focus on making best use of the resources we have a priority. Ensuring that our existing resources have a clear function, are well-managed and meet the needs of the local community and businesses they serve, delivering relevant and tangible benefits is fundamental.

Opportunities to enhance the existing network will be realised by a diverse range of stakeholders, from the Council and our partner organisations, to major land owners and developers, residents and community groups.

Objective 2: Incorporating Green and Blue Infrastructure in New Developments

Significant growth is planned for over the coming years. High-quality green and blue infrastructure that is appropriate to its location, well-designed and well-maintained in the long term (through the application of appropriate planning conditions and legal agreements) will be a key component of any new development and will support the Borough's sustainable growth. It is recognised that development schemes will need bespoke approaches and that the range of potential solutions is ever-expanding as research in this field progresses.

The Council will require the incorporation of green and blue infrastructure at the beginning of the design process. Developers will need to understand the existing local network, the opportunities to enhance and link to it, and will need to consider the most appropriate

approach for their scheme, adding value to the development and realising benefits for the Borough as a whole.

Recognising the importance of the cumulative impact of green and blue infrastructure in small-scale development as well as major schemes, these opportunities will be realised through working with applicants on development proposals of all scales and advocating the benefits of pre-application engagement.

The opportunities highlighted in the following section provide initial ideas as to how green and blue infrastructure can be successfully incorporated into development schemes, with signposting to the varying needs and characteristics of the Borough's local areas.

Objective 3: Enhancing Connectivity and Accessibility

Green linkages across the Borough are key to providing sustainable access to the wider network. This objective is of particular importance in areas where the existing urban form does not allow for the development of new larger green spaces.

Providing permeable green and blue infrastructure and safe and attractive green routes between existing assets will spread the benefits. By promoting the expansion of off-road transport routes in some areas, as well as enhancements to the existing network (particularly in urban areas where space for new infrastructure is limited) cleaner, greener and safer opportunities for active travel can be realised. This linking infrastructure also forms a valuable green and blue infrastructure asset in its own right.

Enhancing the connectivity and accessibility of the green and blue infrastructure network is intrinsically linked with sustainable transport, and successful delivery of this objective will depend on forming strong partnerships with a wide range of stakeholders.

Objective 4: Stakeholder Awareness and Community Resilience

There are two strands to this objective: engaging with a range of stakeholders to promote the multiple, mutually-advantageous benefits of green and blue infrastructure will be vital to secure buy-in and subsequent delivery. In addition, raising awareness of the benefits of the use of the green and blue infrastructure network within the community will play an important role in building community cohesion and resilience.

Opportunities – Across the Borough

This section of the document identifies opportunities for enhancing the Borough's green and blue infrastructure network at a strategic scale.

The intention of this section is not to identify specific interventions or every opportunity for enhancement, but to act as a starting point. By setting out guiding principles that should be considered, research and creativity in planning and design are encouraged.

The key partners and stakeholders who are likely to play a role in the realisation of each objective are identified, be that as asset owners/managers, delivery partners or organisations and individuals who have an interest in and benefit from the the Borough's green and blue infrastructure network.

As well as an overview of key opportunities, this document includes more detailed area summaries, providing an overview of each of the eight settlement areas, their currently identified needs and also opportunities that may be appropriate. The Borough-wide opportunities here should be considered in every instance, with more locally-relevant opportunities identified in the next section.

Opportunity 1 (Objective 1)

Enhance Biodiversity Opportunity Areas (BOAs) and other areas of significant/designated biodiversity importance across the borough, including opportunities to enhance green and blue infrastructure assets and create wildlife stepping stones.

Key benefits: Natural Environment; Health and Wellbeing

Key Stakeholders:
- Natural England
- Surrey County Council
- Surrey Wildlife Trust
- Developers
- Elmbridge Borough Council – Leisure and Cultural Services
- Elmbridge Borough Council – Planning Services

Case Study: Esher Commons Management Plan

Opportunity 2 (Objective 1)

Effective management of publicly and privately-owned woodland and additional tree and hedgerow planting. Detailed guidance on this opportunity can be found at Appendix E.

Key benefits: Natural Environment; Health and Wellbeing

Key Stakeholders:
- Surrey County Council
- Forestry Stewardship Council
- Elmbridge Borough Council – Leisure and Cultural Services
- Elmbridge Borough Council – Planning Services
- Developers
- Community Groups

Case Study: Planting at Cranmere Primary School during Surrey Tree Week 2020

Opportunity 3 (Objective 1)

Enhance grounds of schools and colleges and other institutions for biodiversity, education and recreation. Explore the potential for increased community use to optimise benefits of existing infrastructure.

Key benefits: Natural Environment; Health and Wellbeing

Key Stakeholders:
- Surrey County Council
- Schools and colleges, other private institutions
- Elmbridge Borough Council – Planning Services
- Elmbridge Borough Council – Leisure and Cultural Services

Case Study: Permission granted for a nature trail at Cleves Junior School, Weybridge

Opportunity 4 (Objective 1)

Enhance the quality of existing parks and open spaces and provide additional facilities to deliver health and wellbeing benefits for both the existing population and future residents.

Key benefits: Natural Environment; Health and Wellbeing

Key Stakeholders:
- Elmbridge Borough Council – Leisure and Cultural Services

- Housing Trusts
- Surrey County Council
- Community Groups

Case Study: Re-design of Churchfields Recreation Ground, Weybridge

CHANGE IMAGE

Opportunity 5 (Objective 2)

Provision of large-scale new green and blue infrastructure, including parks, open spaces, green corridors and play facilities as part of major developments. Embed green and blue infrastructure as standard in the delivery of all major and minor residential schemes and householder developments, as well as development of employment land.

Key benefits: Natural Environment; Health and Wellbeing; Prosperous Economy

Key Stakeholders:
- Developers
- Elmbridge Borough Council – Leisure and Cultural Services
- Elmbridge Borough Council – Planning Services

Case Study: Churchfields Meadow, Weybridge

Opportunity 6 (Objective 2)

Encourage the use of green and blue infrastructure assets as a resource for the generation of renewable energy.

Key benefits: Natural Environment; Prosperous Economy

Key Stakeholders:
- Developers
- Utilities Companies
- Elmbridge Borough Council – Asset Management and Property Services
- Surrey County Council – Estates

Case Study: Floating solar farm, Queen Elizabeth II Reservoir

Opportunity 7 (Objective 3)

Improve active transport routes and green corridors, enhancing connectivity between residential areas and key transport hubs and

retail and employment locations.

Key benefits: Natural Environment; Health and Wellbeing; Prosperous Economy

Key Stakeholders:
- Surrey County Council
- Network Rail
- Developers
- Elmbridge Borough Council – Asset Management and Property Services
- Elmbridge Borough Council – Leisure and Cultural Services
- Elmbridge Borough Council – Planning Services

Case Study: Brooklands Business Park Accessibility Project

Opportunity 8 (Objective 3)

Enhance the street scene in urban areas with greening initiatives to improve visual amenity, air quality and biodiversity and encourage active travel.

Key benefits: Natural Environment; Health and Wellbeing; Prosperous Economy

Key Stakeholders:
- Surrey County Council
- Developers
- Elmbridge Borough Council – Economic Development
- Elmbridge Borough Council – Leisure and Cultural Services

Case Study: Wildflower planting pilot on Hampton Court Way

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Case Studies: Cobham Community Garden; InBloom; parkrun

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Opportunity 9 (Objective 4)

Raise awareness of the benefits of the use of the green and blue infrastructure network within the community and support its use as a community resource, building cohesion and resilience.

Key benefits: Natural Environment; Health and Wellbeing

Key Stakeholders:
- Elmbridge Borough Council – Leisure and Cultural Services
- Elmbridge Borough Council – Community Support Services
- Community Organisations, charities and trusts

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Opportunities – local areas

While the previous section of the document explores a range of opportunities that may be appropriate anywhere in the Borough, this section identifies opportunities for the enhancement of green and blue infrastructure that may be appropriate for action based on the identified needs of a local area and its existing infrastructure, character, urban form and land use.

The opportunities explored here are more localised in terms of appropriateness, scale and wider impact, but are no less important. In order to maximise benefits and contribute fully to a sustainable future for the Borough, the cumulative impact of enhancements of all scales will be hold the key to success.

The opportunities identified here should not be considered as a complete list, but as a tool to aid the exploration of the unique identity of each of the local areas and a first step in planning for and delivering enhancements that best meet the needs of the local area and the Borough as a whole.

Opportunity 10 (Objective 1)

Implement biodiversity and flood adaptation and mitigation solutions on land within the ownership of the Council, allowing greater control over delivery and long-term maintenance. These opportunities include the adaptation of maintenance regimes (to enhance biodiversity or ease flooding for example) as well as the provision of new infrastructure.

Key benefits: Natural Environment; Health and Wellbeing; Prosperous Economy

Key Stakeholders:
- Elmbridge Borough Council
- Surrey County Council
- Thames Landscape Strategy Partnership
- Environment Agency

Case Study: Proposals for the River Thames Scheme flood alleviation strategy

Opportunity 11 (Objective 1)

Preserve and support the further enhancement of historic landscapes, conservation areas and other heritage assets through the enhancement of existing green and blue infrastructure as well as the provision of new.

Key benefits: Natural Environment; Health and Wellbeing

Key Stakeholders:
- Elmbridge Borough Council
- Historic England
- Businesses
- Charities and Trusts

Case Study: Avenue of Remembrance, The Tilt, Cobham
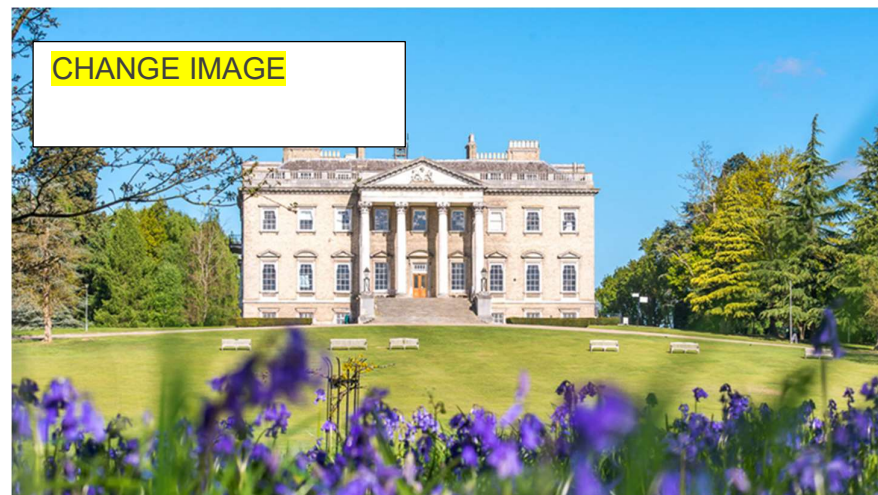
Opportunity 12 (Objective 2)

Retrofit green walls and roofs to existing buildings, particularly in central locations where the existing urban form and land use mean there is limited space for the creation of new infrastructure.

Key benefits: Natural Environment; Health and Wellbeing; Prosperous Economy

Key Stakeholders:
- Developers
- Businesses
- Home Owners
- Elmbridge Borough Council – Asset Management and

Property Services
- Housing Trusts

Case Study: Living wall at Dukes Court, Woking

Opportunity 13 (Objective 2)

Incorporate SuDS and biodiversity opportunities into projects seeking to enhance the existing public realm, as well as larger regeneration schemes.

Key benefits: Natural Environment; Health and Wellbeing; Prosperous Economy

Key Stakeholders:

- Developers
- Businesses
- Surrey County Council
- Elmbridge Borough Council – Economic Development
- Elmbridge Borough Council – Asset Management and Property Services
- Elmbridge Borough Council – Planning Services

Case Study: Grey to Green Sheffield

Opportunity 14 (Objective 3)

Explore the enhancement and use of green and blue infrastructure as assets to attract visitors and tourists to the Borough and provide increased recreation opportunities for local residents, generating

economic activity and contributing to the health and wellbeing of the community.

Key benefits: Health and Wellbeing; Prosperous Economy

Key Stakeholders:
- Local Businesses
- Charities and Trusts
- Elmbridge Borough Council

Case Study: Ongoing restoration of Painshill Park

Opportunity 15 (Objective 4)

Raise awareness of the benefits of the green and blue infrastructure and encourage private landowners and homeowners to make enhancements (unrelated to development) which are mutually beneficial.

Key benefits: Natural Environment; Health and Wellbeing

Key Stakeholders:
- Surrey County Council
- Elmbridge Borough Council – Leisure and Cultural Services
- Homeowners
- Community Organisations
- Charities and Trusts
- Local Businesses

Case Study: Polypipe Building Services, College Road, Aylesford

Opportunity 16 (Objective 4)

Explore the establishment of temporary uses for 'meanwhile spaces' in areas awaiting development, particularly on previously developed land.

Key benefits: Natural Environment; Health and Wellbeing

Key Stakeholders:
- Developers
- Community Organisations
- Elmbridge Borough Council Case Study:

Walton on Thames

Key Green and Blue Infrastructure

- Waterside Meadow Open Space
- Elmgrove Recreation Ground
- George Froud Open Space
- Ashley Park
- Cowey Sale

- River Thames
- Queen Elizabeth II Reservoir
- Bessborough Reservoir
- Knight Reservoir

Area Summary

Walton on Thames is located to the north of the Borough, on the banks of the River Thames. With the largest population and town centre, the settlement area is predominantly urban in character, although the reservoirs and waterbodies to the north have significant conservation value. While the majority of the natural green spaces are located to the north, the area benefits from a number of smaller urban green spaces and convenient access to the Thames Path National Trail.

The urban nature of the settlement area means the key opportunities for improvement will come as a result of relatively small-scale development and improvements to existing infrastructure. This is of particular importance in seeking to enhance the ecological network, with improvements essential to provide ecological stepping stones, linking the BOAs located in the north-east of the area with that further south and west in the borough.

Meeting Needs

Children's Play Provision

- The area is below the quantitative standard of 0.76sq. m of formal children's play provision per child, with access deficiency to the south of the area

Public Parks

- While the area is above the quantitative standard of 0.9 ha of public parkland per 1,000 population there are two small areas of deficiency identified in the north and south of the area.

Opportunities

Any development or project to enhance the network within this area should consider the Borough-wide opportunities explored on pages 29 - 34 of this document. In addition, the local opportunities highlighted below are most significant in relation to this area (for more detailed information on each opportunity refer to pages 35 – 39:

- Opportunity 10

- Opportunity 12
- Opportunity 13

- Opportunity 14
- Opportunity 16

Legend:
- Waterways
- Town Parks
- Local Parks
- Pocket Parks
- Allotments
- Natural Green Spaces
- Children Play Areas
- Amenity Greenspace
- Outdoor Sports Facilities
- Cemetery, Religious Grounds
- Institutional Grounds
- Natural Greenspaces
- Private Gardens

Bessborough Reservoir

Knight Reservoir

Waterside Drive Open Space

River Thames

Queen Elizabeth II Reservoir

Cowey Sale Open Space

George Froude Park

Ashley Park AGS

0   0.5   1 km

Weybridge

Key Green and Blue Infrastructure

- Brooklands Community Park
- Weybridge Heath
- Churchfields Recreation Ground
- Desborough Island
- Oatlands Recreation Ground

- River Thames
- River Wey
- Brooklands Community Park (ditches and flood alleviation pond)
- Broadwater Lake

Area Summary

Located in the west of the Borough at the confluence of the River Thames and the River Wey Navigation, Weybridge has the Borough's second largest population and is a well-established residential area. Weybridge also has the Borough's largest employment area, at Brooklands. The area benefits from significant tree cover, particularly in the south.

There is an opportunity to link the large BOA in the south of this area with those in Cobham to the south and Hersham to the east. Green and blue infrastructure incorporated into development in the urban centre will provide a corridor to link to the BOA in the north of this area.

Weybridge has poor active travel connectivity, in part due to the network of private residential estates in the south of this area.

Opportunities to provide better access for walkers and cyclists will be welcomed.

Forthcoming improvements to flood risk arising from the River Thames Scheme (led by the Environment Agency) will provide opportunities to improve habitat, particularly in the north of the area.

Meeting Needs

Children's Play Provision

- The area is above the quantitative standard of 0.76sq. m of formal children's play provision per child, with no identified deficiency in access within the area.

Public Parks

- While the area is above the quantitative standard of 0.9 ha of public parkland per 1,000 population. There is one small area of deficiency identified in the west of the area.
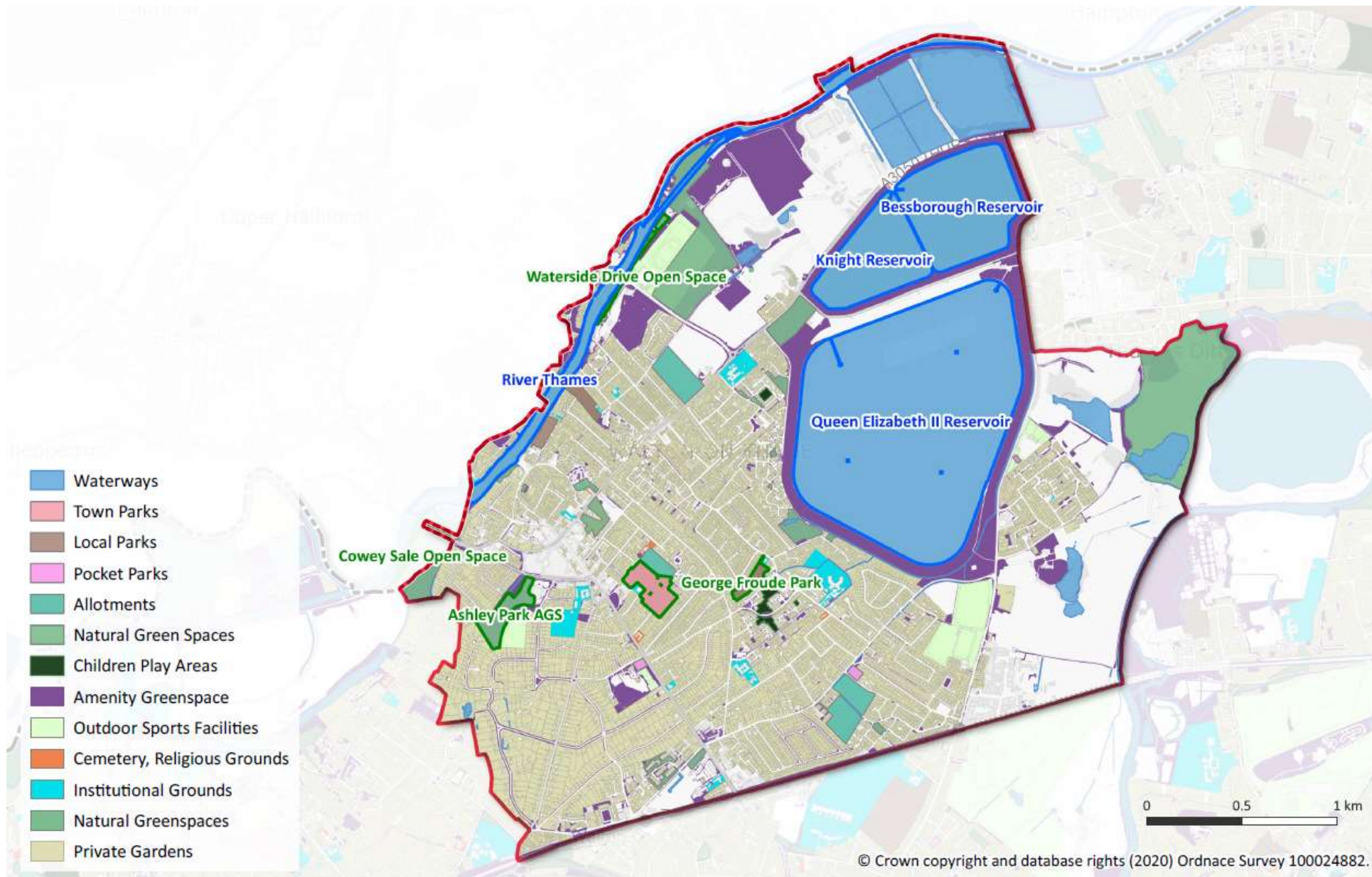
Opportunities

Any development or project to enhance the network within this area should consider the Borough-wide opportunities explored on pages 29 - 34 of this document. In addition, the local opportunities highlighted below are most significant in relation to this area (for

more detailed information on each opportunity refer to pages 35 – 39:

- Opportunity 10
- Opportunity 11
- Opportunity 12
- Opportunity 14

MAP TO BE
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Hersham

Key Green and Blue Infrastructure

- Hersham Recreation Ground
- Coronation Recreation Ground
- Thrupps Lane Open Space / Hersham Riverside
- River Mole

Area Summary

Hersham is a small and primarily residential area, with its built-up area concentrated in the north. It has a small commercial centre set around a village green. There are a number of open spaces which are linked to the green by well-used footpaths and cycle routes and these open spaces are surrounded by modestly-scaled residential development. The south is dominated by farmland.

The area benefits from a strong tree presence, with mature broadleaf trees found in front and rear gardens and lining public green spaces. Residents participate in the annual Hersham in Bloom community project, which enhances the area's green character whilst promoting social benefits.

Hersham has limited blue infrastructure. Whilst this area is strongly defined by the River Mole to the south, there is limited public access to the river and there are no public crossing points. Where space permits, developers should consider the use of swales and ponds to address surface water run-off.

Meeting Needs

Children's Play Provision

- While the area is above the quantitative standard of 0.76sq. m of formal children's play provision per child, there is access deficiency in the north of the area

Public Parks

- While the area is above the quantitative standard of 0.9 ha of public parkland per 1,000 population there is access deficiency identified in the north of the area.

Opportunities

Any development or project to enhance the network within this area should consider the Borough-wide opportunities explored on pages 29 - 34 of this document. In addition, the local opportunities highlighted below are most significant in relation to this area (for more detailed information on each opportunity refer to pages 35 – 39:

- Opportunity 12
- Opportunity 13

- Opportunity 15

MAP TO BE
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East and West Molesey

Key Green and Blue Infrastructure

- Hurst Park / Hurst Meadows
- Grovelands Recreation Ground
- Nielsons Field / The Wilderness
- Molesey Heath
- River Thames
- Island Barn Reservoir
- River Ember

Area Summary

This is a relatively densely-developed area almost entirely surrounded by water, with the River Thames to the north, the River Ember to the east and the Island Barn to the south. Molesey Heath is designated as a Local Nature Reserve and is combined with the Hersham Gravel Pits Site of Nature Conservation Importance.

East and West Molesey is well served by open green spaces, with recreation and sports grounds, parkland, a large cemetery and allotments. Parts of East Molesey have good mature tree cover. The riverside spaces are valued, providing access to the water as well as a pleasant environment for land-based recreation. Pedestrian and cycle routes link to the Thames Path, which is a defined National Trail.

Given the density of development within this area, opportunities relating to green and blue infrastructure are likely to arise from enhancing the existing provision, retrofitting green walls/roofs and improving private amenity spaces, rather than from providing new infrastructure.

Meeting Needs

Children's Play Provision

- The area is above the quantitative standard of 0.76sq. m of formal children's play provision per child, with no identified deficiency in access within the area.

Public Parks

- The area is above the quantitative standard of 0.9 ha of public parkland per 1,000 population, with no access deficiency identified in the area.

Opportunities

Any development or project to enhance the network within this area should consider the Borough-wide opportunities explored on pages 29 - 34 of this document. In addition, the local opportunities highlighted below are most significant in relation to this area (for more detailed information on each opportunity refer to pages 35 – 39:

- Opportunity 11

- Opportunity 12
- Opportunity 13

- Opportunity 15
- Opportunity 16

MAP TO BE
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Thames Ditton, Long Ditton, Hinchley Wood and Weston Green

Key Green and Blue Infrastructure

- Long Ditton Recreation Ground
- Giggs Hill Green
- Littleworth Common
- Stokes Field
- Weston Green

- River Thames
- Ditton Marina
- Littleworth Common Ponds

Area Summary

This is a cluster of individual communities in the north-east of the Borough, bordering the River Thames to the north with large areas of green space to the south of the A309.

This area is relatively well-served by public transport, and the boundary with the Royal Borough of Kingston-upon-Thames provides an opportunity to enhance active travel measures.

Littleworth and Ditton Commons are located within the south-east of this area and are Sites of Nature Conservation Importance. There is a BOA along the southern bank of the River Thames and development proposals in this area will be expected to <mark>enhance its biodiversity value.</mark>

The north and west of the area are prone to flooding, and development proposals should take account of the increase in this risk due to climate change when designing their schemes. With the exception of one site, potential development sites allocated in this area are likely to be relatively small-scale but will be expected to provide green infrastructure as the cumulative impact of these sites can be significant.

Meeting Needs

Children's Play Provision

- The area is below the quantitative standard of 0.76sq. m of formal children's play provision per child, with access deficiency to the east and west of the area

Public Parks

- The area is below the quantitative standard of 0.9 ha of public parkland per 1,000 population, with two small areas of deficiency identified in the west of the area.

Opportunities

Any development or project to enhance the network within this area should consider the Borough-wide opportunities explored on pages <mark>29 - 34</mark> of this document. In addition, the local opportunities highlighted below are most significant in relation to this area (for

more detailed information on each opportunity refer to pages <mark>35 – 39</mark>:

- Opportunity 10
- Opportunity 12

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- Opportunity 13
- Opportunity 15
- Opportunity 16

Esher

Key Green and Blue Infrastructure

- Esher Common
- West End Recreation Ground
- Claremont Landscape Garden
- Esher Green
- Lower Green Recreation Ground

- River Mole
- River Rythe
- Black Pond (Esher Common)

Area Summary

Esher is located within the centre of the Borough and has a relatively small residential population, mostly accommodated within large detached houses set within generous plots.

The area benefits from high quality landscape with a village green and a Grade I-registered historic garden at Claremont. The private residential estates located centrally within this area have generally open grass verges combined with green boundaries. The south of Esher is dominated by the nationally-designated Site of Special Scientific Interest at Esher, Arbrook and West End Commons. A large BOA incorporates these Commons and stretches across the A3 to include parts of Cobham and Oxshott.

Esher has the River Mole to its west, but there is almost no public access to the riverside and so opportunities to improve this will be welcomed. The area suffers from traffic congestion and so the promotion of active travel opportunities would provide multiple benefits.

Meeting Needs

Children's Play Provision

- The area is above the quantitative standard of 0.76sq. m of formal children's play provision per child, with no identified deficiency in access within the area.

Public Parks

- While there is no access deficiency identified, the area is below the quantitative standard of 0.9 ha of public parkland per 1,000 population.

Opportunities

Any development or project to enhance the network within this area should consider the Borough-wide opportunities explored on pages 29 - 34 of this document. In addition, the local opportunities highlighted below are most significant in relation to this area (for more detailed information on each opportunity refer to pages 35 – 39:

- Opportunity 11

- Opportunity 12
- Opportunity 13
- Opportunity 14
- Opportunity 15

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Cobham, Oxshott, Stoke D'Abernon and Downside

Key Green and Blue Infrastructure

- Ockham Common
- Downside Common
- Leg 'O' Mutton Field
- Oxshott Heath
- Prince's Coverts
- Stoke D'Abernon Recreation Ground
- Painshill Park

- River Mole
- Middle Pond (Fairmile Common)
- Littleheath Lake
- Downside Pond

Area Summary

This is a collection of communities each with its own distinctive character, though Cobham acts as its social and commercial centre. The area is physically separated from the remainder of the borough by the A3, reinforced by broad areas of Green Belt land. Traversing the area using active travel options is challenging, and so improvements would be welcomed.

Oxshott Heath, in the north of the area, forms part of a larger Site of Scientific Interest and Princes Coverts (in the east) is a locally-designated Site of Nature Conservation Importance. Both are recognised as BOAs and incorporation of green infrastructure measures into development on the intervening land will help to link these.

Large swathes of undeveloped land are in private ownership, limiting opportunities for the Council and partner organisations to deliver improvements.

Meeting Needs

Children's Play Provision

- The area is above the quantitative standard of 0.76sq. m of formal children's play provision per child, with no identified deficiency in access within the area.

Public Parks

- While the area is above the quantitative standard of 0.9 ha of public parkland per 1,000 population there are two small areas of deficiency identified in the north of the area and one in the east of the area.

Opportunities

Any development or project to enhance the network within this area should consider the Borough-wide opportunities explored on pages 29 - 34 of this document. In addition, the local opportunities highlighted below are most significant in relation to this area (for more detailed information on each opportunity refer to pages 35 –

39:

- Opportunity 11
- Opportunity 12

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- Opportunity 13
- Opportunity 14
- Opportunity 15

Claygate

Key Green and Blue Infrastructure

- Claygate Common
- Claygate Recreation Ground
- Hare Lane Green

Area Summary

Open countryside almost entirely surrounds Claygate, which is located in the east of the Borough. This separation gives Claygate an individual, village feel but also restricts connectivity with the rest of the borough. Measures to increase the opportunity to participate in active modes of travel will be welcomed.

Claygate has its own Parish Council, which promotes the good management of natural features as well as the protection of the area's existing open spaces and road verges. The Common, towards the south of this area, is designated as a Local Nature Reserve and forms part of a BOA together with Princes Coverts, on the southern side of the A3 in Oxshott. Linkages between Claygate Common and Arbrook Common (to the west, in Esher) would assist with connectivity for wildlife.

There is little blue infrastructure, though there is a pond on Foley Road and a number of ponds at the rear of houses on Hill View Road, as well as a pond to the west of Woodstock Lane South. The scale of development schemes coming forward in this area is likely to limit future opportunities to provide new blue infrastructure.

Meeting Needs

Children's Play Provision

- While there is no access deficiency identified, the area is just below the quantitative standard of 0.76sq. m of formal children's play provision per child.

Public Parks

- While there is no access deficiency identified, the area is below the quantitative standard of 0.9 ha of public parkland per 1,000 population.

Opportunities

Any development or project to enhance the network within this area should consider the Borough-wide opportunities explored on pages 29 - 34 of this document. In addition, the local opportunities highlighted below are most significant in relation to this area (for more detailed information on each opportunity refer to pages 35 – 39:

- Opportunity 12

- Opportunity 13
- Opportunity 15

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Ideas for inclusion in development proposals

This section of the document provides some initial suggestions as to how green and blue infrastructure can be incorporated into development proposals. Opportunities and solutions that are currently available are identified, but the Council will be flexible in supporting the implementation of the best solutions available at the time of delivery.

Extensions, outbuildings and replacement dwellings

- Incorporating green walls and roofs into the design
- Include bat and bird boxes and bricks, and insect refuges
- Using hedges as boundary treatments, instead of fences
- Planting schemes using native species of plant, shrubs and trees resilient to changing temperatures
- Retain good-quality existing trees and features
- SuDS, including permeable surfacing, using water butts and pond creation where feasible and appropriate
- Creating a compost heap
- Choosing and positioning external lighting to minimise lightspill

Larger proposals

In addition to the ideas listed above, larger development proposals should consider:

- Improving the condition of existing cycleways and footpaths
- Greening internal pedestrian/cycle/vehicular routes using verges, hedgerows, wildflower planting and rough grassland banks
- Including space for allotments, a community orchard or a community garden
- Incorporating appropriate SuDS, dependent on the soil type
- Where public open space is provided, setting play equipment/areas within a larger natural habitat
- Connecting new green spaces to existing green spaces in the surrounding area

The design of the proposal will need to balance any potential for conflict between areas of habitat/wildlife importance or enhancement and green infrastructure which is publicly accessible so as to avoid undue disturbance. Consideration will also need to be given as to how new green and blue infrastructure assets will be managed and maintained in the future.

The Local Design Code and Renewables Supplementary Planning Document, both to be produced following the adoption of the Local Plan, will set out more detailed guidance on how green and blue infrastructure will be expected to be incorporated into development proposals. The Council also intends to commission a Green and Blue Infrastructure Strategy to identify site-specific opportunities.

Glossary

Active Travel – the transport of people or goods using non-motorised means.

Biodiversity – the number and types of plants and animals that exist within their natural environments.

Biodiversity net gain – provision of an overall increase in natural habitat and ecological features, aiming to leave ecological networks in a better state than they were before development.

Blue Infrastructure – The water-based elements of our environment essential to the quality of our lives. It includes watercourses, ponds, lakes, sustainable drainage systems, floodplains and wetlands.

Green Corridor – linear green infrastructure, such as cycleways, rights of way and disused railway lines. These can support both human and ecological connectivity.

Green Infrastructure – A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.

Green space – An area of vegetated land separating or surrounding areas of intensive residential or commercial use, and devoted primarily to providing recreational opportunities.

Local Nature Reserves - A statutory term denoting an area of land designated under the National Parks and Access to the Countryside Act 1949 as being of importance for nature conservation and where public understanding and enjoyment of nature conservation is actively promoted.

Open space – All open space of public value, including not just land, but also areas of water (such as rivers, canals, lakes and reservoirs) which offer important opportunities for sport and recreation and can act as a visual amenity.

Natural Capital – Stocks of natural assets such as geology, soil, air, water and all living things.

Nature Recovery Network – an expanding, increasingly connected, network of wildlife-rich habitats supporting species recovery, alongside wider benefits such as carbon capture, water quality improvements, natural flood risk management and recreation. It includes the existing network of protected sites and other wildlife-rich habitats as well as landscape- or catchment-scale recovery areas where there is coordinated action for species and habitats.

Special Protection Area – Areas classified under regulation 15 of the Conservation of Habitats and Species Regulations 2017 which have been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds.

Site of Special Scientific Interest - A site identified by Natural England under the Wildlife and Countryside Act 1981 as an area of special interest by reason of its flora, fauna, geological or physiographic features.

Sites of Nature Conservation Importance – A site with substantive nature conservation value, based on important and threatened habitats and species within a region. These sites are selected by local authorities in conjunction with the local Wildlife Trust.
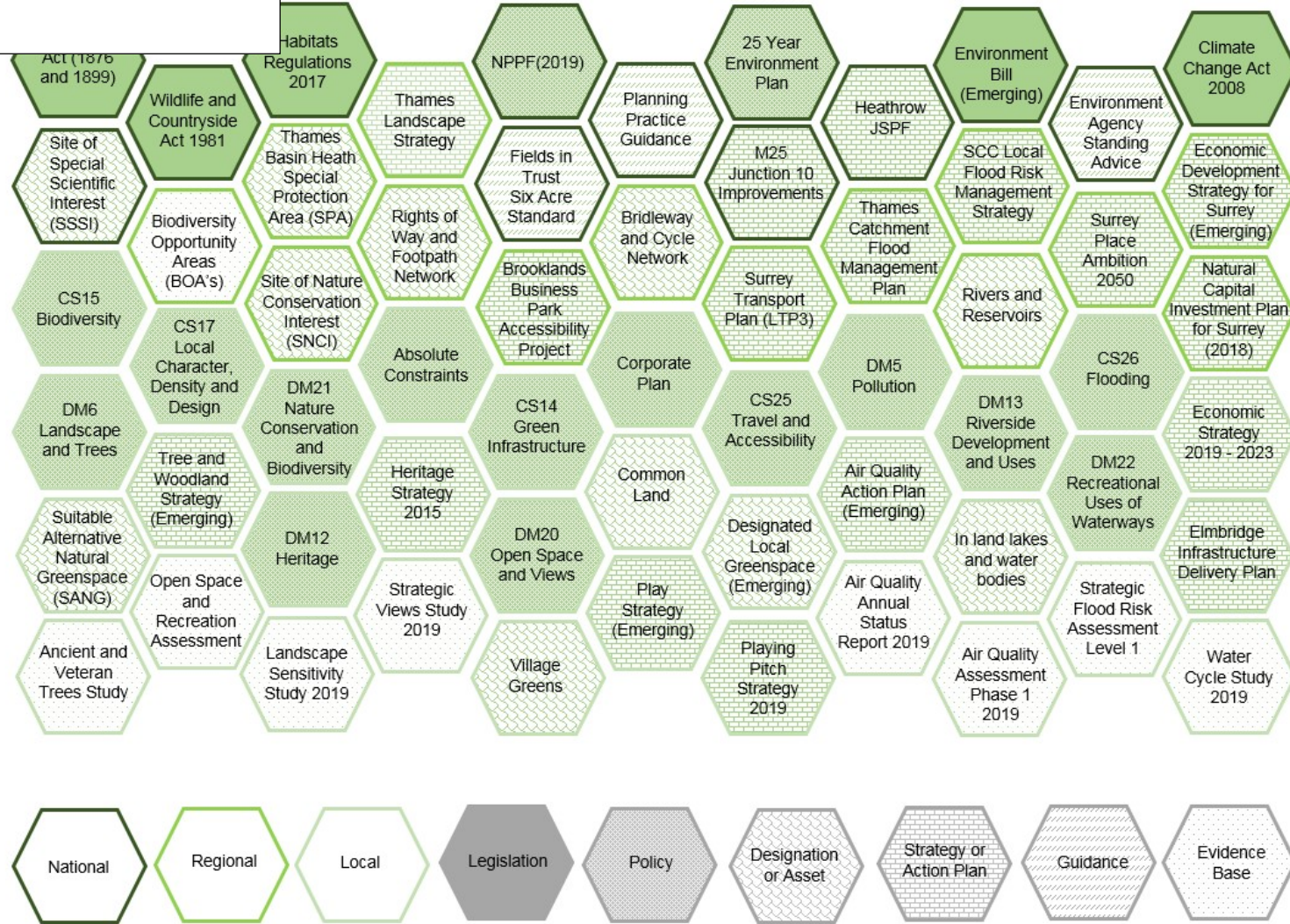
Sustainable Drainage Systems (SuDS) – systems designed to reduce the impact of new development on surface water drainage

Appendix A - Policy Connections

Act (1876 and 1899)

Habitats Regulations 2017

NPPF (2019)

25 Year Environment Plan

Environment Bill (Emerging)

Climate Change Act 2008

Wildlife and Countryside Act 1981

Thames Landscape Strategy

Planning Practice Guidance

Heathrow JSPF

Environment Agency Standing Advice

Site of Special Scientific Interest (SSSI)

Thames Basin Heath Special Protection Area (SPA)

Fields in Trust Six Acre Standard

M25 Junction 10 Improvements

SCC Local Flood Risk Management Strategy

Economic Development Strategy for Surrey (Emerging)

Biodiversity Opportunity Areas (BOA's)

Rights of Way and Footpath Network

Bridleway and Cycle Network

Thames Catchment Flood Management Plan

Surrey Place Ambition 2050

Natural Capital Investment Plan for Surrey (2018)

Site of Nature Conservation Interest (SNCI)

Surrey Transport Plan (LTP3)

Rivers and Reservoirs

CS15 Biodiversity

CS17 Local Character, Density and Design

Absolute Constraints

Corporate Plan

DM5 Pollution

CS26 Flooding

DM6 Landscape and Trees

DM21 Nature Conservation and Biodiversity

CS14 Green Infrastructure

CS25 Travel and Accessibility

DM13 Riverside Development and Uses

Economic Strategy 2019 - 2023

Tree and Woodland Strategy (Emerging)

Heritage Strategy 2015

Common Land

Air Quality Action Plan (Emerging)

DM22 Recreational Uses of Waterways

Suitable Alternative Natural Greenspace (SANG)

DM12 Heritage

DM20 Open Space and Views

Designated Local Greenspace (Emerging)

In land lakes and water bodies

Elmbridge Infrastructure Delivery Plan

Open Space and Recreation Assessment

Play Strategy (Emerging)

Air Quality Annual Status Report 2019

Strategic Flood Risk Assessment Level 1

Ancient and Veteran Trees Study

Landscape Sensitivity Study 2019

Strategic Views Study 2019

Village Greens

Playing Pitch Strategy 2019

Air Quality Assessment Phase 1 2019

Water Cycle Study 2019

National

Regional

Local

Legislation

Policy

Designation or Asset

Strategy or Action Plan

Guidance

Evidence Base

Appendix B - Policy Connections - Links

Links to information shown in the hexagons in Appendix A…..

Appendix C - Green and Blue Infrastructure and Sustainable Development (accessible table/list)

List featured in honeycomb graphic on page 13

Appendix D - Green and Blue Infrastructure – Useful Links

Use this page for links to relevant and useful documents

Appendix E - Tree planting and maintenance

Surrey's Climate Change Strategy (2020) includes an ambition to see 1.2 million new trees planted within the county by 2030. The supporting Tree Strategy sets out the need to plant the right trees in the right places and emphasises the importance of aftercare, as well as valuing existing trees.

To contribute towards the delivery of this ambition, the Council will need to work in partnership with landowners and developers as well as using its own land. The types of locations that may be suitable for tree planting include:

- Open spaces such as recreation grounds and Common Land
- Highway verges in public ownership
- Land owned by charities and housing associations
- Land on which development is proposed
- Land in private ownership, including residential gardens

The following considerations will need to be taken into account when assessing whether or not a site has the potential to support new trees:

- Protecting the existing landscape features, habitats and species (particularly grassland and wetland habitats)
- Protected views
- Overground and underground services, such as gas pipes

- Proximity to houses and other buildings
- Current and future use of open spaces, such as for sports or provision of access rotes
- Natural surveillance and discouragement of anti-social behaviour

Wherever feasible broad-canopy trees should be planted, as opposed to ornamental trees, as these have a greater positive environmental benefit. A wide species selection will ensure that new planting contributes to the character of the area (e.g. London Plane in urban areas) and biodiversity value (e.g. Oak, Birch and Thorn). Other factors to consider when selecting the species include:

- The eventual size, in relation to the space available and other trees in the vicinity
- The tree's appearance, growth habit and lifespan
- The amount and type of debris dropped by the tree, with regard to its location

Species with a known poor resilience to diseases (e.g. Elm and Ash) should not be planted unless there is a specific reason to do so and this is supported by advice from specialists such as the Forestry Commission. Trees should be sourced from reputable suppliers and should ideally have plant passports showing the origins of the seed or plant material. UK-grown and sourced trees will be preferable to

imported trees.

Improving the age diversity of the Borough's tree stock will ensure continuous cover and reduce future peaks in tree failure, so it is recommended that trees are planted on an annual basis. Taking into account climate change, the best planting season is late Autumn, but this can be extended into early Spring.

Planting whips should be done in groups and is better suited to larger planting areas. Single trees can be planted on an individual basis and should have water bags, stakes and ties. Newly-planted trees should be watered in immediately and mulched.

Maintenance following planting is essential for the establishment and future successful growth of the trees. All trees, regardless of their size and species, will require regular watering for a minimum of the first year following planting.