Water Resource Management Plan 2029

SEA Scoping Appendix B - Baseline Data

Thames Water

September 2026

Contents

Appendix B. Baseline Data

Note all counts are approximate. For clarity, where there are instances of designated sites made up of multiple component areas, this is counted as one site.

B.1. Biodiversity, flora and fauna

Table 1: Biodiversity, flora and fauna

Feature	Thames Water Plan Area
Special Protection Areas (SPAs)	Within the Plan Area, there are four classified SPAs[1]: • **Lee Valley** - is designated for its support to breeding bird populations, including Bittern, Shoveler and Gadwall; • **South West London Waterbodies** - is designated for internationally important numbers of wintering Gadwall and Shoveler; • **Thursley, Hankley & Fresham Commons** - is designated due to supporting internationally important populations of nightjars, woodlark and dartford warblers; and • **Wealden Heaths Phase II** - is designated due to supporting internationally important populations of nightjars, woodlark and dartford warblers.
	Explanatory text and anticipated future trends: Special Protection Areas (SPAs) are protected areas for birds in the UK. SPAs are classified in accordance with European Council Directive 2009/147/EC on the conservation of wild birds, known as the Birds Directive. SPAs protect rare and vulnerable birds (as listed on Annex I of the Birds Directive), and regularly occurring migratory species. JNCC[2] is responsible for advising the UK Government and Devolved Administrations on aspects of the classification and management of SPAs from a UK perspective, including reporting on the implementation of the UK SPA programme and the status and trends of protected bird species. New potential Special Protection Areas (pSPAs) for classification or updates to existing SPAs are submitted in tranches. The UK's Statutory Nature Conservation Bodies (SNCBs) are responsible for assessing the condition of SPAs. As of June 2026, approximately 80.77% of all SPAs in the UK are classified as being in favourable or unfavourable-recovering condition, with 4.51% classed as unfavourable with no change, 14.11% unfavourable – declining, and 0.03% partially destroyed[3]. The locations of SPAs are shown in Appendix C. Anticipated Future Trends[4]:

[1] https://www.data.gov.uk/dataset/174f4e23-acb6-4305-9365-1e33c8d0e455/special-protection-areas-england2
[2] https://jncc.gov.uk/our-work/special-protection-areas/
[3] https://designatedsites.naturalengland.org.uk/ReportUnitConditionSummary.aspx?SiteType=SPA
[4] Bournemouth University (2015) *Biodiversity Report Card.* Available: https://nerc.ukri.org/research/partnerships/ride/lwec/report-cards/biodiversity-source04/

Feature	Thames Water Plan Area
	The composition of flora and fauna on each Protected Area (PA) will change – high confidence (medium evidence, high agreement) Cold adapted species of high latitudes and altitudes will tend to decrease on PAs, whilst warm adapted species will tend to increase – medium confidence (medium evidence, medium agreement) • PAs in the North of the UK will gain plant species overall, whilst PAs in the south may lose some native plant species. This pattern is reversed for UK breeding birds – low confidence (medium evidence, low agreement) • Species with lower dispersal capacities and those for which urban and intensive agricultural areas are a barrier to dispersal will be unable to colonize PAs that become climatically suitable – low confidence (limited evidence, medium agreement • Increasing range mismatching of interacting species, such as butterflies and their host plants, might mean that more management is necessary on PAs to preserve species that interact with each other – low confidence (limited evidence, medium agreement). Integrating consideration of climate change into management plans for the PA network is likely to result in more effective (and cost-effective) conservation solutions. In order to facilitate this integration, monitoring of climate change impacts and management actions should be carried out to enable adaptive decision making.
Special Areas of Conservation (SAC)	Within the Plan Area there are 18 classified SAC: • Aston Rowant • Burnham Beeches • Chilterns Beechwoods • Cothill Fen • Epping Forest • Hackpen Hill • Hartslock Wood • Kennet & Lambourn Floodplain • Kennet Valley Alderwoods • Little Wittenham • North Meadow & Clattinger Farm • Oxford Meadows • Richmond Park • River Lambourn

Feature	Thames Water Plan Area
	• Thursley, Ash, Pirbright & Chobham • Wimbledon Common • Windsor Forest & Great Park • Wormley-Hoddesdonpark Woods
	Explanatory text and anticipated future trends: SACs are strictly protected sites designated under the EC Habitats Directive. Article 3 of the Habitats Directive requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended). The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds). Sites of Community Importance (SCIs) are sites that have been adopted by the European Commission but not yet formally designated by the government of each country. Candidate SACs (cSACs) are sites that have been submitted to the European Commission, but not yet formally adopted. JNCC is responsible for advising the UK Government and devolved administrations on aspects of the designation and management of SACs from a UK perspective. SACs are of national and international conservation importance. As of June 2026, approximately 78.73% of all SAC in the UK are classified as being in favourable or unfavourable-recovering condition, with 9.48% classed as unfavourable with no change, 11.69% unfavourable – declining, and 0.04% partially destroyed[5]. The locations of SACs shown in Appendix C. Anticipated Future Trends[6]: See above details that are applicable to all forms of PA.
Ramsar Sites	Within the Plan Area there are three classified Ramsar Sites: • **Lee Valley** - A series of embanked water supply reservoirs, sewage treatment lagoons, and former gravel pits extending along about 24km of the valley from near Ware southward to Finsbury Park in London

[5] Natural England (2026) Designated Sites View. Available: https://designatedsites.naturalengland.org.uk/ReportUnitConditionSummary.aspx?SiteType=SAC
[6] UKRI (2026) Available: https://www.ukri.org/councils/nerc/

Feature	Thames Water Plan Area
	• South West London Waterbodies - Comprises a number of reservoirs and former gravel pits in the Thames Valley adjacent to Heathrow Airport between Windsor and Hampton Court which support internationally important numbers of Gadwall Anas strepera and Shoveler Anas clypeata • Thursley & Ockley Bogs - The site is a valley mire complex which occurs within a matrix of heathland, where drainage is impeded, and a deep layer of peat has built up from the remains of bog-moss Sphagnum spp. which forms much of the vegetation
	Explanatory text and anticipated future trends: Ramsar sites are wetlands of international importance designated under the Ramsar Convention. The initial emphasis was on selecting sites of importance to water birds within the UK, and consequently many Ramsar sites are also Special Protection Areas (SPAs) classified under the Birds Directive. Sites proposed for selection are advised by the UK statutory nature conservation agencies, or the relevant administration in the case of Overseas Territories and Crown Dependencies, co-ordinated through JNCC. As of June 2026, approximately 77.92% of all Ramsar Site in England are classified as being in favourable or unfavourable recovering condition. Approximately 4.97% of Ramsar Sites are in an unfavourable condition with no change, 17.09% unfavourable – declining, and 0.01% partially destroyed[7]. The locations of Ramsar Sites within England are shown in Appendix C. Anticipated Future Trends[8]: See above details that are applicable to all forms of PA.
Marine Conservation Zones (MCZ)	There is one MCZ located within the Plan Area: Swanscombe.
	Explanatory text and anticipated future trends: The UK government aims to have 'clean, healthy, safe, productive and biologically diverse oceans and seas. The government has made a commitment to completing a network of Marine Conservation Zones (a type of Marine Protected Area), to create a Blue Belt of protected sites around our coasts. The locations of MCZs are shown in Appendix C.

[7] Natural England (2026) Designated Sites View. Available: https://designatedsites.naturalengland.org.uk/ReportUnitConditionSummary.aspx?SiteType=RAMSAR

[8] UKRI (2026) Available: https://www.ukri.org/councils/nerc/

Feature	Thames Water Plan Area
	Anticipated Future Trends[9]: Increasing marine development, pollution, fishing practices and climate change place pressure on MCZs and wider marine habitat and wildlife. Management measures may be required in order to restore or maintain the conservation status of the protected features of MCZs. See above details that are applicable to all forms of PA.
Sites of Special Scientific Interest (SSSI's)	There are 329 SSSIs located within the Plan Area. These SSSIs are each associated with Impact Risk Zones for a broad range of development proposals including those relevant to the water sector (large infrastructure, water supply, landfilling, incineration, development that may lead to air and dust pollution, large non-residential developments outside existing settlements).
	Explanatory text and anticipated future trends: A Site of Special Scientific Interest (SSSI) is a formal conservation designation of national importance. Usually, it describes an area that's of particular interest to science due to the rare species of fauna or flora it contains - or even important geological or physiological features that may lie in its boundaries. SSSIs often contain important habitats such as grasslands, parkland and woodland. Some even contain ancient woodland and ancient trees. In other words, these areas have high conservation value and need to be protected. Official authorities in each country determine which sites should have SSSI status, for England this is Natural England. Approximately 76.15% of all SSSIs in England are classified as being in favourable or unfavourable recovering condition, with 9.78% classed as unfavourable no change, 13.95% unfavourable – declining, and 0.05% partially destroyed[10]. Natural England have also developed SSSI Impact Risk Zones (IRZs) which allow for a rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts. IRZs for a broad range of development proposals have been identified within the Plan Area including those relevant to the water sector including large infrastructure projects, water supply, landfilling and incineration, development that may lead to air and dust pollution and large non-residential developments outside existing settlements. The locations of SSSIs within the Plan Area are shown in Appendix C.

[9] UKRI (2026) Available: https://www.ukri.org/councils/nerc/

[10] Natural England (2026) Designated Sites View. Available: https://designatedsites.naturalengland.org.uk/ReportUnitConditionSummary.aspx?SiteType=ALL

Feature	Thames Water Plan Area
	Anticipated Future Trends[11]: See above details that are applicable to all forms of PA.
Nature Reserves (National and Local)	There are 11 National Nature Reserves (NNR) located within the Plan Area: • Broxbourne Woods • Aston Rowant • Chimney Meadows • Cothill • North Meadow, Cricklade • Swanscombe Skull Site • Wealden Heaths • Wychwood • Ashtead Common • Burnham Beeches • Richmond Park There are 184 Local Nature Reserves (LNR) located within the Plan Area.
	Explanatory text and anticipated future trends: National Nature Reserves (NNRs) were established to protect some of our most important habitats, species and geology, and to provide 'outdoor laboratories' for research. Natural England manages approximately two thirds of England's NNRs. The remaining reserves are managed by organisations approved by Natural England, such as the National Trust, Forestry Commission, RSPB, Wildlife Trusts and local authorities. As of June 2026, approximately 73.14% of all NNRs in England are classified as being in favourable or unfavourable recovering condition, with 3.84% classed as unfavourable no change, 22.80% unfavourable – declining, and 0% partially destroyed[12]. Local Nature Reserves (LNRs) are a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949 by principal local authorities. Parish and Town Councils can also declare LNRs, but they must have the powers to do so delegated to them by a principal local authority. LNRs are places with wildlife or

[11] UKRI (2026) Available: https://www.ukri.org/councils/nerc/

[12] Natural England (2026) Designated Sites View. Available: https://designatedsites.naturalengland.org.uk/ReportUnitConditionSummary.aspx?SiteType=NNR

Feature	Thames Water Plan Area
	geological features that are of special interest locally. They offer people opportunities to study or learn about nature or simply to enjoy it. They range from windswept coastal headlands, ancient woodlands and flower-rich meadows to former inner-city railways, long abandoned landfill sites and industrial areas now re-colonised by wildlife. They are an impressive natural resource which makes an important contribution to England's biodiversity. The locations of NNRs and LNRs within the Plan Area are shown in Appendix C. Anticipated Future Trends: See above details that are applicable to all forms of PA.
RSPB Reserves	There are three RSPB reserves located within the Plan Area: • Rye Meads • Barfold Copse • Otmoor
	Explanatory text and anticipated future trends: RSPB reserves are nature reserves run by the Royal Society for the Protection of Birds (RSPB); a non-statutory body incorporated by Royal Charter. RSPB reserves cover a broad range of habitat and landscapes, including heathland, estuaries, cliffs. Anticipated Future Trends: See above details that are applicable to all forms of PA.
Priority Habitat	The following priority habitats are located within the Plan Area, making up approximately 12.6% of the land intersected by the Thames Water region: • Coastal and floodplain grazing marsh – 8,903.14ha • Traditional orchard – 796.2ha • Deciduous woodland – 74,889.04ha • Good quality semi-improved grassland – 5,641.53ha • Lowland fens – 422.01ha • Lowland heathland – 913.94ha • No main habitat but additional habitats present – 7,307.19ha • Ponds – 29.09ha • Reedbeds – 40.01ha • Coastal and floodplain grazing marsh, Lowland meadows – 44.06ha

Feature	Thames Water Plan Area
	• Lowland calcareous grassland – 5,865.25ha • Lowland dry acid grassland – 891.62ha • Lowland meadows – 3,004.25ha • Purple moor grass and rush pastures – 57.42ha • Ponds, Reedbeds – 0.13ha • Blanket bog, Deciduous woodland – 0.23ha • Coastal and floodplain grazing marsh, Coastal saltmarsh – 0.06ha • Lowland dry acid grassland, Lowland heathland – 12.95ha • Mudflats – 315.99ha • Reedbeds, Coastal saltmarsh – 4.81ha • Coastal saltmarsh – 50.98ha
	Explanatory text and anticipated future trends: Priority habitats can be designated as protected areas called Sites of Special Scientific Interest (SSSIs). They can also be outside of these SSSI protected areas but be under Higher Level Stewardship (HLS) or Countryside Stewardship (CS) agreements or fall within Forestry Commission (FC) 'Managed woodland'. Some priority habitats, however, fall outside of the protection of all these schemes. Anticipated Future Trends: See above details that are applicable to all forms of PA.
Local Wildlife Sites	*Targeted council data will be obtained as necessary to support the local assessment of Plan feasible options as part of SEA Stage B*
	Explanatory text and anticipated future trends: Local Wildlife Sites are areas of land that are especially important for their wildlife. They are identified and selected locally using scientifically-determined criteria and surveys. They are corridors for wildlife, forming key components of ecological networks. They make up a web of stepping stones and corridors for wildlife, forming key components of ecological networks. Anticipated Future Trends: It is anticipated that the number of LWS within and beyond the Plan area will continue to grow through the identification of Candidate LWS. See above details that are applicable to all forms of PA.
National Priority Focus Areas	There are 26 National Priority Focus Areas located within the Plan Area.
	Explanatory Text and anticipated future trends:

Feature	Thames Water Plan Area
	Natural England's National Priority Focus Areas are typically where NE are targeting more than one delivery programme. So, these areas are the key opportunities for NE to integrate its delivery to achieve better outcomes. The focus areas are a broad guide as to where NE anticipate focusing more effort in future, though they are not precise and are anticipated to evolve. NE want to focus proportionately more of its resource in focus areas and Nature Improvement Areas over time. Anticipated Future Trends: While not a precise or definitive map, these areas indicate where future investment and focus will be in respect of Natural England. While not a moratorium on projects that are outside focus areas, there is a strong steer towards projects within these areas in the future.
Nature Improvement Areas	There are two nature improvement areas located within the Plan Area: • Greater Thames Marlborough • Marlborough Downs
	Explanatory text and anticipated future trends: The Nature Improvement Areas project was in response to the Governments review, with the aim of creating bigger, better, more and joined spaces for nature. In 2011 a competition was launched by DEFRA to select twelve pilot sites for NIAs and in response seventy-six entries were made. In 2012 a final list of 12 NIAs were announced and run with the aid of Local Nature Partnerships and around 11,000 volunteers. Anticipated Future Trends: The NIA project has finished but the philosophy of landscape scale conservation will be continued through future initiatives including Farmer clusters (Countryside Stewardship Facilitation Fund scheme), Brighton Integrated Catchment Management Partnership and funding from the Rampion Offshore Wind Farm project.
Ancient Woodland & Veteran Trees etc.	The Ancient Woodland Inventory for England identifies over 5,600 sites of Ancient Woodland within the Plan area. Some areas have been continuously wooded since at least 1600AD are scattered across the plan area.
	Explanatory text: Ancient woods are areas of woodland that have persisted since 1600 in England and Wales, and 1750 in Scotland. They are relatively undisturbed by human development. As a result, they are unique and complex communities of plants, fungi, insects and other microorganisms. Ancient woodlands can be classified into different categories, including Ancient semi-natural woods (woods that have developed naturally) and plantations on ancient woodland sites (ancient woodlands that have been felled and replanted with non-native species). Ancient woodland is identified using presence or absence of woods from old maps, information about the wood's name, shape, internal boundaries,

Feature	Thames Water Plan Area
	location relative to other features, ground survey, and aerial photography. The Forestry Commission is responsible for protecting, expanding and promoting the sustainable management of woodlands. Approximately 1,225 ancient woodlands are under threat in the UK due to conifer plantations, overgrazing, infrastructure development and the spread of invasive species. Anticipated Future Events: See above details that are applicable to all forms of PA. In addition to the threat of climate change, ancient woodlands are at particular threat from major infrastructure projects, including road and rail schemes. Whilst many schemes take part in some form of habitat regeneration (such as replanting), the replacement habitat is not comparable to the ecological value of ancient woodlands that have been preserved since 1600. Once these habitats are removed, they cannot be replaced or regrown.
Priority Species	*Targeted council data will be obtained as necessary to support the local assessment of Plan feasible options as part of SEA Stage B*
	Explanatory text: Priority species are defined as those appearing on the priority species list for England (Natural Environmental and Rural Communities Act 2006 - Section 41). In England there are 940 species on the priority species list. The priority species were highlighted as being of conservation concern for a variety of reasons, including rapid decline in some of their populations. The index of distribution of priority species in England decreased to 82 by 2024, a decrease of 18% of the 1970 value[13]. Over this long-term period, 22% of species showed a strong or weak increase and 34% showed a strong or weak decline. However, between 2019 and 2024, the distribution index decline remained stable. Over this short-term period, 86% of species showed a strong or weak increase and 2% showed a strong or weak decline. This indicator measures change in the number of 1 kilometre grid squares across England in which priority species were recorded in any given year. This is referred to as the 'occupancy index' and is effectively equivalent to changes in the distribution of priority species for which data are available. The indicator will increase when priority species become more widespread on average and decrease when species becomes less widespread on average. Presented in this indicator are values of abundance relative to the starting year (set to a value of 100), rather than absolute

[13] DEFRA (2026) Status of priority species: distribution. Available: https://www.gov.uk/government/statistics/england-biodiversity-indicators/status-of-priority-species-distribution

Feature	Thames Water Plan Area
	abundance. Changes to this value reflect the average change in species abundance; if on average species experienced a doubling in abundance, the indicator would rise to 200, if they halved it would fall to a value of 50.
Functionally Linked Land	*Targeted council data will be obtained as necessary to support the local assessment of Plan feasible options as part of SEA Stage B*
	Explanatory text: Functionally linked land is land or sea outside designated conservation areas such as SPAs, SACs, or Ramsar sites, which provides critical support for species that rely on the protected site for part of their life cycle. These areas are not formally protected but are vital for activities like foraging, roosting, breeding, or migration, effectively acting as extensions of the designated habitats.
Groundwater Dependent Terrestrial Ecosystems (GWDTE)	There are 123 GWDTE within the Plan Area.
	Explanatory text and anticipated future trends: Groundwater-dependent terrestrial ecosystems (GWDTEs) are land-based ecosystems whose plants and ecological functions rely on groundwater for some or all of their water needs, particularly when rainfall and soil moisture are insufficient. In the context of the Water Framework Directive, GWDTEs are typically defined as wetlands that depend critically on groundwater flows and/or groundwater chemistry. GWDTEs face a range of threats that affect either the quantity or quality of the groundwater on which they depend, including from groundwater abstraction, pollution drainage and lad improvement, climate change, physical development and infrastructure. These pressures can lead to habitat degradation, changes in plant communities, and loss of biodiversity. <u>Anticipated Future Trends:</u> Without effective management, these habitats are likely to face increasing pressure from groundwater abstraction as future water supply demand increases with population increases, pressure from climate change, land-use change, and potential for water quality deterioration.
County Wildlife Site (CWS)	*Targeted council data will be obtained as necessary to support the local assessment of Plan feasible options as part of SEA Stage B*
	Explanatory Text: County Wildlife Sites (CWS) are local, non-statutory designated sites that are recognised for their significant value for wildlife and biodiversity. They are one of the names used for Local Wildlife Sites (LWS) in England. Other areas may use terms such as Sites of Importance for Nature Conservation (SINCs) or Sites of Nature Conservation Importance

Feature	Thames Water Plan Area
	(SNCIs)[14]. They are usually recognised within local planning policy and are usually administered at a county or unitary authority scale. They are usually managed through a Local Sites partnership. This partnership consists of local organisations, each contributing different expertise and responsibilities. Local Sites should include all areas of substantive value including both the most important and the most distinctive species, habitats, geological and geomorphological features within a national, regional and local context. Local Sites: • provide comprehensive, rather than representative, networks of important sites • act as wildlife refuges for most of the UK's fauna and flora, complementing statutory protected sites through buffering and connectivity • play a significant role in achieving national and regional biodiversity targets • represent local character and distinctiveness • represent local geological diversity • contribute to quality of life and community wellbeing • provide opportunities for research and education Anticipated future trends[15]: CWS are expected to become increasingly important within the delivery of nature recovery objectives through the Environmental Improvement Plan, Local Nature Recovery Strategies (LNRSs), and broader biodiversity commitments in England. Government guidance identifies Local Wildlife Sites (including CWS) as important components of ecological networks and nature recovery. Many CWS are expected to benefit from: • Environmental land management schemes. • Biodiversity Net Gain (BNG) requirements. • Targeted conservation management.

[14] Natural England (2026) Local Sites and nature conservation. Available: https://www.gov.uk/government/publications/local-sites-and-nature-conservation/local-sites-and-nature-conservation

[15] Natural England (2026) Local Sites and nature conservation. Available: https://www.gov.uk/government/publications/local-sites-and-nature-conservation/local-sites-and-nature-conservation

Feature	Thames Water Plan Area
	• Habitat restoration projects associated with LNRS priorities Despite increased policy support, many CWS remain vulnerable because they are non-statutory designations and do not have the legal protection afforded to statutory sites such as SSSIs. Development pressure, particularly around major growth areas, may continue to result in habitat loss, fragmentation or indirect effects where planning policies are insufficient or not fully effective.
Roadside Nature Reserves (RNR)	*Targeted council data will be obtained as necessary to support the local assessment of Plan feasible options as part of SEA Stage B*
	Explanatory Text: Road verges are home to almost half of the UK's wildflower species (approximately 720 different flowers). In turn these flowers are home to hundreds of species of pollinators. Across the UK there are around 300,000 miles of road verge, which, if managed for wildlife while keeping road safety in mind, can provide a huge network of corridors and refuges for nature. Road verges create an enormous area of land (over 200,000ha) that cannot be put to any other use, providing a great opportunity to build a network of vital wildlife habitat. While some road verges i.e. at junctions, certain bends or on busy roads, need to be cut for driver and pedestrian safety, many can simply be left to grow and remain uncut until late summer when seeds have set and insects have benefitted from the nectar and pollen[16]. The designation enables the management of these areas for their wildlife, botanical, geological or ecological value. They are typically designated by local authorities, Wildlife Trusts, or county conservation partnerships to protect particularly important sections of roadside habitat. <u>Anticipated future trends:</u> There is a growing trend towards: • Reduced mowing frequencies. • Seasonal cutting regimes. • Removal of arisings to maintain species-rich grassland. • Creation of pollinator-friendly habitats. These measures can improve habitat quality and increase floral diversity, benefitting a range of invertebrates and other wildlife. However, the following factors are likely to negatively affect RNRs:

[16] The Wildlife Trust (2026) Managing rod verges. Available: https://www.wildlifetrusts.org/managing-road-verges-wildlife

Feature	Thames Water Plan Area
	Climate Change: • Increased drought stress on grasslands. • Changes in species composition. • More extreme weather events. • Expansion of some invasive and non-native species. Development and infrastructure pressure (Road widening, junction improvements, active travel schemes and adjacent development): • Habitat loss. • Fragmentation. • Disturbance during construction. • Changes in drainage or roadside management. These pressures may reduce the ecological value of some Roadside Nature Reserves over time. Pollution and invasive species • Nutrient enrichment from runoff. • Pollution from road traffic. • Encroachment by invasive plant species.
Nature Recovery Network / Local Nature Recovery Strategy	*Targeted council data will be obtained as necessary to support the local assessment of Plan feasible options as part of SEA Stage B*
	Explanatory Text: Nature Recovery Networks are coordinated networks of wildlife-rich areas designed to restore, connect, and enhance nature across landscapes, benefiting both biodiversity and human wellbeing. NRNs aim to increase biodiversity, restore habitats, and create resilient ecological networks beyond isolated nature reserves, integrating wildlife recovery into towns, cities, and countryside NRNs address multiple environmental challenges: • Biodiversity loss: By connecting habitats, species have more space to live, feed, breed, and migrate • Climate resilience: Networks allow ecosystems to adapt to changing conditions and extreme weather events • Human wellbeing: Access to green spaces improves mental and physical health, provides natural flood management, and supports ecosystem services like pollination

Feature	Thames Water Plan Area
	Local nature recovery strategies agree priorities for nature recovery and propose actions in the locations where it would make a particular contribution to achieving those priorities. The Secretary of State for Environment, Food and Rural Affairs has appointed 48 responsible authorities to lead on preparing a local nature recovery strategy for their area. Together these 48 strategy areas cover the whole of England with no gaps or overlaps[17]. Anticipated future trends: The anticipated future trend is generally positive, as these initiatives are specifically intended to deliver long-term improvements in biodiversity, habitat quality and ecological connectivity. Some of the main benefits include: • Increased habitat creation and restoration • Improved ecological connectivity • Enhancement through biodiversity net gain • Greater reliance to climate change • Increased policy and funding support
Invasive Non-Native Species (INNS)[18]	There are currently 194 different species of INNS within the Thames River Basin and the UK more widely. Minimum sizes of INNS range from 200 millimetres (mm) for terrestrial animals, down to 100 micrometres (µm) for small sedentary aquatic animals and 0.1 µm for aquatic pathogens, influencing the difficulty of preventing their spread. Explanatory Text: INNS are species that have been introduced outside their natural range and which spread in a way that causes harm to the environment, the economy, human health, or infrastructure. Any development can contribute to their spread, especially water supply infrastructure which are located within the water environment, providing another pathway for dispersal. Anticipated future trends: Thames Water already has existing INNS mitigation measures employed across its estate, including policy, process and educational measures along with prevention and control measures at some key sites. These 'harder' prevention and control measures include washdown stations at sailing reservoirs, disinfectant stations at fisheries sites, project-

[17] DEFRA (2023) Local nature recovery strategies. Available: https://www.gov.uk/government/publications/local-nature-recovery-strategies/local-nature-recovery-strategies

[18] Thames Water (2022) Thames Water AMP7 WINEP Company-wide INNS Plan.

Feature	Thames Water Plan Area
	specific INNS monitoring and site-specific management of new INNS introductions. Different types of INNS mitigation measure to manage the spread of INNS includes: • Biosecurity roles • Education • Standard operating procedures • Surveys and monitoring • Waste management • Site security • Washing facilities • Research • Raw water transfer mitigation measures

B.2. Population and Human Health

Table 2: Population and Human Health

Feature	Thames Water Plan Area
Population and Locations of Major Settlements	Thames Water serves approximately 16 million people[19]. Some of the key urban areas within the plan area include (2024 populations estimates)[20]: • Swindon – population of 220,646 • Newbury – population of 74,420 • Oxford – population of 187,762 • Banbury – population of 61,976 • Reading – population of 373,578 • Aylesbury – population of 102,656 • High Wycombe – population of 145,293 • Slough – population of 192,326 • London – population of 10,914,333
	Explanatory text and anticipated future trends: Latest ONS figures for household projections in England show an indication of the future number of households in England and its regions and local authorities[21]. These are used for planning in areas such as housing and social care. The latest household projections show a continued rise in the number of households in England, at a level closely in line with what was previously projected. Between 2022 and 2032, the number of households in England is projected to grow from 23.5 million to 25.9 million, an increase of 10.3% (2.4 million). The projected increase of 10.3% equates to an average of 242,000 additional households per year. For the same period (2022 to 2032) in the 2018-based projections, it was projected that there would be an average of 158,000 additional households per year. There continues to be much variation across age groups, regions and household types. ONS project the majority of household growth over the next 10 years will be because of an increase in older households without dependent children, particularly those where the household reference person is aged 75 years and over. This shows the potential impact of an ageing population on future household formation.

[19] Thames Water (no date) Who we are. Available: https://www.thameswater.co.uk/about-us

[20] City Population (2024) United Kingdom. Available: https://www.citypopulation.de/en/uk/cities/

[21] Office of National Statistics (2021) Household projections for England: 2022 based. Available: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/householdprojectionsforengland/2022based

Feature	Thames Water Plan Area
	The South East Region is expected to see substantial population growth in the coming years, with a projected population increase of 6.39% from mid-2022 to mid-2032 (approximately 600,000 people), whilst the proportion of residents of an older age increasing in line with the trend across much of England. Development across the Plan Area needs to be of the increasing demand that population growth will place on water infrastructure and resources take into consideration. There will be a need to promote development that is supported by adequate water supply capacity and investment in infrastructure to ensure that new and existing communities have access to reliable water services.
General Health	There are 56 Clinical Commissioning Groups within or partially intersecting the Plan Area. General health trends expected to be in keeping with that reported at the Regional level (South East and London, ONS Census data 2021): • Very Good Health – 51.7% • Good Health – 33.0% • Fair Health – 11.1% • Bad Health – 3.3% • Very Bad Health – 1.0%
	Explanatory text and anticipated future trends: The Health Survey for England monitors trends in the nation's health and care, providing survey, interview and medical examination-based findings on a range of topics including weight, eating disorders, behaviours (including smoking and alcohol consumption) and health issues (includes diabetes, hypertension and high cholesterol). As a society, people are living longer – life expectancy in England reached 78.7 years for men and 82.7 for women in 2021 following the pandemic[22]. Inequalities however persist and the richest areas enjoy 19 more years in good health than those in poorest areas. The death rate for dementia and Alzheimer's disease, already the leading cause of death in women is anticipated to become the leading cause of death in men and the number of people with diabetes is expected to increase by a million – from just under 4 million in 2017 to almost 5 million in 2035[23].

[22] UK Health Security Agency (2021) What the Health Profile for England shows us about the wider impacts of COVID-19 on health. Available: https://ukhsa.blog.gov.uk/2021/09/15/what-the-health-profile-for-england-shows-us-about-the-wider-impacts-of-covid-19-on-health/

[23] Ministry of Housing, Communities and Local Government (2019) The English Indicies of Deprivation 2019. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/835115/IoD2019_Statistical_Release.pdf

Feature	Thames Water Plan Area
	Health profiles for LAs across the Plan Area in 2021 show seven LAs reporting generally better health than the England average in 2015 (Index Scores over 119)[24].
Community Features	Within the Plan Area, the following areas of greenspace have been identified: • 1,327 no. Allotments Or Community Growing Spaces; • 5,073 no. Play Spaces; • 452 no. Cemeteries; • 2,563 no. Public Parks Or Gardens; • 4 no. National Trails; • 32 no. Country Parks; and • 1 no. National Park.
	Explanatory text and anticipated future trends: There is increasing evidence that provision of areas of greenspace contribute to mental and physical wellbeing however access varies greatly depending on where people live. The most economically deprived areas often have less available public greenspace, meaning people in those communities have fewer opportunities to benefit. The Committee on Climate Change found that the total proportion of urban greenspace in England declined by 8 percentage points between 2001 and 2018. The Governments 25 Year Environmental Plan however acknowledges the essential role the natural environment and greenspace play in peoples physical and mental health and aims to improve population health and wellbeing by improving access to greenspace and delivering more good quality green infrastructure.
Population Projections	At the time of writing, population projections for the Thames Water area are being considered by WRSE and Thames Water as part of the development of RP29 and WRMP29 respectively, and no firm figures are available as yet. The relevant projections will be considered by the SEA once they are formally available from the plan making process. The Thames Water region serves approximately 16 million people. Population and housing forecasts for a forecasting period of 2020-2100 were prepared for our WRMP24. Based on the 2023 scenarios, population between 2021-2050 was predicted to increase between 9.1% to 30.9%, and between 2021-2100 to increase between 5.4% to 52.5%.
	Explanatory text and anticipated future trends: All regions in England had similar levels of population growth in the year to mid-2024, between 1.0% and 1.4%. Natural change in the year to mid-2024 increased the size of the population in four regions, London, the South East, West Midlands and East of England. The other regions had negative natural change, which reflects a long-term decline in fertility and an increasing number of deaths because of the growing proportion of older people. London had the highest rates of

[24] https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/healthinengland/2015to2021#health-in-england-data

Feature	Thames Water Plan Area
	natural change and net international migration; these were partially offset by net outward internal migration to other UK countries or regions in England[25]. The population of England is projected to increase by 6.4% between mid-2022 and mid-2032 compared with 5.9% for the UK. Between mid-2022 and mid-2032 the population is projected to increase across all regions as well as in 302 of the 309 local authorities in England (based on 2021 boundaries). Across the same period, the South East Region's population is expected to increase by 6.39% and in London, 6.71%[26].

[25] ONS (2023) Health in England 2015 – 2021. Available: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationestimatesforenglandandwales/mid2024#:~:text=Source:%20Population%20estimates%20from%20the%20Office%20for%20National%20Statistics,-Embed%20code&text=Natural%20change%20in%20the%20year,countries%20or%20regions%20in%20England.

[26] ONS (2025) Subnational population projections for England. Available: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2022based

B.3. Material Assets

Table 3: Material Assets

Feature	Thames Water Plan Area
Water Treatment Works / Water Supply	Thames Water's service area covers approximately 13,000 square kilometres (5,000 square miles) in and around London. This includes parts of Gloucestershire in the west, and Kent and Essex in the east. They provide water and wastewater services to 16 million customers across London and the surrounding counties[27]. Thames Water operates 100 Water Treatment Works and 350 Wastewater Treatment Works within the Plan Area[28].
	Explanatory text and anticipated future trends: Development in the Plan Area Region will need to respond to capacity issues in terms of these types of infrastructure. In some instances, development may need to support the delivery of new infrastructure where capacity issues emerge. Without a strategic approach, capacity issues in the region may prove more difficult to address in manner which benefits the highest number of residents in the plan area. Water companies are developing Water Resource Management Plans which will set out how they will commit to deliver a safe and sustainable water supply for future generations in decades to come. It sets out how they will safeguard supplies to millions of households across the South Eastover the next 5 years.
Authorised and Historic Landfill Sites	There are 1,286 historic landfill sites and 110 permitted waste sites located within the Plan Area.
	Explanatory text and anticipated future trends: The amount of waste sent to landfill across England has remained relatively stable since 2009 although peaks in 2019 for the South East and East of England demonstrate demand continues to be high. While the South East is a region of significant landfill capacity (c. 27 million m3 of inert waste and 24 million m3 of non-hazardous waste)[29] the number of non-hazardous landfill facilities is declining across the South East and a lack of new capacity being allocated in Local Plans is noted[30].
Major Utilities (major gas mains, overhead lines etc)	The electricity distribution operators in the Plan Area include UK Power Networks and Scottish and Southern Electricity Networks[31].

[27] Thames Water (no date) Who we are. Available: https://www.thameswater.co.uk/about-us

[28] (Atkins 2022) Thames Water AMP7 WINEP

[29] LetsRecycle.com (2020) Waste to landfill in England jumps 4% in 2019. Available: https://www.letsrecycle.com/news/waste-to-landfill-in-england-jumps-4-in-2019/

[30] South East Waste Planning Advisory Group (2018) Joint Position Statement: Non hazardous Landfill in the South East of England . Available: https://www.surreycc.gov.uk/__data/assets/pdf_file/0009/360792/Annex_C_-_SEWPAG_Non-Hazardous_Landfill_Joint_Position_Statement_Final.pdf

[31] Energy Network Association (no date) Who's my electricity operator. Available: https://www.energynetworks.org/customers/find-my-network-operator

	According to the National Grid Network Map, the Plan Area is intersected by cables and overhead powerlines throughout[32]. There are no gas terminals within the Plan Area. The Plan Area is intersected by gas pipelines[33]. There are also 73 substations within the Plan Area.
	Explanatory text and anticipated future trends: There are currently no gas terminals in the South East Region. There are areas of the South East Region within which gas pipelines and overhead power lines are present to facilitate supply. Without a strategic approach to development, it is less likely that development and new infrastructure is provided to complement the existing distribution of this infrastructure.
Other Material Assets	Within the Plan Area the following assets have been identified: • 2,123 no. Other Sports Facilities; • 1,629 no. Religious Grounds; • 1,566 no. Playing Fields; • 222 no. Golf Courses; • 1,257 no. Tennis Courts; • 371 no. Bowling Greens; • 302 no. Registered Common Land; and • 2,356 no. National Cycle Network. A number of A and B classified roads run throughout the Plan Area (approximately 31,200 A Roads and 11,600 B Roads). There are six motorways intersected by the Plan Area (M40, M4, M20, M25 and M26), with the M4 intersected over half its length. London, which is located within the Plan Area, is one of the most densely connected areas for trainline connections. There are a number of branch, main and high speed lines that intersect the Plan Area. There are approximately three high speed lines travelling from London in the north western, western and south eastern directions, the latter connecting to the Channel Tunnel[34]. There are four UK airports within the Plan Area[35]:

[32] National Grid (2026) Network Route Maps. Available: https://www.nationalgrid.com/electricity-transmission/network-and-infrastructure/network-route-maps
[33] National Gas (2026) Network Route Maps. Available: https://www.nationalgas.com/our-businesses/network-route-maps
[34] OpenRailwayMap (2026) Available: https://www.openrailwaymap.org/
[35] ArcGIS (no date) UK Airport Locations. Available: https://www.arcgis.com/apps/mapviewer/index.html?webmap=8ce9f799dc324776af60b2ad04495756

	• Oxford Airport • London Heathrow Airport • London City Airport • London Biggin Hills Airport
	Explanatory text and anticipated future trends: As expected, given the size of the Plan Area, it contains a wide range of material assets including recreational amenities, services, facilities and major infrastructure including road, rail, airports and ports, many of which concentrate or interact with the urban centres across the Plan Area.
Open Green Space	There are over 16,500 Open Green spaces within the Plan area with the main typologies reflecting the regional typologies: • Natural and Semi-natural Greenspace • Outdoor Sports Facilities • Parks and Gardens • Amenity Greenspace • Educational and Community Grounds
	Explanatory text and anticipated future trends: Open space, which includes all open space of public value, can take many forms, from formal sports pitches to open areas within a development, linear corridors and country parks. It can provide health and recreation benefits to people living and working nearby; have an ecological value and contribute to green infrastructure, as well as being an important part of the landscape and setting of built development, and an important component in the achievement of sustainable development[36]. Local authorities play a vital role in[37]: • providing new, good quality greenspace that is inclusive and equitable. • improving, maintaining and protecting existing greenspace. • increasing green infrastructure within public spaces and promoting healthy streets. • improving transport links, pathways and other means of access to greenspace, and providing imaginative routes linking areas of greenspace for active travel.

[36] Ministry of Housing, Communities and Local Government (2018). Available: https://www.gov.uk/guidance/open-space-sports-and-recreation-facilities-public-rights-of-way-and-local-green-space

[37] Public Health England (202) Improving access to greenspace. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904439/Improving_access_to_greenspace_2020_review.pdf

	Without a co-ordinated strategic approach to development and infrastructure, there is increased potential for planning decisions to result in inappropriate development, which could fragment existing networks of open space thereby reducing connectivity.

B.4. Water

Table 4: Water

Feature	Thames Water Plan Area
Water Framework Directive (WFD)	The Plan Areas falls within the Thames, South East, South West, Anglian and Severn River Basins. The Thames River Basin covers the largest proportion of the Plan Area. As of 2019, the status of surface and groundwater water bodies in the intersected RBDs are as follows: Surface Waters (including lakes, coastal, estuarine and rivers, canals and surface water transfers) ecological status, *Thames RBD[38] totalling 501:* • High – 0 • Good – 31 • Moderate – 334 • Poor – 117 • Bad – 19 *South East RBD[39] totalling 282:* • High – 0 • Good – 45 • Moderate – 172 • Poor – 55 • Bad – 10 *South West RBD[40] totalling 691:* • High – 0 • Good – 146 • Moderate – 431

[38] Department for Environment, Food and Rural Affairs (2019). Classifications data for Thames River Basin District. Available: https://environment.data.gov.uk/catchment-planning/v/c3-plan/RiverBasinDistrict/6/classifications

[39] Department for Environment, Food and Rural Affairs (2019). Classifications data for South East River Basin District. Available: https://environment.data.gov.uk/catchment-planning/v/c3-plan/RiverBasinDistrict/7/classifications

[40] Department for Environment, Food and Rural Affairs (2019). Classifications data for South West River Basin District. Available: https://environment.data.gov.uk/catchment-planning/v/c3-plan/RiverBasinDistrict/8/classifications

- Poor – 104
- Bad – 10

Anglian RBD[41] totalling 599:

- High – 0
- Good – 47
- Moderate – 428
- Poor – 103
- Bad – 21

Severn RBD[42] totalling 475:

- High – 0
- Good – 45
- Moderate – 309
- Poor – 110
- Bad – 11

Surface Waters (Chemical Status),

Thames RBD totalling 500:

- Good – 0
- Fail – 500

South East RBD totalling 281:

- Good – 0
- Fail – 281

South West RBD totalling 691:

[41]Department for Environment, Food and Rural Affairs (2019). Classifications data for Anglian River Basin District. Available: https://environment.data.gov.uk/catchment-planning/v/c3-plan/RiverBasinDistrict/5/classifications

[42] Department for Environment, Food and Rural Affairs (2019). Classifications data for Severn River Basin District. Available: https://environment.data.gov.uk/catchment-planning/v/c3-plan/RiverBasinDistrict/9/classifications

- Good – 0
- Fail – 691

Anglian RBD totalling 599:

- Good – 0
- Fail – 599

Severn RBD totalling 475:

- Good – 0
- Fail – 475

Groundwaters (Chemical Status),

Thames RBD totalling 47:

- Good – 18
- Poor – 29

South East RBD totalling 33:

- Good – 17
- Poor – 16

South West RBD totalling 42:

- Good – 13
- Poor – 29

Anglian RBD totalling 31:

- Good – 16
- Poor – 15

Severn RBD totalling 33:

- Good – 21
- Poor – 12

In respect of aquifer designation (Bedrock)[43] the British Geological Society Aquifer Designation Map (Bedrock) lists the 'Principal aquifer' designation across much of the area. Secondary A (Unproductive) designations are also present.

There are approximately 31 WFD lakes identified within the Plan Area.

There are approximately 351 waterbodies within the Plan Area.

There are no Shellfish Protected Areas within the Plan Area.

Explanatory text and anticipated future trends:

The EU WFD is transposed into UK law through the following regulations: The Water Environment (WFD) (England and Wales) Regulations 2017 for England and Wales; the Water Environment and Water Services (Scotland) Act 2003 (WEWS Act) and The Water Environment (WFD) Regulations (Northern Ireland) 2003) for Northern Ireland.

The purpose of the Directive is to establish a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. Groundwater is an important natural resource that supports river flows as well as ecological diversity in rivers, lakes and wetlands. It is also available for use, across the United Kingdom, for water supply by abstraction from boreholes, wells and springs.

There has been little change in the overall number of surface water bodies in the UK awarded high or good ecological status int he long term between 2009 and 2024 and in the short term between 2019-2024. In 2024, 33% of surface water bodies were assessed under the WFD Regulations as being in high or good ecological status, two percentage points higher than in 2009 and 1 percentage points higher than the figure of 32% reported in 2019[44].

RBMPs are prepared in line with the WFD to protect and improve the quality of our water environment. The RBMPs support the government's framework for the 25-year environment plan and will allow local communities to find more cost-effective ways to take action to further improve our water environment[45].

As with most water bodies in England, there are a range of significant water management issues manifested in the South East and London regions, with pollution from towns, cities and transport noted as being an issue for 19% of

[43] MagicMaps (no date) Available: https://magic.defra.gov.uk/MagicMap.html

[44] JNCC (2025) Surface water status. Available: https://jncc.gov.uk/our-work/ukbi-surface-water-status/#assessment-of-change

[45] DAERA (2016) River basin management plans: 2015. Available: https://www.gov.uk/government/collections/river-basin-management-plans-2015

	water bodies in the Thames RBD, 12% in the South East RBD, 6% in the South West RBD, 8% in the Anglian RBD and 11% in the Severn RBD. This includes Rainwater draining from roofs, roads and pavements carries pollutants, including grit, bacteria, oils, metals, vehicle emissions, detergent and road salt drains to surface water, including estuaries and coastal waters. Many homes and workplaces have 'misconnected' drains, meaning that dirty water often enters surface waters and groundwater rather than foul sewer drains. New development may result in physical modifications to water bodies – an issue affecting 31% of water bodies in the Thames RBD, 29% in the South East RBD, 15% in the South West RBD, 30% in the Anglian RBD and 13% in the Severn RBD. Without a coordinated and sensitive approach to development and infrastructure there will be increased pressure on water resources and water quality in the Thames Water Region.
Drinking Water Safeguard Zones (DWSZ) Source Protection Areas	There are 26 Surface Water Drinking Water Protected Areas, 15 DWSZ and 30 Groundwater DWSZ within the Plan Area. There are also a number of Source Protection Zones: • SPZ 1 – 163 • SPZ 1c – 1 • SPZ 2 – 105 • SPZ 2c – 3 • SPZ 3 – 34 • SPZ 3c – 0 • SPZ 4 – 1
	Explanatory text and anticipated future trends: DWSZs are designated by the Environment Agency for areas in which action is needed to address pollution so that extra treatment of raw water can be avoided. Furthermore, groundwater provides around a third of drinking water in England and maintains the flow in many of the waterbodies in the country. SPZs are also designated by the Environment Agency. These designations cover groundwater sources such as wells, boreholes and springs which are used for public drinking water supply. Groundwater supplies a third of our drinking water. In some areas of southern England, up to 80% of the water you get from your taps is from groundwater[46].

[46] Environment Agency (2019) Groundwater source protection zones. Available:https://www.gov.uk/guidance/groundwater-source-protection-zones-spzs

	• Inner Zone (SPZ1) - This zone is 50 day travel time of pollutant to source with a 50 metres default minimum radius. • Outer zone (SPZ2) - This zone is 400 day travel time of pollutant to source. This has a 250 or 500 metres minimum radius around the source depending on the amount of water taken. • Total catchment (SPZ3) - This is the area around a supply source within which all the groundwater ends up at the abstraction point. This is the point from where the water is taken. This could extend some distance from the source point. • Extended zones beneath protective cover (1c, 2c and 3c) - Areas where there is protective geology cover, such as clay. This is because activities below the surface, such as deep drilling, could create pathways for pollutants to enter the groundwater. • Zone of special interest (SPZ4) - This zone is where local conditions require additional protection. Without a coordinated approach to development and infrastructure there is increased potential for pollution to occur in areas where there is a risk of contamination of drinking water resulting. The location of Source Protection Zones and Drinking Water Safeguard Zones within the Plan Area are shown on Appendix C.
Bathing Water Quality	There are seven designated bathing water sites within the plan area. Conditions are reported as follows: • Cotswold Country Park and Beach - Excellent • Hampstead Heath (Ladies Pond) - Good • Hampstead Heath (Mens Pond) - Excellent • Hampstead Heath (Mixed Pond) - Excellent • The Serpentine - Hyde Park - Sufficient • Wallingford Beach, River Thames – Poor • Wolvercote Mill Stream - Poor
	Explanatory text and anticipated future trends: Water quality at designated bathing water sites in England is assessed by the Environment Agency. From May to September, weekly assessments measure current water quality, and at a number of sites daily pollution risk forecasts are issued. Annual ratings classify each site as excellent, good, sufficient or poor based on measurements taken over a period of up to four years[47].
Chalk Streams	There are 5,799 segments of chalk streams within the Plan Area.

[47] Environment Agency (2026) Bathing water data. Available: https://environment.data.gov.uk/bwq/profiles/data.html?country=England

Explanatory text and anticipated future trends:

Chalk streams are a unique and internationally important type of freshwater river fed primarily by groundwater stored in chalk aquifers. They are typically found in the rolling chalk hills of southern and eastern England. They are associated with some of southern England's main Rivers, including the River Kennet located within the Plan Area[48]. They support distinctive habitats with aquatic plants, invertebrates, fish and birds adapted to the more alkaline water.

Some threats to these habitats include:

- pressures associated with increased groundwater abstraction for drinking water reducing river baseflows49
- pollution from agriculture, sewage and urban runoff
- sedimentation
- climate change and drought[50]

[48] TopSoil (no date) Catchment Based Approach. Available: https://storymaps.arcgis.com/stories/b490f8ff54964780be1728d96a7d7bfe

[49]UKRI (2024) Protect Chalk streams or maintain groundwater resources, do we have to choose? Available: https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/dtp/2024-projects/grantham-institute-2024-projects/2024_1_BGS-_CJ.pdf

[50] WildFish (2025) How drought and human pressures are changing our chalk rivers. Available: https://wildfish.org/latest-news/how-drought-and-human-pressures-are-changing-our-chalk-rivers/

B.5. Flood Risk

Table 5: Flood Risk

Feature	Thames Water Plan Area
Location of Flood Zones	Flood Zones 2 and 3 are located throughout the Plan Area. There are approximately 112 EA flood alert areas and flood warning areas throughout the Plan Area. There are approximately 13,000 flood defences within the plan area including flood gates, walls, embankments, and natural and engineered high ground.
	Explanatory text and anticipated future trends: In England, the flood risk (river and tidal) is categorised into three zones[51] for planning purposes (noting that the NPPF further subdivides flood zone 3 into 3a and Functional Floodplain 3b (land where water has to flow or be stored in times of flood): • Flood Zone 1 – Land unlikely to be affected by flooding, with a less than 0.1% (less than 1 in 1000) chance of flooding each year. • Flood Zone 2 – Land likely to be affected by a major flood, with up to a 0.1% (1 in 1000) chance of occurring each year. • Flood Zone 3 – Land likely to be affected by flooding from the sea by a flood that has a 0.5% (1 in 200) or greater chance of happening each year, or from a river by a flood that has a 1 per cent (1 in 100) or greater chance of happening each year. The risk of surface water flooding also needs to be considered: • Very low risk area (less than 0.1% (1:1000)) chance of flooding. • Low risk area (0.1% to 1% (1:1000 – 1:100)) chance of flooding. • Medium risk area (1% to 3.3% (1:100 – 1:30)) chance of flooding. • High risk area (3.3% (1:30)) or greater chance of flooding. Estimates of flood risk from different sources across the UK vary, but it is known that the level of risk is substantial – England has approximately 5.2 million properties at risk.

[51] DAERA (2025) Flood Map for Planning – Flood Zones. Available:https://environment.data.gov.uk/dataset/04532375-a198-476e-985e-0579a0a11b47

	While new development is expected to occur in the plan area making use of a sequential approach, without a strategic approach, there is increased potential for the inappropriate siting of new development which may aggravate existing flood risk. Flood Zones in the Plan Area are shown in Appendix C.

B.6. Soil

Table 6: Soil

Feature	Thames Water Plan Area
Agricultural Land Classifications	Large areas in the Plan Area, particularly in the west are designated as Grade 3 land, which has the potential to be Best and Most Versatile (BMV) land[52]. There are some small areas of Grade 1 and slightly larger areas of Grade 2 land which are classed as BMV. Areas of Grade 4 and non-agricultural land are identified throughout the Plan Area, and urban land associated with towns and most notably the city of London. There are small areas of Grade 5 land in the western part of the Plan Area.
	Explanatory Text and anticipated future trends: ALC uses a grading system to assess and compare the quality of agricultural land at national, regional and local levels. It assesses the potential for land to support different agricultural uses, such as growing crops for food. It does not consider the land's current use and intensity of use. Natural England has a statutory role in advising local planning authorities about land quality issues. A combination of climate, site and soil characteristics and their unique interactions determine the limitation and grade of the land. These affect the: • range of crops that can be grown; • yield of crop; • consistency of yield; and • cost of producing the crop. When considering development proposals that affect agricultural land, development should aim to protect the best and most versatile (BMV) agricultural land and soils in England from significant, inappropriate or unsustainable development proposals. BMV agricultural land is graded 1 to 3a. The highest grade goes to land that[53]: • gives the highest yield or output; • has the widest range and versatility of use; • produces the most consistent yield from a narrower range of crops; and • requires less input.

[52]Natural England (2025) Provisional Agricultural Land Classification. Available: https://www.data.gov.uk/dataset/952421ec-da63-4569-817d-4d6399df40a1/provisional-agricultural-land-classification-alc2

[53] Natural England (2026) Guide to assessing development proposals on agricultural land. Available: https://www.gov.uk/government/publications/agricultural-land-assess-proposals-for-development/guide-to-assessing-development-proposals-on-agricultural-land

	There is increased potential for development to occur in areas which would affect higher value agricultural land without a co-ordinated strategic approach. Agricultural land classifications are shown in Appendix C.
Geological SSSIs and RIGS	There are 329 SSSIs within the within the Plan Area. A number of these are designated as Geological SSSI's including Elmstead Pit and Netherside Stream Outcrops SSSI's. *Targeted council data will be obtained as necessary for RIGS to support the local assessment of Plan feasible options as part of SEA Stage B.*
	Explanatory text and anticipated future trends: SSSIs represent the principal national designation for places of importance for biodiversity and geodiversity in the UK. The designation of areas as SSSIs attaches certain legal requirements to the management of these sites. In addition to designating areas as SSSIs when the land's wildlife is of special interest, Natural England will select and notify an area as a new SSSI when it believes the geology or landform is of special interest[54]. In the South East Region, the majority of SSSIs area in favourable or unfavourable recovering condition. However, 13.2% of sites contain units that are in unfavourable condition which are reported to have not improved or are in decline from when previously reported on[55]. Geology in the South East is likely to face threats from development; human activities such as pollution, roads, disturbance, farming practices; loss of habitat; loss of food sources and a changing climate. Without a co-ordinated strategic approach to development and infrastructure is likely to increase the potential for inappropriate greenfield development to occur which could increase pressures on SSSIs designated for their geological importance.
Contaminated Land	Certain types of contaminated land (as described in Regulation 2 of the Contaminated Land (England) Regulations 2006 are required to be designated as special sites. Sites which have been designated as special sites and have been identified within the Plan Area are as follows[56]:

[54] Environment Agency (2026) Contaminated Land Special Sites. Available: https://www.data.gov.uk/dataset/e3770885-fc05-4813-9e60-42b03ec411cf/contaminated-land-special-sites

[55] Natural England (2026) Designated Sites View. Available: https://designatedsites.naturalengland.org.uk/

[56] Environment Agency (2026) Contaminated Land Special Sites. Available: https://www.data.gov.uk/dataset/e3770885-fc05-4813-9e60-42b03ec411cf/contaminated-land-special-sites

	• Cranleigh Brick And Tile • AWE Aldermaston (Area A12Q1) • RAF Brize Norton • Sterling Industrial Estate • Oakley Wood Landfill It is anticipated that there are a large number of brownfield sites within the Plan Area which are also potentially contaminated.
	Explanatory text and anticipated future trends: • Land is legally defined as 'contaminated land' where substances are causing or could cause: • Significant harm to people, property or protected species; • Significant pollution of surface waters (for example lakes and rivers) or groundwater; and • Harm to people as a result of radioactivity. Land may be contaminated by various substances including: • Heavy metals such as arsenic, cadmium and lead; • Oils and tars; • Chemical substances and preparations, like solvents; • Gases; • Asbestos; and • Radioactive substances. Some types of contaminated land are classed as 'special sites', which are then regulated by the Environment Agency in England once a local council has decided that an area is a special site[57]. The National Planning Policy Framework requires a risk assessment of land potentially affected by contamination and expects all investigations to be undertaken in accordance with established practices such as BS10175 (2002) 'Code of Practice for the Investigation of Potentially Contaminated Sites'.
Mineral Resources	The following mineral resources have been identified within the Plan Area[120]: • Hydrocarbon wells • Active quarries • Superficial Sand and Gravel

[57] Environment Agency (2014) Land contamination: technical guidance: Available: https://www.gov.uk/government/collections/land-contamination-technical-guidance

- Bedrock Sand and Gravel
- Deep Coal
- Coal 2m thick 200m to 1200m depth
- Fuller's Earth
- Limestone
- Brick Clay
- Chalk
- Glacial limit
- Multiple mineral assessment areas

Explanatory text and anticipated future trends:

Mineral resources are naturally occurring materials found in the Earth's crust that can be extracted and used for economic purposes. They are valuable because they provide raw materials for industry, construction, energy production, and everyday products.

In the south of England, the following minerals can be found:

Aggregate Minerals:

- Sand and gravel
- Crushed limestone
- Chalk
- Sandstone
- Building stone
- Clay and shale

Industrial Minerals:

- China clay (kaolin)
- Ball clay
- Silica sand
- Gypsum
- Industrial limestone
- Dolomite (where present)

Metalliferous Minerals:

- Tin
- Copper
- Tungsten

• Lithium • Lead • Zinc Energy Minerals: • Oil • Natural gas

B.7. Air Quality

Table 7: Air Quality

Feature	Thames Water Plan Area
Air Quality Management Areas (AQMAs)	There are 77 AQMAs identified within the Plan Area, and these are largely associated with the city of London. These are predominately designated in relation to NO_2, with some also in relation to PM_{10}. There are approximately 20 locally managed automatic monitoring sites throughout the Plan Area. Many of these are in urban background or urban traffic environments[58].
	Explanatory text and anticipated future trends: Since December 1997 each local authority in the UK must review and assess air quality in their area to determine performance against national air quality objectives. Where air quality objectives are not likely to be achieved an AQMA must be declared. AQMAs are typically associated with vehicle emissions, principally oxides of nitrogen (NOx), oxides of sulphur (SO_2) and particulates (PM_{10}). As such, AQMAs are predominantly associated with urban areas and the road network[59]. The quality of our air in the UK has improved considerably over the last decade. Road transport is a key source of many air pollutants, particularly in urban areas. This includes non-exhaust emissions of $PM_{2.5}$ from brake wear, tyre wear and the debris created by the gradual erosion of road services. These now exceed tailpipe emissions and have increased 19% between 1996-2024, mainly driven by rising traffic levels, including electric vehicles, and increasing trends in heavier vehicles. There are two main trends in the transport sector working in opposite directions: new vehicles are becoming individually cleaner in response to European emission standards legislation, but total vehicle kilometres are increasing. Overall emissions of key air pollutants from road transport have fallen by about 50% over the last decade, despite increases in traffic, and are expected to reduce by a further 25% over the next decade. This is mainly a result of progressively tighter vehicle emission and fuel standards agreed at European level and set in UK regulations[60]. Note that there is also increasing recognition of the role solid fuel use in domestic properties plays in poor air quality, with wood burning making a significant contribution toward wintertime PM_{10} concentrations in many towns and cities. PM_{10} attributable to wood burning tends to peak during wintertime evenings and weekends. This suggests that wood is used principally as a secondary or 'lifestyle' fuel, rather than a primary source of heating. It also suggests that the

[58] UK Air (no date) Interactive monitoring networks map. Available: https://uk-air.defra.gov.uk/interactive-map

[59] UK Air (no date) Summary AQMA data. Available: https://uk-air.defra.gov.uk/aqma/summary

[60] DAERA (2011) The air quality strategy for England, Scotland, Wales and Northern Ireland: Volume 1. Available: https://www.gov.uk/government/publications/the-air-quality-strategy-for-england-scotland-wales-and-northern-ireland-volume-1

	majority of current air quality impacts are linked to simpler appliances such as open fires and stoves, rather than more complex appliances such as biomass boilers and Combined Heat and Power systems. Local authorities have experienced a number of gross pollution and nuisance cases linked to solid fuel appliances, and the frequency of these cases may be increasing. In many cases these problems occur when appliances are poorly installed, misused and/or inappropriate fuels are used[61]. The location of AQMAs within the Plan Area can be seen in Appendix C.
Noise Action Important Areas	There are 1,414 Noise Action Important Areas within the Plan Area. The source of noise in these areas is predominately roads, with the exception a small number in which the source is rail.
	Explanatory text and anticipated future trends: Noise Action Plans are required by the Environmental Noise Directive. Noise Important Areas identify 'hotspot' locations where the highest 1% of noise levels at residential locations can be found and therefore highlight where further investigation should be directed. *DEFRA defines an agglomeration as an area having a population in excess of 100,000 persons and a population density equal to or greater than 500 people per km^2 and which is considered to be urbanised.

[61] Environmental Protection UK (2013) Solid Fuel and Air Quality. Available: https://silo.tips/download/solid-fuel-and-air-quality

B.8. Climatic Factors

Table 8: Climate Factors

Feature	Thames Water Plan Area
Distribution of GHG emissions	GHG emissions within the Plan Area are anticipated to be in keeping with that in the wider South East / London regional level. Total carbon dioxide (CO2) emissions for 2024 for these regions in kilotonnes (Kt CO2e) were as follows[62]: • South East Region: 39,149.6 kt CO2e • London Region: 27,382.6 kt CO2e **Explanatory text and anticipated future trends:** The UK's yearly publication on GHG emissions provides the latest estimates of 1990-2024 UK territorial greenhouse gas emissions, which are presented in carbon dioxide equivalent units (CO2e). They show greenhouse gas emissions occurring within the UK's borders and cover the Kyoto "basket" of seven greenhouse gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). The UK has domestic targets for reducing greenhouse gas emissions under the Climate Change Act 2008 (CCA). The CCA established a long-term legally binding framework to reduce emissions, initially committing the UK to reducing emissions by at least 80% below 1990/95 baselines by 2050. In June 2019, following the IPCC's Special Report on Global Warming of 1.5°C and advice from the independent Committee on Climate Change, the CCA was amended to commit the UK to achieving a 100% reduction in emissions (to net zero) by 2050. <u>Anticipated Future Trends:</u> Recent trends illustrate that GHG emissions are primarily being reduced in the energy sector due to the change in fuel mix for electricity generation, in particular a reduction in the use of coal and gas. It is expected that this will continue over the next few years and decades in favour of more renewable and low-carbon sources. It can also be expected that GHG emissions in the transportation sector are likely to decrease with the increasing availability and feasibility of electric vehicles and business fleets. Thames Water made a pledge in 2019 for their operations to become net zero by 2030. They do, however, note that since making this pledge there have been some significant changes to the original assumptions, which include:[55] • Changes to the understanding of the levels of nitrous oxide emitted from the wastewater treatment process, a significant operational emission

[62] DESNZ (2026) UUK local authority and regional greenhouse gas emissions statistics, 2005-2024. Available: https://www.gov.uk/government/statistics/uk-local-authority-and-regional-greenhouse-gas-emissions-statistics-2005-to-2024

Feature	Thames Water Plan Area
	• Increased operational emissions due to changes in reporting scope boundaries • Additional carbon impacts associated with increases in treatment standards • Guidance from Government to consider phasing non-statutory commitments including Net Zero to future planning periods, reflecting concerns around customer affordability, deliverability and financeability of Price Review 2024 plans. These developments do not change Thames Water desire to achieve net zero, and Thames Water are currently reviewing their route map to fully understand the challenges and opportunities they present and how these will impact on net zero plans.
Contribution of sectors to GHG emissions	Trends in the contribution of sectors to GHG emissions within the Plan Area are anticipated to be in keeping with that in the wider South East / London regional level. Total carbon dioxide (CO2) emissions for 2023 for the sectors within these regions in kilotonnes (Kt CO2e) were as follows: South East Region • Industry – 2,909.4 kt CO2e • Commercial – 3,695.5 kt CO2e • Public Sector – 1,360.7 kt CO2e • Domestic – 10,945.0 kt CO2e • Transport – 16,458.6 kt CO2e (highest contributor) • Agriculture – 2,819.4 kt CO2e • Waste – 2,692.7 kt CO2e • **Total – 39,149.6 kt CO2e** • Land Use, Land-Use Change and Forestry (LULUCF) - 1,730.1 ktCO2e (negative) London • Industry – 2,656.7 kt CO2e • Commercial – 5,364.0 kt CO2e • Public Sector – 1,580.2 kt CO2e • Domestic – 8,782.1 kt CO2e (highest contributor) • Transport – 6,979.7 kt CO2e • Agriculture – 55.5 kt CO2e • Waste – 1,948.5 kt CO2e • **Total – 27,382.6 kt CO2e** • LULUCF – 15.8 kt CO2e

Feature	Thames Water Plan Area

Explanatory text and anticipated future trends:

The UK's yearly publication on GHG emissions provides the latest estimates of 1990-2024 UK territorial greenhouse gas emissions, which are presented in carbon dioxide equivalent units (CO2e). They show greenhouse gas emissions occurring within the UK's borders and cover the Kyoto "basket" of seven greenhouse gases: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3).

The UK has domestic targets for reducing greenhouse gas emissions under the Climate Change Act 2008 (CCA). The CCA established a long-term legally binding framework to reduce emissions, initially committing the UK to reducing emissions by at least 80% below 1990/95 baselines by 2050. In June 2019, following the IPCC's Special Report on Global Warming of 1.5°C and advice from the independent Committee on Climate Change, the CCA was amended to commit the UK to achieving a 100% reduction in emissions (to net zero) by 2050.

The CCA also introduced carbon budgets, which set legally binding limits on the total amount of greenhouse gas emissions the UK can emit for a given five-year period. The first carbon budget ran from 2008-12. In 2014, the UK confirmed that it had met the budget, with emissions 36 MtCO2e below the cap of 3,018 MtCO2e. The second carbon budget ran from 2013-17. In 2019, the UK confirmed that it had met the budget, with emissions 384 MtCO2e below the cap of 2,782 MtCO2e. Additionally, final emissions data confirm that the UK has achieved its Third Carbon Budget, covering the period 2018 to 2022. The UK has so far outperformed its budgets. But progress is slowing, and the country is not on track to meet its future budgets or the overall reduction target, according to the 2021 Progress Report to Parliament by the Committee on Climate Change.

UK five-year carbon budgets

Budgetary Period	Carbon Budget ($MtCO_2e$)
1st carbon budget (2008 to 2012)	3,018
2nd carbon budget (2013 to 2017)	2,782
3rd carbon budget (2018 to 2022)	2,544
4th carbon budget (2023 to 2027)	1,950
5th carbon budget (2028 to 2032)	1,725
6th carbon budget (2033 to 2037)	965

Source: Climate Change Committee

Feature	Thames Water Plan Area
	Anticipated Future Trends: Recent trends illustrate that GHG emissions are primarily being reduced in the energy sector due to the change in fuel mix for electricity generation, in particular a reduction in the use of coal and gas. It is expected that this will continue over the next few years and decades in favour of more renewable and low-carbon sources. It can also be expected that GHG emissions in the transportation sector are likely to decrease with the increasing availability and feasibility of electric vehicles and business fleets.
Predicted changes to temperature and weather patterns	The most recent 'State of the UK Climate in 2025' report highlights the following key statistics on the UK's changing climate[63]: Temperature records: • 2025 was the warmest year in the UK series from 1884, with the last 4 years in the top five warmest. This is the sixth time this century this record has been set. • 2025 included the UK's warmest spring and summer, with the six months, March to August, all in the top ten warmest of their respective monthly series. • The most recent decade, 2016–2025, has been 0.51°C warmer than 1991–2020, and 1.33°C warmer than 1961–1990, with warming extending northwards and uphill. • The number of days over 30°C and nights over 18°C has more than quadrupled for Greater London for the most recent decade, 2016–2025, compared to 1961–1990. • The average hottest day of the year has warmed by over 4.5°C in a swathe from Kent to Lincolnshire for the most recent decade, 2016–2025, compared to 1961–1990. • The number of 'icing days' (maximum temperature below 0°C) has more than halved for the UK for the most recent decade, 2016–2025, compared to 1961–1990, and the number of hard frosts (minimum temperature below −8°C) has reduced by a factor of more than four. Precipitation: • The UK's climate has become steadily wetter from the 1980s, due to an increase in winter half-year rainfall. There is some evidence for increases in the frequency of very wet months and days. • 2025 was a relatively dry year overall but not exceptional. Rainfall deficits in spring and summer partially recovered in autumn. • In spring 2025, most of England and Wales received less than half the 1991–2020 average rainfall, and in some places less than a third. England had its driest spring for over 100 years.

[63] Kendon et al (2026) State of the UK Climate in 2025. Available: https://rmets.onlinelibrary.wiley.com/doi/10.1002/joc.70470

Feature	Thames Water Plan Area
	• Total annual rainfall in the most recent decade 2016–2025 has seen no change compared to 1991–2020 but has increased by 8% compared to 1961–1990. • The winter half-year (October to March) for the most recent decade, 2016–2025, has been 3% wetter than 1991–2020, and 13% wetter than 1961–1990, with little change for the summer half-year. • The spatial frequency of very wet months in the winter half-year (October to March) with twice the 1961–1990 average rainfall has approximately doubled from 1961–1990 to 2016–2025. • There is no clear evidence of an increase in the frequency of very dry months in either the winter half-year or the summer half-year (April to September). • Observations suggest an increase in very wet days across the UK in recent decades, but further digitization of daily rainfall before 1961 would provide greater confidence in this result. Extremes and Significant Weather Events • The large variability in the UK's weather on different timescales means that extreme weather events are an integral part of the UK's climate. • Storm Éowyn was the UK's most powerful wind storm for over a decade, hitting the UK in late January 2025. A gust of 87 Kt (100 mph) was recorded in Scotland. • Spring and summer 2025 combined saw a UK mean maximum temperature anomaly of +2.1°C and sunshine total 125% of the 1991–2020 average, by far the warmest and sunniest such period on record. • Spring and summer 2025 combined saw less than 40% of 1991–2020 average rainfall in the driest areas, but for durations longer than 6 months the 1976 drought was far more severe. The projected changes in temperature and precipitation for the South East of England by the 2050s (2040-2069), under the RCP8.5 scenario (high emissions scenario) are as follows; • Annual mean temperatures are projected to increase by 2.0°C. Summer temperatures are projected to see the largest increase by 2.6°C and winter temperatures by 1.7°C • Annual mean precipitation is projected to decrease by 1.1%. Seasonal variability is projected with a 22.9% decrease in precipitation during summer months and an increase of 11.5% during winter months. Key potential climate related pressures identified by experts that increase habitat sensitivity include sea-level rise, lack of space, temperature stress, drought, eutrophication, increased storms and invasive species[64].

[64] Natural England (2023) Re-evaluating the sensitivity of habitats to climate change (NECR478). Available: https://publications.naturalengland.org.uk/publication/6095916432621568

Feature	Thames Water Plan Area
	Explanatory text and anticipated future trends: In December 2015, climate change issues were highlighted during the UN Conference of the Parties (COP) 21. At COP21, 189 parties ratified The Paris Agreement. The Paris Agreement's long-term temperature goal is to keep the increase in global average temperature to well below 2 °C above pre-industrial levels; and to pursue efforts to limit the increase to 1.5 °C, recognising that this would substantially reduce the risks and impacts of climate change globally. It also aims to increase the ability of parties to adapt to the adverse impacts of climate change and make "finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development." Under the Paris Agreement, each country must determine, plan, and regularly report on the contribution that it undertakes to mitigate global warming. No mechanism forces a country to set a specific emissions target by a specific date, but each target should go beyond previously set targets.

B.9. Historic Environment

Table 9: Historic Environment

Feature	Thames Water Plan Area
World Heritage Sites	There are 6 World Heritage Sites within the plan area: • Blenheim Palace; • Tower of London; • Palace of Westminster, Westminster Abbey and St. Margaret's Church; • Maritime Greenwich; • Stonehenge, Avebury and Associated Sites; and • Royal Botanic Gardens, Kew. **Explanatory text and anticipated future trends:** World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention and the sites are designated for their globally important cultural or natural interest and require appropriate management and protection measures[65]. The first World Heritage Sites within the UK were designated in 1986. Sites can continue to be nominated, with the last site on the UK mainland being the 'The Flow Country', designated in 2024[65]. Sites are inscribed by the United Nations Educational, Scientific and Cultural Organisation (UNESCO). In England the Department for Culture, Media and Sport (DCMS) acts as the UK 'State Party' which is responsible for nominating new sites. The DCMS receives advice from Historic England in this regard[66]. The Outstanding Universal Value of a World Heritage Site indicates its importance as a heritage asset of the highest significance. This is to be taken into account by the relevant authorities in plan-making and determining planning applications[67]. Of the sites in England, none have been placed on the List of World Heritage in Danger. The list presently comprises 56 sites in total worldwide. These are sites at which conditions are present to threaten the characteristics for which a site was placed on the World Heritage List[68].

[65] UNESCO (no date) United Kingdom of Great Britain and Northern Ireland. Available: https://whc.unesco.org/en/statesparties/gb

[66] Historic England (2024) The 'Tentative List' and World Heritage Nomination Process. Available: https://historicengland.org.uk/advice/planning/world-heritage/nomination-process/

[67] Ministry of Housing, Communities and Local Government (2014). Available: https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment#World-Heritage-Sites

[68] UNESCO (no date) List of World Heritage in Danger. Available: https://whc.unesco.org/en/danger-list/

	Additional development in the South East Region may be inappropriately located or designated to pose a risk to the World Heritage Sites as well as their setting. Without a co-ordinated strategic approach to development and infrastructure there is an increased potential for this risk to result. The locations of World Heritage Sites are shown in Appendix C.
Scheduled Monuments	There are 1,209 Scheduled Monument Sites located within the Plan Area.
	Explanatory text and anticipated future trends: Scheduling is the selection of nationally important archaeological sites which are legally protected. The monitoring and identification of sites is undertaken by Historic England. Scheduled Monuments cover the whole range of archaeological sites and are not always visible or above ground sites. The condition of Scheduled Monuments is monitored as part of Historic England's 'Heritage at Risk' programme. Local government archaeological services, plus independent national and local heritage organisations and community groups, can also play important roles in their curation, plus that of non-scheduled but nationally important monuments[69]. Additional development in the South East Region may be inappropriately located or designated to pose a risk to scheduled monuments and their settings. Without a co-ordinated strategic approach to development and infrastructure there is an increased potential for this risk to result. The locations of Scheduled Monuments are shown in Appendix C.
Listed Buildings and Conservation Areas	There are 89,597 listed buildings located within the Plan Area, which are graded as follows: • Grade II* - 45,598 • Grade II – 42,705 • Grade I – 1,294 There are approximately 1,404 Conservation Areas located within the Plan Area.
	Explanatory text and anticipated future trends: Listing of buildings is concerned with recognising the buildings special architectural and historic interest, with a view to protecting the building, under the planning system for future generations to enjoy. All buildings built before 1700 which survive in anything like their original condition are listed, as are most of those built between 1700 and 1840. Particularly

[69] Department for Culture Media and Sport (2013) Scheduled Monuments. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/249695/SM_policy_statement_10-2013__2_.pdf

	careful selection is required for buildings from the period after 1945. Usually, a building has to be over 30 years old to be eligible for listing[70]. Buildings are considered by the Secretary of State (for Digital, Culture, Media and Sport) and where they are deemed to be of special architectural or historic interest they can be included on the list. The Planning (Listed Buildings and Conservation Areas) Act 1990 sets out the designation regime[71]. There are three categories of listed building: • Grade I buildings are of exceptional interest, only 2.5% of listed buildings are Grade I • Grade II* buildings are particularly important buildings of more than special interest; 5.8% of listed buildings are Grade II* • Grade II buildings are of special interest; 91.7% of all listed buildings are in this class and it is the most likely grade of listing for a homeowner. Local authorities have a positive legal duty to designate conservation areas where parts of their own area are of special architectural or historic interest. In exceptional circumstances, where the local authority has not done so, the Secretary of State (for Digital, Culture, Media and Sport) may designate a conservation area anywhere in England. The Planning (Listed Buildings and Conservation Areas) Act 1990 also sets out the requirement for local authority's proposals for the preservation and enhancement of conservation areas. Additional development in the South East Region may be inappropriately located or designed to pose a risk to listed building and conservation areas and their settings. Without a co-ordinated strategic approach to development and infrastructure there is an increased potential for this risk to result. The locations of listed buildings and conservation areas in the plan area are shown in Appendix C.
Historic Battlefields	There are four historic battlefields within the Plan Area: • Battle of Chalgrove 1643 • Battle of Cropredy Bridge 1644 • Battle of Newbury 1643 • Battle of Stow (-on-the-Wold) 1646

[70] Historic England (2025) What are Listed Buildings. Available: https://historicengland.org.uk/listing/what-is-designation/listed-buildings/

[71] Historic England (2025) What are Listed Buildings. Available: https://historicengland.org.uk/listing/what-is-designation/listed-buildings/

	Explanatory text and anticipated future trends: Historic battlefields are designated by Historic England as conferred under the Historic Buildings and Ancient Monuments Act, 1983 (as amended).
Parks and Gardens	There are 324 registered historic parks and gardens located within the Plan Area which are graded as follows: • Grade II* - 280 • Grade II – 202 • Grade I - 44
	Explanatory Text and anticipated future trends: The purpose of Registers of Historic Parks and Gardens in England is to encourage the protection of gardens, grounds and other open spaces which are of historic importance. The majority of sites registered are, or started life as, the grounds of private houses, but public parks and cemeteries form important categories too. The emphasis of the Register is on 'designed' landscapes, rather than on planting or botanical importance. The various types of designed landscape included on the Register are designated in the following four themes: • Rural Landscapes • Urban Landscapes • Landscapes of Remembrance • Institutional Landscapes There are also numerous unregistered parks and gardens within the plan area. Whilst they are non-statutory designations, they remain relevant considerations for local planning and developments. The plan area contains numerous heritage assets some of which are on Historic England's Heritage at Risk Register, although none of these are Registered Parks and Gardens. **New development within the Plan Area may result in pressure on areas of importance for their cultural heritage and aesthetic quality and there is a requirement for them to be preserved and enhanced.** Locations of Parks and Gardens are shown in Appendix C.
Protected Wrecks	There are no protected wrecks within the Plan Area.
	Explanatory Text and anticipated future trends: The Protection of Wrecks Act (1973) allows the Government to designate a wreck to prevent uncontrolled interference. Designated sites are identified as being likely to contain the remains of a vessel, or its contents, which are of historical, artistic, or archaeological importance.

B.10. Landscape

Table 10: Landscape

Feature	Thames Water Plan Area
National Parks	There is one national park located within the Plan Area: South Downs National Park.
	Explanatory text and anticipated future trends: In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales. In addition, the Environment Act 1995 requires relevant authorities to have regard for nature conservation. The designation of National Parks is an ongoing process with two being added in England since 2008 (South Downs and Broads).
National Landscapes (formerly known as Areas of Outstanding Natural Beauty)	There are five national landscapes within the Plan Area: • Kent Downs • North Wessex Downs • Surrey Hills • Chilterns • Cotswolds
	Explanatory text and anticipated future trends: In England, the primary purpose of the National Landscape designation is to conserve natural beauty – which by statute includes wildlife, physiographic features and cultural heritage as well as the more conventional concepts of landscape and scenery. Account is taken of the need to safeguard agriculture, forestry and other rural industries and the economic and social needs of local communities. Particular regard should be paid to promoting sustainable forms of social and economic development, that in themselves conserve and enhance the environment. These areas have equivalent status to National Parks as far as conservation is concerned. National Landscapes are designated under the National Parks and Access to the Countryside Act 1949, amended in the Environment Act 1995. The Countryside and Rights of Way Act 2000 clarifies the procedure and purpose of designating National Landscapes. The Protected Landscapes Targets and Outcomes Framework (PLTOF) was published by Defra in January 2025 and sets ambitious targets under ten key themes for England's 44 National Landscapes and National Parks. The framework sets a shared vision for our protected landscapes to contribute to the nation's goals on nature recovery, climate

Feature	Thames Water Plan Area
	resilience, and enhancing beauty, heritage and engagement with the natural environment[72]. The PLOTF sets ambitious targets under the following key themes for England's 44 National Landscapes and National Parks[73]: *Thriving plants and wildlife targets:* 1. Restore or create more than 250,000 hectares of a range of wildlife-rich habitats within Protected Landscapes, outside protected sites by 2042 (from a 2022 baseline). 2. Bring 80% of SSSIs within Protected Landscapes into favourable condition by 2042. 3. For 60% of SSSIs within Protected Landscapes assessed as having 'actions on track' to achieve favourable condition by 31 January 2028. 4. Continuing favourable management of all existing priority habitat already in favourable condition outside of SSSIs (from a 2022 baseline) and increasing to include all newly restored or created habitat through agri-environment schemes by 2042. 5. Ensuring at least 65% to 80% of land managers adopt nature friendly farming on at least 10% to 15% of their land by 2030. *Mitigating and adapting to climate change targets:* 1. Reduce net greenhouse gas emissions in Protected Landscapes to net zero by 2050 relative to 1990 levels. 2. Restore approximately 130,000 hectares of peat in Protected Landscapes by 2050. 3. Increase tree canopy and woodland cover (combined) by 3% of total land area in Protected Landscapes by 2050 (from 2022 baseline). *Enhancing beauty, heritage and engagement with the natural environment targets* 1. Improve and promote accessibility to and engagement with Protected Landscapes for all using existing metrics in our Access for All programme. 2. Decrease the number of nationally designated heritage assets at risk in Protected Landscapes.

[72] National Landscapes Association (no date) The Protected Landscapes Targets and Outcomes Framework: do we have what it takes? Available:https://national-landscapes.org.uk/news/the-protected-landscapes-targets-and-outcomes-framework-do-we-have-what-it-takes

[73] DAERA (2024) Protected Landscapes Targets and Outcomes Framework. Available: https://www.gov.uk/government/publications/protected-landscapes-targets-and-outcomes-framework/protected-landscapes-targets-and-outcomes-framework#protected-landscape-targets

Feature	Thames Water Plan Area
	There is a need to protect landscape character (including that of the National Landscapes) from potential threats. This includes issues such as inappropriate development, lack of appropriate management and climate change. Without a co-ordinated strategic approach to development and infrastructure degradation of the special qualities of the National Landscapes within the region is more likely to result. Locations of National Landscapes in the Plan Area are shown in Appendix C.
Landscape Character Areas (LCAs) / National Character Areas (NCAs)	Of the 73 LCAs and four seascape assessments on the landscape institutes' Landscape Character database[74], located within the South Eat and London regions, 61 LCAs and 1 seascape assessments are located within the Plan Area. There are also 22 NCAs within the Plan Area.
	Explanatory text and anticipated future trends: Landscape Character Areas or Landscape Character Assessments encompass various aspects of landscape, biodiversity, heritage, cultural and geological features. These are non-statutory and used as an aid in the planning process and for decision making. Each LCA profile produced by Natural England includes a description of the natural and cultural features that shape our landscapes, how the landscape has changed over time, the current key drivers for ongoing change, and a broad analysis of each area's characteristics and ecosystem services. Statements of Environmental Opportunity (SEOs) are suggested, which draw on this integrated information. The SEOs offer guidance on the critical issues, which could help to achieve sustainable growth and a more secure environmental future. There is a need to protect landscape character from potential threats. This includes issues such as inappropriate development, lack of appropriate management and climate change. Without a co-ordinated strategic approach to development and infrastructure degradation of the special qualities of the protected landscapes within the region is more likely to result. Locations of the NCAs in the Plan Area are shown in Appendix C.
Green Belt and Urban areas	There are 43 green belts located within the Plan Area.

[74] Landscape Institute (2023) Landscape character assessment database for the UK and Ireland. Available: https://landscapeinstitute.org/technical-resource/landscape-character-assessment-lca-database/

Feature	Thames Water Plan Area
	Urban land within the agricultural land classification of the Plan area makes up approximately 228,000 hectares and non-agricultural land approximately 151,000 hectares, which equates to 12.4% and 8.2% respectively.
	Explanatory text and anticipated future trends: The National Planning Policy Framework attaches great importance to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence[75]. In 2025, 195 out of 361 local authorities have some land designated as Green Belt. Green Belt serves five purposes: • to check the unrestricted sprawl of large built-up areas; • to prevent neighbouring towns merging into one another; • to assist in safeguarding the countryside from encroachment; • to preserve the setting and special character of historic towns; and • to assist in urban regeneration, by encouraging the recycling of derelict and other urban land. Once Green Belts have been defined, local planning authorities should plan positively to enhance their beneficial use, such as looking for opportunities to provide access; to provide opportunities for outdoor sport and recreation; to retain and enhance landscapes, visual amenity and biodiversity; or to improve damaged and derelict land. Across England between March 2024 and March 20254 there was a decrease of 660 hectares (0.04%) in the area of land designated as Green Belt. In spite of its strong protection through national planning policy, Green Belt may come under pressure as areas are targeted for potential release and development in inappropriate locations as housing needs increase. There is increased potential for Green Belt land that has not been identified as suitable for strategic growth to be subject to development without a co-ordinated strategic planning approach.
Woodland Priority Habitat	Within the Plan Area, 9.5% of land contains deciduous woodland priority habitat, equating to 74,889 ha.
	Explanatory text and anticipated future trends: Priority habitats can be designated as protected areas called Sites of Special Scientific Interest (SSSIs). They can also be outside of these SSSI protected areas but be under Higher Level Stewardship (HLS) or Countryside Stewardship

[75] Ministry of Housing, Communities and Local Government (2025) Local authority green belt: England 2024-25 - statistical release. Available: https://www.gov.uk/government/statistics/local-authority-green-belt-statistics-for-england-2024-to-2025/local-authority-green-belt-england-2024-25-statistical-release

Feature	Thames Water Plan Area
	(CS) agreements or fall within Forestry Commission (FC) ‘Managed woodland’. Some priority habitats, however, fall outside of the protection of all these schemes.


Thames
Water