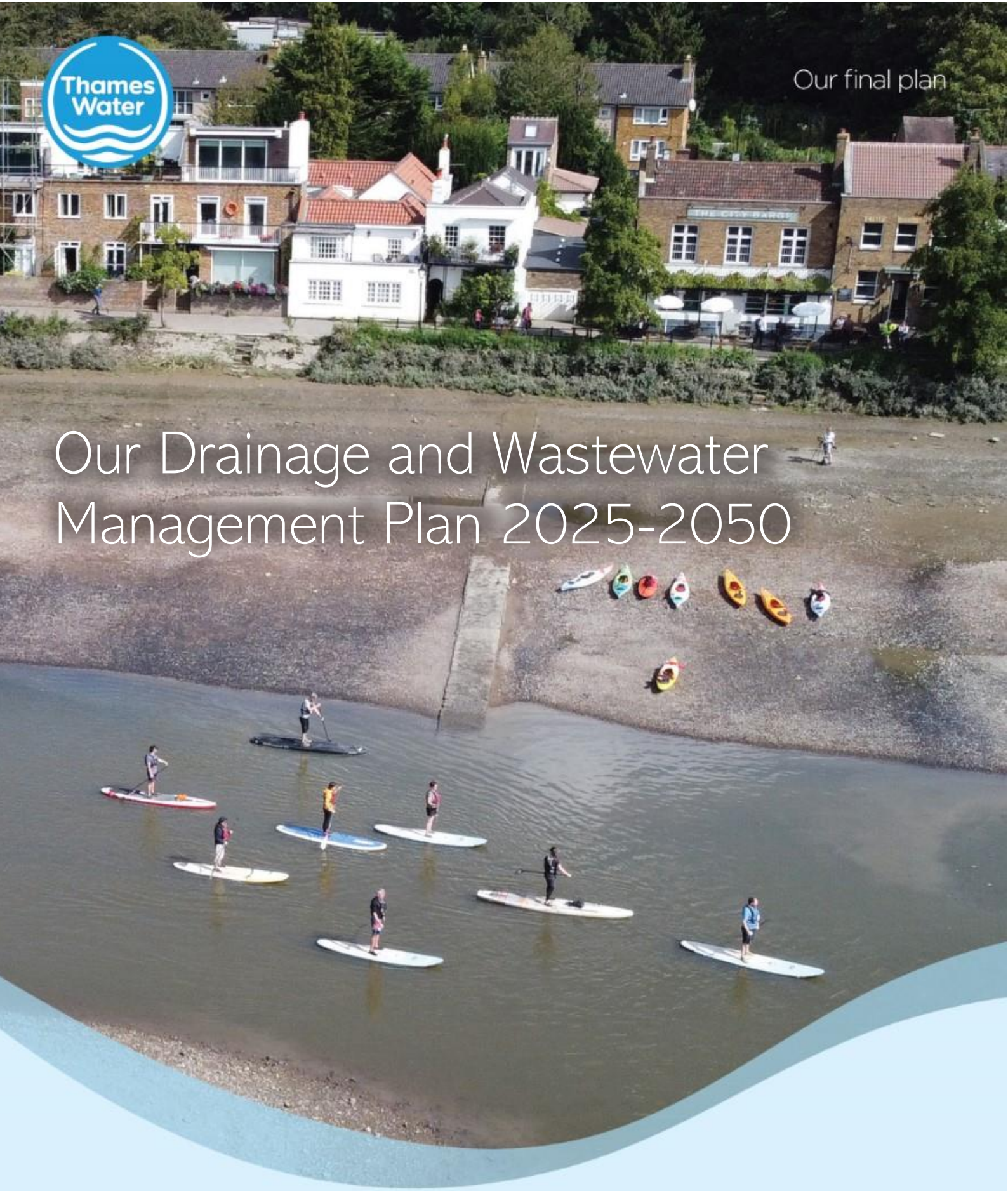


Our final plan

Our Drainage and Wastewater Management Plan 2025-2050

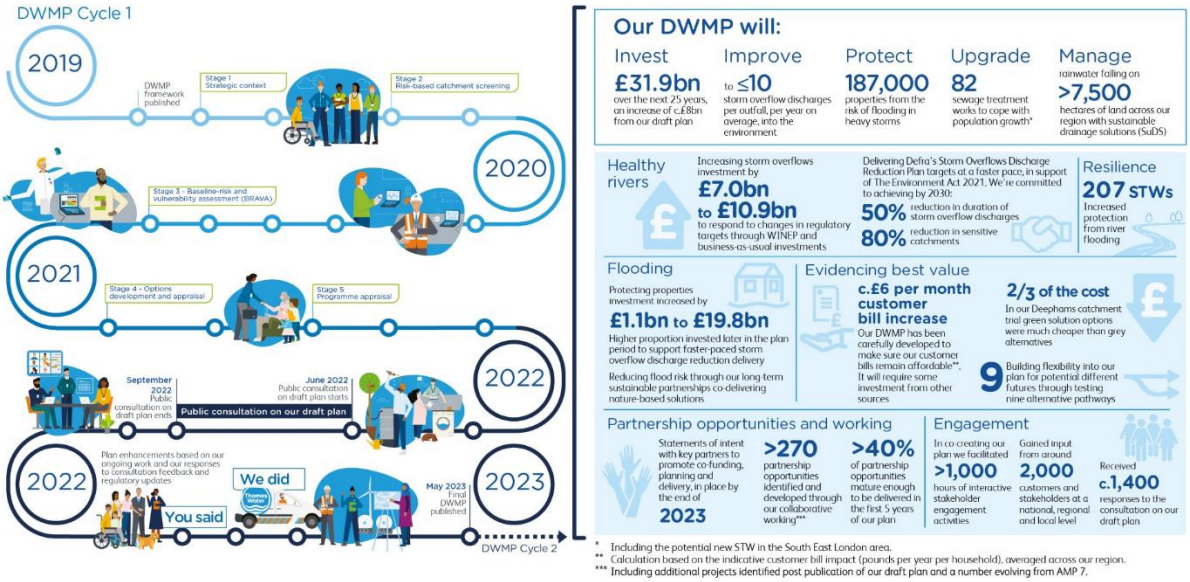
Technical Appendices

Appendix L – Habitats Regulations Assessment

May 2023

Preface

We're proud to present our first Drainage and Wastewater Management Plan (DWMP) and encouraged by the level of positive feedback we've received. Over the last four years, we've engaged and worked collaboratively with around 2,000 of our customers and stakeholders, to deepen our shared understanding and develop new ways to manage drainage and wastewater across our region. We illustrate our DWMP Cycle 1 and its headlines below.



We've progressed and enhanced our DWMP since we published it for public consultation in June 2022. We were pleased to receive lots of positive comments and support on the quality and ambition of our draft plan as well as useful ideas for making our final DWMP even stronger.

We've updated our draft plan based on our ongoing DWMP work, regulatory updates and our responses to the consultation feedback wherever possible*. Our updates include providing more detail where you felt it was needed and creating new appendices to answer technical queries. For more details on how we've progressed our final plan and responded to the consultation feedback, please see our Non-technical summary and You said, We did Technical appendix.

* Some public consultation feedback didn't require further action or wasn't relevant to the DWMP process. Other feedback was relevant to future DWMP planning cycles and will be used to inform this work.

Progress signposts

We want to make it easy for you to see what's changed. You can spot all the places we've updated our draft plan with our 'progress signposts' which we've used across our final DWMP documents.

Here's where they'll be:

- Preface summaries – we've put a summary table in each document's preface (excluding Summary documents and CSPs)

To help you find our progress signposts, here are examples of what to look out for:

Progress summary table

The progress signposts summary table for the chapters in this document is outlined below. We've used orange cells to indicate where our draft plan has been updated with progress.

Progress signposts summary: Technical Appendix – HRA	Progress updated	More detail or new content	Number(s) updated	Delivery timeframe updated	Informing DWMP cycle 2
1. Introduction					
1. DWMP					
3. Methodology					
4. Stage 1 Screening Assessment					
5. Stage 1 Screening Conclusions					
6. Stage 2 Appropriate Assessment					
Appendix A. European Sites Designated for Nature Conservation					
Appendix B. European Sites Conservations Objectives					
Appendix C. European Site Vulnerabilities					
Appendix D. HRA GSO and GSO Detailed Screening Assessment					

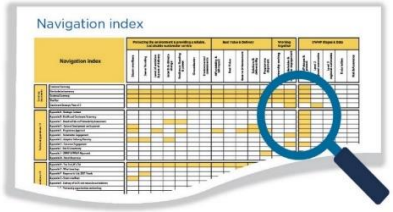
Key DWMP content

This document specifically includes the following key DWMP content:

- Protecting the environment and providing a reliable, sustainable wastewater service:
  - Environmental assessments

Navigating our documents

To help you navigate around our final DWMP document suite and find where key DWMP content features, we've placed a Navigation index at the back of this document.



ATKINS

Member of the SNC-Lavalin Group

Thames Water Drainage and Wastewater Management Plan

Habitats Regulations Assessment – Stage 1 Screening and Stage 2 Appropriate Assessment

Thames Water Utilities Ltd

April 2023

5201208-ATK-O-RP-E021-A1

Notice

This document and its contents have been prepared and are intended solely as information for Thames Water Utilities Ltd and use in relation to the Habitats Regulations Assessment of the Drainage and Wastewater Management Plan.

Atkins Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/ or its contents.

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The information which Atkins Limited has provided has been prepared an environmental specialist in accordance with the Code of Professional Conduct of the Chartered Institute of Ecology and Environmental Management (CIEEM). Atkins Limited confirms that the opinions expressed are our true and professional opinions.

This document does not purport to provide legal advice.

This document has 109 pages including the cover.

Contents

Tables

Figures

Executive Summary

Introduction

Thames Water, along with other water companies, are developing Drainage and Wastewater Management Plans (DWMPs) which will set out how they maintain, improve, and increase capacity of their drainage network and wastewater services over the next 25 years.

To do this, a series of solutions to known problems will need to be developed across the Thames Water area. It is recognised, that some of these solutions may potentially cause adverse effects on the environment or the people of the area, particularly during their construction or implementation. However, all of the solutions aim to address particular problems and will ultimately benefit both the environment and people.

Approach to the assessment

In order to understand where adverse effects may occur from constructing or implementing the proposed solutions, as well as where opportunities for environmental improvement may be found, an environmental assessment has been produced. The solutions analysed include more than forty generic types across all of the drainage catchments in the Thames Water area (of which there are 382).

Habitats Regulations Assessment (HRA) is required by Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) 'the Habitats Regulations', for all plans and projects which may have likely significant effects (LSE) on a European site[1] and are not directly connected with or necessary to the management of the European site.

European sites include Special Areas of Conservation (SAC) and Special Protection Areas (SPA). HRA is also required, as a matter of UK Government policy for potential SPAs (pSPA), possible SACs (pSAC), wetlands of international importance (Ramsar sites), proposed Ramsar sites (pRamsar) and sites identified, or required, as compensatory measures for adverse effects on listed and proposed European sites and Ramsar sites for the purposes of considering plans and projects, which may affect them. Hereafter, all of the above designated nature conservation sites are referred to as 'European sites'.

There are four stages to the HRA process. These are summarised below:

- **Stage 1 – Screening**: To test whether a plan or project either alone or in combination with other plans and projects is likely to have a significant effect on a European site;
- **Stage 2 – Appropriate Assessment**: To determine whether, in view of a European site's conservation objectives, the plan (either alone or in combination with other projects and plans) would have an adverse effect on the integrity of the site with respect to the site structure, function and conservation objectives. If adverse impacts are anticipated, potential mitigation measures to alleviate impacts should be proposed and assessed;
- **Stage 3 – Assessment of alternative solutions**: Where a plan is assessed as having an adverse impact (or risk of this) on the integrity of a European site, there should be an examination of alternatives (e.g., alternative locations and designs of development); and
- **Stage 4 - Imperative Reasons of Overriding Public Interest (IROPI):** where no alternative solutions have been identified and where adverse impacts remain, in exceptional circumstance (i.e. where there are IROPI), compensatory measures can be agreed and secured to offset negative impacts.

Assessment findings

Having determined that the project or plan is not directly connected with, or necessary for the management of a European site, it is necessary to undertake screening to determine whether the proposals are likely to have an LSE on any European sites. This report comprises Stage 1 – Screening and Stage 2 - Appropriate Assessment.

The Stage 1 Screening used an initial screening exercise to determine which of the 42 generic sub options (GSO) and five site specific interventions progressed to feasible optioneering (out of a total of 47 identified at the unconstrained option development stage) may have an LSE on a European site. This screening concluded

[1] 'Following the changes made to the Conservation of Habitats and Species Regulations 2017 (as amended) by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, SACs and SPAs in the UK no longer form part of the EU's Natura 2000 ecological network and now form part of a UK national site network. In this document they are still referred to as European Sites.'

that, based on the information available, the following GSO and site-specific interventions could have an LSE on a European site:

- B1.2 - Targeted source control sustainable drainage system (SuDS) measures at opportunity areas;
- B2.1 - Combined sewer separation. Convert existing combined sewers to surface water only and construct new foul water sewers;
- B2.2 - Combined sewer separation. Construct new surface water sewers;
- B2.3 - Disconnect existing surface water systems from combined sewers and discharge to watercourse;
- B2.4 - Deep tunnel(s) to connect surface water networks to major reuse or discharge location(s);
- B2.5 - Combined sewer separation. Convert existing combined sewers to foul water only and convey surface water on the surface using SuDS measures;
- B2.6 - Re-create historical rivers to convey surface water;
- B2.7 - Use parks and urban spaces to store excess surface water during rainfall events;
- C3.1 - Increase network capacity by installing larger sewers;
- C3.2 - Deep tunnel(s) to convey combined sewage;
- C4.0 - Deep tank(s) and tunnel(s) to store combined sewage;
- C6 - Transfer flow between catchments via existing connections;
- C7 - Transfer flow between catchments via new connections;
- D4.1 - Buy land and expand STW (Effluent and sludge treatment);
- D4.2 - Buy land and move sludge treatment to new location. Expand effluent stream on remaining land;
- D5 - Construct new/additional STWs;
- D7.1 - River catchment-based discharge permitting; and
- WC01 – Beckton STW Luxborough Lane new treatment works.

Following the identification of the above GSO and site specific interventions, each STW Catchment was then screened based on its location and proximity to the European sites to determine which STW Catchments may result in a likely significant effect on a European site. This identified the following:

- 99 STW Catchments had no European sites within 10 km of the STW Catchment boundary and were, therefore, screened out;
- 94 STW Catchments had no proposed GSO interventions and were, therefore, screened out;
- 107 STW Catchments had European sites within 10 km but were screened out based on the proposed GSO and the distance from the STW catchment; and
- 82 STW Catchments had European sites located sufficiently close enough to the GSO to result in potential LSEs.

The 82 STW Catchments identified as resulting in a potential LSE on a European site were then taken forward to Stage 2 Appropriate Assessment. The potential impacts on the European sites were considered to include the following:

- direct land take;
- water pollution;
- noise;
- air pollution;
- changes in hydrology; and
- increased recreation.

The 82 STW Catchments were subsequently reviewed against the preferred plan.

As the detailed potential impacts of the DWMP GSO (not site specific options) alone and in-combination cannot be identified on a site-by-site basis at this stage, it is not possible to detail potential detailed mitigation measures. However, it is concluded that based on the information available that the following measures would mitigate for any potential impacts on the European sites:

- all development through the implementation of the DWMP will be subject to HRA;
- habitat loss within the European sites will be avoided through sensitive siting and design;

- construction will seek to avoid the most sensitive times of the year for qualifying species for which the European sites are designated within the respective zone of influence for those species;
- works will not be undertaken which risk changing the hydrology and/or hydrogeology of European designated sites;
- measures will be taken to minimise noise and visual disturbance impacts on species, where these are a likely impact on the European site; and
- standard working practices, pollution prevention and control measures will be implemented where there is the potential for changes in air or water quality.

Conclusions

Taking into account the proposed outline mitigation measures and the addition of text specifically committing to the protection of the European sites within the DWMP, it can be concluded that it is unlikely that the DWMP will have an adverse effect on the integrity of the European sites either alone or in-combination with other plans and projects.

The only exception will be in situations where no alternative solutions exist (as considered at Stage 3) for a scheme and where adverse impacts remain. In these situations, if it is deemed that the scheme should be allowed to proceed, the identification of imperative reasons of overriding public interest (IROPI) will be necessary and compensatory measures will need to be identified (as considered at Stage 4). This can only be decided at the next stage of project development.

Stakeholder engagement

Discussions relating to this Habitats Regulation Assessment (HRA) took place with the Environment Agency (EA) and Natural England as part of wider conversations relating to the Strategic Environmental Assessment approach for the DWMP. These discussions noted that identification had been made of all European sites, across the 382 catchments within the DWMP area, with information on these passed to the HRA team as well as the wider Plan making team, with a view to avoiding these sites in the future development of drainage schemes. It was noted that where appropriate, further consideration would be made through specific scheme HRA.

1. Introduction

1.1. Background to this Assessment

Atkins, member of SNC-Lavalin Group, has been commissioned by Thames Water Utilities Ltd (hereafter referred to as Thames Water) to undertake a Habitats Regulations Assessment (HRA) appropriate to the maturity of their Drainage and Wastewater Management Plan (DWMP), comprising a Stage 1 Screening.

Thames Water along with other water companies, are developing Drainage and Wastewater Management Plans (DWMPs) which will set out how they maintain, improve, and increase capacity of their drainage network and wastewater services over the next 25 years. Final DWMPs will be produced in May 2023 which is anticipated to enable water companies to embed them within their respective PR24 business plans for Ofwat.

A key consideration at this stage of DWMP development is that while the catchments are known (382 have been examined) and the broad Solution types are known (with a total of 47 possible Solution types set out for feasible optioneering), no further information or details regarding the precise location where a Solution will be developed within a catchment (other than those at an existing sewage works), nor the precise size, layout and nature of the Solution are known at this stage. Therefore, any approach to understanding the potential effects of Solutions and their significance is necessarily high level, commensurate with the detail available about the plan.

1.2. Background to Habitats Regulations Assessment

HRA is required by Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) 'the Habitats Regulations', for all plans and projects which may have likely significant effects (LSE) on a European site and are not directly connected with or necessary to the management of the European site.

European sites include Special Areas of Conservation (SAC) and Special Protection Areas (SPA). HRA is also required, as a matter of UK Government policy for potential SPAs (pSPA), possible SACs (pSAC), wetlands of international importance (Ramsar sites), proposed Ramsar sites (pRamsar) and sites identified, or required, as compensatory measures for adverse effects on listed and proposed European sites and Ramsar sites for the purposes of considering plans and projects, which may affect them[2]. Hereafter, all of the above designated nature conservation sites are referred to as 'European sites'.

There are four stages to the HRA process. These are summarised below:

- **Stage 1 – Screening:** To test whether a plan or project either alone or in combination with other plans and projects is likely to have a significant effect[3] on a European site;
- **Stage 2 – Appropriate Assessment:** To determine whether, in view of a European site's conservation objectives, the plan (either alone or in combination with other projects and plans) would have an adverse effect on the integrity of the site with respect to the site structure, function and conservation objectives. If adverse impacts are anticipated, potential mitigation measures to alleviate impacts should be proposed and assessed;
- **Stage 3 – Assessment of alternative solutions:** Where a plan is assessed as having an adverse impact (or risk of this) on the integrity of a European site, there should be an examination of alternatives (e.g. alternative locations and designs of development); and
- **Stage 4 - Imperative Reasons of Overriding Public Interest (IROPI)**: where no alternative solutions have been identified and where adverse impacts remain, in exceptional circumstance (i.e. where there are IROPI), compensatory measures can be agreed and secured to offset negative impacts.

1.2.1. Habitats Regulations Assessment Stage 1 Screening

Having determined that the project or plan is not directly connected[4], or necessary for the management of a European site, it is necessary to undertake screening to determine whether the proposals are likely to have an LSE on any European sites.

[2] *National Planning Policy Framework*. Department for Communities and Local Government. 2021.

[3] Likely significant effect is any effect that may reasonably be predicted as a consequence of a plan or project that may affect the conservation objectives of the features for which the site was designated. If any plan or project causes the cited interest features of a site to fall into unfavourable condition, they can be considered to have a likely significant effect on the site.

[4] The project or plan is not related to the management of the European site(s)

It is important to note that the burden of evidence is to show, on the basis of objective information, that the project or plan will have no LSE on a European site. If there may be an LSE, or there is uncertainty and an LSE cannot be ruled out, this would trigger the need for an appropriate assessment. As a result of European case law, irrespective of the normal English meaning of 'likely', in this statutory context a 'LSE' is a 'possible significant effect', one whose occurrence cannot be ruled out on the basis of objective information[5].

Recent European case law[6] ruled that it was not acceptable at screening to take account of measures intended to avoid or reduce effects upon European sites, therefore, where such measures are required, the project or plan must be subject to a Stage 2 HRA.

1.3. Outline of this Report

Following this introduction:

- Section 2 outlines the details of the DWMP;
- Section 3 sets out the methodology used for the Stage 1 - Screening;
- Section 4 details the results of the Stage 1 - Screening for the European sites;
- Section 5 provides the conclusions of the Stage 1 – Screening assessment; and
- Section 6 provides the Stage 2 Appropriate Assessment.

1.4. Stakeholder Engagement

Discussions relating to this HRA took place with the EA and Natural England as part of wider conversations relating to the Strategic Environmental Assessment approach for the DWMP. These discussions noted that identification had been made of all European sites, across the 382 catchments within the DWMP area, with information on these passed to the HRA team as well as the wider Plan making team, with a view to avoiding these sites in the future development of drainage schemes. It was noted that where appropriate, further consideration would be made through specific scheme HRA.

[5] Tyldesley, D., and Chapman, C., (2013) The Habitats Regulations Assessment Handbook, February 2022 edition UK: DTA Publications Limited

[6] Court of Justice of the European Union (CJEU) judgement referred to as People Over Wind (Peter Sweetman v Coillte Teoranta, Case C-323/17)

2. Drainage and Wastewater Management Plan

2.1. Background and Description of the DWMP

In 2018, Water UK collaborated with water companies across the UK, plus the Department for Environment, Food & Rural Affairs (Defra); the Welsh Government; Ofwat; the Environment Agency; Natural Resources Wales; the Consumer Council for Water; Association of Directors of Environment, Economy, Planning and Transport (ADEPT); and Blueprint for Water to create a DWMP Framework[7]. The document outlines a framework for undertaking DWMPs.

A DWMP will set out how water and wastewater companies intend to extend, improve and maintain a robust and resilient drainage and wastewater system. The plan must take a long-term view, setting out a planning period that is appropriate to the risks faced by each company, but with a minimum period of 25 years.

The 11 England and Wales water and wastewater companies, including Thames Water, are producing DWMP following an industry framework for the first time in a non-statutory phase. The DWMPs will inform their business plan submissions for the next price review in 2024.

The framework provides the basis for more collaborative and integrated planning with, and alongside, organisations that have responsibilities relating to drainage, flooding and protection of the environment.

The Thames Water DWMP will be required to:

- Set out the company's assessment of long-term drainage and wastewater capacity and the drivers, risks and scenarios being planned for;
- Assess where (largely drainage) infrastructure managed by other stakeholders may impose additional risks to drainage and wastewater services; and
- Identify those options that offer best value to customers and the environment, ensuring robust, resilient and sustainable drainage and wastewater services in the long-term.

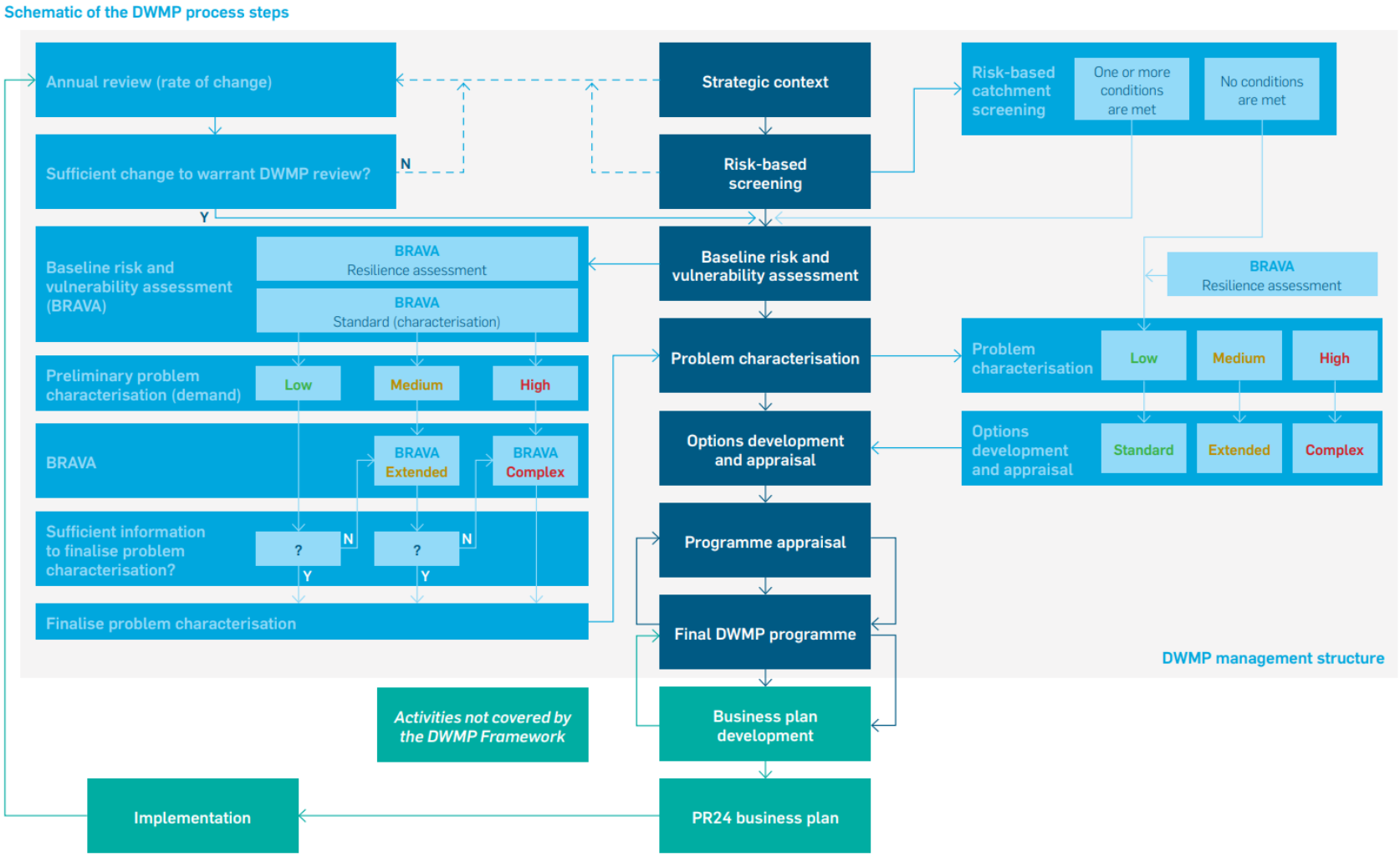
Figure 2-1 provides a schematic of the DWMP process steps that Thames Water undertook to prepare the DWMP including:

1. Scope and Context: An overview of Thames Water's drainage and wastewater region, plus the drivers and objectives that shape the DWMP;
2. Catchment Screening: An overview of Thames Water's region's results from the industry-wide catchment vulnerability screening against 17 different risk indicators;
3. Catchment Risk Analysis: A more detailed assessment of the catchments to help understand the risks they face and identify opportunities for solutions;
4. Option Development and Appraisal (ODA): A list of options considered and their feasibility using a methodology which focuses the level of planning effort, i.e. proportionate to the risk identified; and
5. Programme Appraisal/Final DWMP.

The Plan Area is shown in Figure 2-2 below.

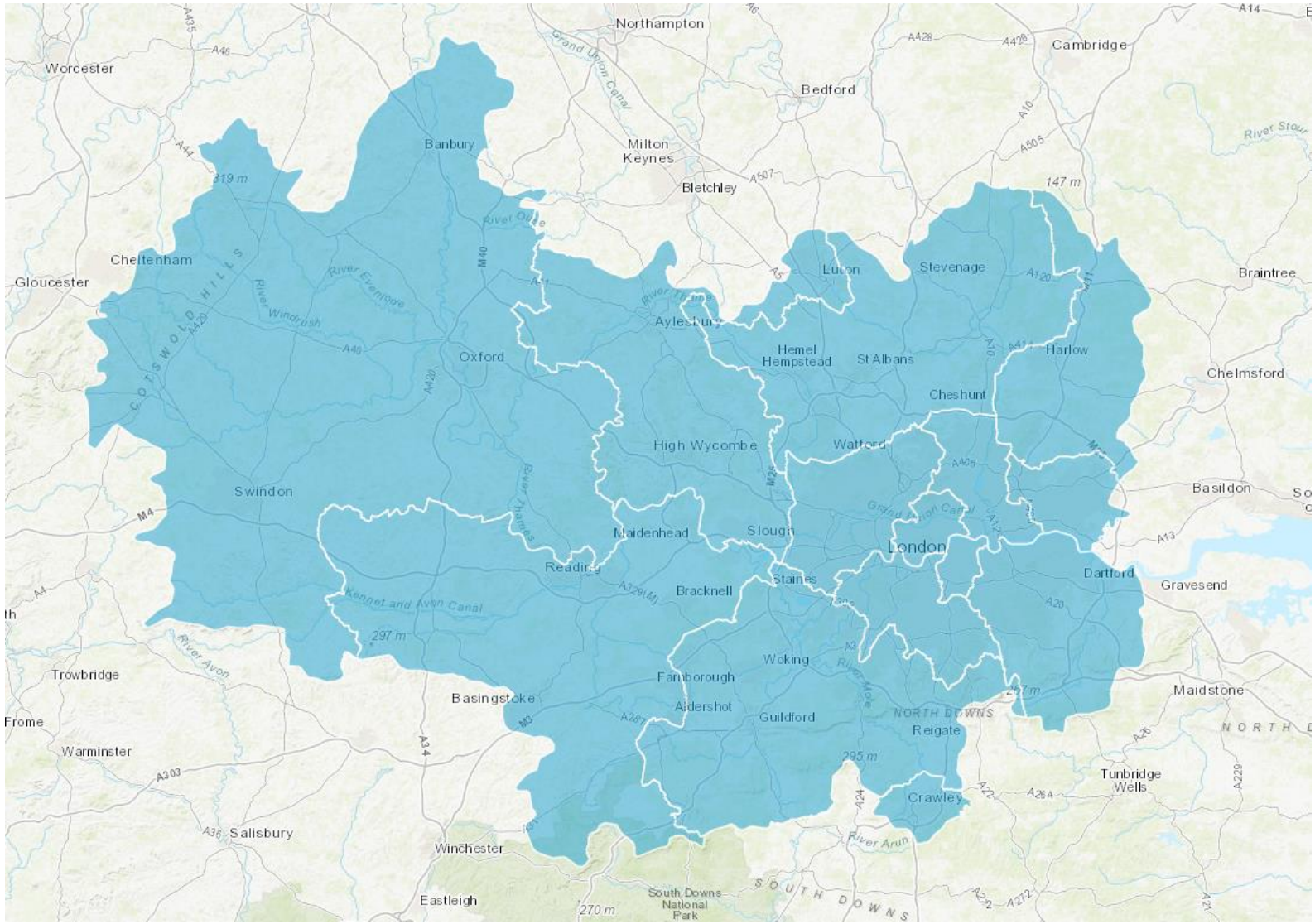
[7] https://www.water.org.uk/wp-content/uploads/2018/12/Water-UK-DWMP-Framework-Report-Main-Document.pdf

Figure 2-1 - Schematic of DWMP Process Steps



Source: A Framework for the production of Drainage and Wastewater Management Plans, September 2018

Figure 2-2 Plan Area



2.2. Generic Sub Options

The DWMP option development and appraisal has identified 42 GSO and five site-specific options (SSO) for feasible optioneering, which comprise options and policies that may be implemented across the 382 Sewage Treatment Work Catchments (STW) within the Thames Water region.

Whilst not all GSOs are promoted in this first cycle of the DWMP, this assessment reflects the full range of potential GSOs and SSO, as summarised in Table 2-1.

It is highlighted that WRMP24 is proposing a scheme to increase river abstraction at Teddington. This would be facilitated by wastewater currently discharging from Mogden STW being highly treated and discharged further upstream on the River Thames to compensate for the additional water taken. While this scheme would have an impact on our wastewater services the primary need for the scheme is from a WRMP perspective. This potential solution has therefore been subject to an HRA as part of WRMP process (see draft WRMP 2024 Technical Appendix B – Strategic Environmental Assessment. This identified that the scheme should be scoped out for HRA Appropriate Assessment.

Table 2-1 GSO and Site-specific Option Summary

GSO/ SSO ID	Solution Name	Solution Description
B1.1	Source control Sustainable Drainage Systems (SuDS) measures	Installation of surface water management devices to collect, store and infiltrate surface water from buildings and surrounding impermeable areas such as driveways and car parks. This option includes residential properties, schools and other public buildings, commercial and industrial buildings. Installation of surface water management devices to collect, store and infiltrate surface water from roads, pavements and pedestrianised areas.
B1.2	Targeted source control SuDS measures at opportunity areas	Delivery of large-scale surface water management strategies across the catchment's opportunity areas to significantly reduce the total flow entering the sewer network at these locations.
B2.1	Combined sewer separation. Convert existing combined sewers to surface water only and construct new foul water sewers	Progressively convert existing combined sewer networks into surface water networks by constructing a parallel foul sewer network (gravity, vacuum or pressurised).
B2.2	Combined sewer separation. Construct new surface water sewers	Fully below/above ground surface water sewer network collecting different types of run off and conveying to receptor which could be a local watercourse, a major watercourse or a water reuse point.
B2.3	Disconnect existing surface water systems from combined sewers and discharge to watercourse	Progressively disconnect surface water sewers from existing combined sewer networks and direct discharge to suitable receptors (gravity, vacuum or pressurised).
B2.4	Deep tunnel(s) to connect surface water networks to major reuse or discharge location(s)	Deep tunnel network to capture surface water flows from major strategic sink points and convey it to a major reuse or discharge location. Assumed that this approach would only be used where natural surface level pathways are insufficient.
B2.5	Combined sewer separation. Convert existing combined sewers to foul water only and convey surface water on the surface using SuDS measures	Fully above ground system (highways, swales, channels, etc.) collecting highway and building flows and conveying to local watercourse or re-use point.
B2.6	Re-create historical rivers to convey surface water	As per description – this option would require activities to open up the lost watercourse and the conveyance infrastructure to get the surface water to the watercourse.

GSO/ SSO ID	Solution Name	Solution Description
B2.7	Use parks and urban spaces to store excess surface water during rainfall events	Daylight surface water systems through parks to create a water-based public amenity with a well-defined flood plain to be used for exceedance events and/or allow surface water systems running through/under urban social spaces to flood (during extreme events) into a well-defined sacrificial storage area within the urban space. Could involve daylighting some or all of the surface water flow path but keep buried if more appropriate.
B2.8	Use highways to store and convey surface water during rainfall events	Highways designed to retain water when gullies and/or the sewer network are unable to accept any more flow and/or highways to convey exceedance flows as a secondary function when sewer network capacity is reached with further protective receptor measures to be taken at topographical low points.
B3.0	Property-level protection measures to prevent buildings from flooding	Provide vulnerable homes with passive flood protection measures such as flood proof doors and/or provide vulnerable homes with active property flood resilience measures such as self-sealing bath/shower systems (non-return valves). Active measures could also include the installation of FLIPs devices. Temporary raised barriers erected in response to flood predictors in order to create a flow retention storage volume to avoid damage to property. Increase thresholds of commercial properties to protect from more severe floods (future-proof). Develop and build partnerships with strategic asset owners and operators to provide resilient flood protection measures. Develop and build partnerships with property developers, product suppliers and the insurance industry to provide a framework for offering high quality affordable property flood protection measures.
C1.0	"Intelligent" sewer network to control flows	Active System Management (ASM) at key points in the network to optimise available network capacity by balancing network flows, e.g., automation of weir chambers on trunk sewers. Requires deployment of sewer monitors for live/predictive modelling. ASM at key pumping stations across the network to optimise available network capacity by balancing network flows. Requires deployment of sewer monitors for live/predictive modelling. Ability to monitor and control flow at pipe/chamber level. Integrate energy and cost monitoring from operational sites into ASM decision-making process.
C2.0	Proactive maintenance	Condition based maintenance at all pumping stations; use of intelligent autonomous vehicles to survey sewer network, highlight/prioritise repairs and carry out repair and maintenance work from within the sewer.
C3.1	Increase network capacity by installing larger sewers	Replace existing sewers in most beneficial locations with larger sewers to increase network capacity.
C3.2	Deep tunnel(s) to convey combined sewage	Deep tunnels to convey combined sewage to treatment location. Creates conveyance capacity for storm water.

GSO/ SSO ID	Solution Name	Solution Description
C4.0	Deep tank(s) and tunnel(s) to store combined sewage	Deep tanks and tunnels to convey combined sewage to treatment location. Creates conveyance capacity for storm water.
C5.0	Sewer lining to target infiltration hotspots	Programme of sewer and manhole lining in areas of high infiltration and high potential benefit.
C6.0	Transfer flow between catchments via existing connections	Connections exist between the catchments and also between some of the Sewage Treatment Works (STWs). These connections could be used to transfer flows between catchments without capacity to those with short term capacity.
C7.0	Transfer flow between catchments via new connections	This option is about creating new connections between the STW catchments to optimise capacities and to find the best balance of flow and load, i.e. removing catchment boundaries. It would allow utilisation of the short-term capacity in some STWs whilst other STWs are expanded or redeveloped. Similar to the London Water Ring Main this could be a large infrastructure project that would allow most/all catchments to discharge into a single infrastructure pipe/tunnel and then allow any or all of the STWs to extract from this ring main and treat the flows. Reliant on availability of suitable STWs - London may be the only possible location for such a strategic option
C9.0	Intercompany wastewater transfers	This option would be about transferring sewage effluent from catchments within the TW operating area to STWs in neighbouring water and waste companies that may have spare capacity.
D1.1	Screening in the network	Removing screenings in the network would result in less blockages and optimal use of sewer capacity. Less screenings arriving at STW would reduce the risk of screens being overwhelmed on the site resulting in out of service plant thus increasing the sites resilience. Technology such as coarse or fine screens could be used. Skips and odour control would be required.
D1.2	Remove fats, oils and grease (FOG) in the network	Removing FOG in the network would result in less blockages and optimal use of sewer capacity. For removal in the catchment then technology such as Dissolved Air Flotation (DAFs) could be used to remove grease. This would require additional storage tanks in the network.
D1.3	Primary settlement in the network	Primary treatment in the network would reduce the requirement for similar capacity at STW. This would only be possible where the volume of settled flow can subsequently be diverted directly to secondary treatment. Compact technology with associated sludge holding tanks could be located near major pumping stations.
D1.4	Chemical treatment within the network (ferric iron)	Adding iron (Fe) to the network reduces septicity and enhances primary treatment at the site. This improves the treatability of the sewage and also improves the performance of existing processes.
D1.5	Biological treatment within the network	Adding Return Activated Sludge (RAS) to a sewer system would provide additional biological treatment within the network allowing for reduced secondary treatment on site. Periodically oxygen would have to be added to

GSO/ SSO ID	Solution Name	Solution Description
		continue the biological treatment. Typically, this would involve blowing air into the flow. Multiple aeration points within the network would be required.
D1.6	Other within-sewer treatment	Within-sewer treatment options (e.g. fatberg dissolving enzymes, peroxide) to begin treatment processes in advance of sewage treatment works. Eliminates or reduces risk of blockages and corrosive by-products.
D2.1	Optimising maintenance performance	Opportunities presented by digitisation are being used to offset the issues of ageing infrastructure and capacity shortfalls to meet increasing demand. Digitisation can provide a better understanding of both networks and treatment processes thereby extending asset life and increasing treatment capacity. In addition, digitisation can generate “Smart Data” to make informed decisions to increase plant capacity and performance. Capital maintenance regimes can vary from a ‘fix on fail’ approach for less critical assets to a more proactive rolling replacement programme for some key assets such as aeration domes. Enhanced capital maintenance is about a strict planned rolling programme of proactive maintenance that not only ensures that the assets are fixed quickly when failed but likely they are maintained (e.g. oiled and greased or strengthened) to prevent failure or premature failure. Operations teams are under increasing pressure to maintain availability, throughput and consent. The increasingly tight process and control envelope, the bolstering options being considered, and the potential new process solutions mean that a successful ‘in consent’ works requires the operations team to be ‘on board’ and fully conversant with all solutions and installations. An aim from this initiative would be to facilitate a greater understanding of the impact of operational changes. The management of these STWs can involve complex biological and chemical interactions and flow management. A better understanding of the elements of the system and the use of the data available may allow the sites to be run with less headroom.
D2.2	Real Time Control Implementation, including Supervisory Control and Data Acquisition (SCADA) upgrades and automation	Real Time Control (RTC) is about managing and controlling the works based on the actual flows and loads arriving at the site rather than on a set profile. This could be on secondary treatment plant, sludge thickening or even in reaction to rainfall radar and smart sewer sensors that allow the works to prepare for high flows by dropping the sludge blankets, desludging primary settlement tanks or changing Dissolved Oxygen (DO) targets.
D3.0	Replace/retrofit/expand existing primary/secondary treatment processes using existing process types or more intensive processes	Chemically Assisted Primary Sedimentation (CAPS), DAF, Lamellas, and sand ballasted primary treatment are some of the five plus methods of getting more intensive primary treatment from a smaller area of land than traditional processes. There are a range of different technologies that have been identified for increasing the intensity of secondary treatment processes at the STW either with retrofitting or new build, e.g. modular stacked treatment processes.
D4.1	Buy land and expand STW (effluent and sludge treatment)	Buy land and expand STW (effluent and sludge treatment).

GSO/ SSO ID	Solution Name	Solution Description
D4.2	Buy land and move sludge treatment to new location. Expand effluent stream on remaining land	Buy land and move sludge treatment to new location. Expand effluent stream on remaining land.
D5.0	Construct new/additional STWs	Option involves construction of new treatment works within the catchment (meeting either single or multiple catchment needs) - effective decentralisation of treatment. Increased centralisation of STWs with decommissioning of those considered as surplus to requirement.
D7.1	River catchment-based discharge permitting	Catchment-based discharge permitting (optimising operational and environmental headroom). Some deterioration or less stringent discharge permit criteria allowed in certain locations with conditions improved elsewhere (potentially more stringent permit criteria at certain sites). Net overall benefit.
D7.2	Environmental effects based permitting	Discharge permitting based on bioavailability or ecological impact rather than water quality. Reflects the fact that the relationship between water quality and ecological quality is often non-linear and difficult to predict.
D7.3	Treatment process-based permitting	Treatment process-based permitting where the permit requires specific treatment processes and conditions to be deployed at a site (rather than the discharge quality that should be achieved) - permit compliance determined through provision of evidence that influents have been subject to the agreed treatment processes (follows example of sludge treatment principles).
D8.1	Real-time quality monitoring and dynamic consenting	Real-time effluent and receiving water quality monitoring to improve statistical confidence, reduce uncertainty and allow for dynamic consenting.
D8.2	Real-time quality monitoring with automated process response	Real-time / continuous effluent and receiving water quality monitoring (improves confidence / reduces uncertainty) in conjunction with automated re-treatment / selective recirculation (or diversion to emergency tertiary treatment process) of low quality effluent to maximise discharge of quality effluent. Permit criteria considers ecological sensitivity of receiving water (seasonality, specific species requirements etc.).
D9.1	Treatment of diffuse pollution sources (inputs to river)	Treat the chemical inputs to the river from sources other than STWs (e.g. from agriculture, road and trading estate run-off) in lieu of STW-based treatment options to achieve the equivalent environmental outcome.
D9.2	Treatment of diffuse pollution sources (inputs to sewer)	Treat chemical inputs from non-water sector sources to reduce ultimate wastewater process treatment requirement.
D9.3	Treatment of point pollution sources (inputs to sewer)	Pre-treat trade/industrial effluent. In combination with active/continuous trade-effluent monitoring (to check and verify compliance). This would be treatment at source before it is input to the sewers.

GSO/ SSO ID	Solution Name	Solution Description
D9.4	Control of chemicals at source	Source control / supply chain management and engagement - setting procurement standards that preclude the use of (or limit) certain chemicals.
D12.1	Sludge transfers (cross-company, internal, from centralised STW)	Sludge transfers.
WC01	Beckton STW	New STW at Luxborough Lane, Barking town centre surface water disconnection
WC02	Hogsmill STW	Major upgrade to inlet pumping station at Hogsmill STW
WC03	Iver South STW	Mixed liquors alternative discharge location (discharge to sewer for treatment at STW)
WC04	Maple Lodge STW	Additional grit removal, Integrated fixed film activated sludge (IFAS) retrofit into Activated sludge plant (ASP) lanes (total volume of 4000 m^3), 2 additional Final settlement tanks (FSTs)
WC05	Blackbirds STW	Additional grit removal and screening, 1 x additional Primary settlement tank (PST), bring 2 ASP lanes back into service and retrofit with 450 m^3 IFAS.

3. Methodology

3.1. Gathering Information

All available information about the DWMP was gathered in order to analyse whether the DWMP is likely to have any LSE on European sites.

3.2. Determination of European Sites included in the HRA

An initial review of the DWMP in light of the Habitats Regulations has been undertaken as part of the HRA process. This initial review looked at the geographic extent or zone of influence of any impacts which could arise as a result of the DWMP and considered which European sites should be included within the assessment.

The lack of project-specific detail means that the HRA site selection and screening process is undertaken at a high level. Combined with recent European case law, which ruled that measures to avoid or reduce effects cannot be considered at the screening stage, very few European sites will be able to be screened out of further assessment without specific project details.

3.3. Obtaining Information on European Sites with the Potential to be Affected

The Conservation Objectives and site vulnerabilities for all European sites (where available) have been obtained from Natural England[8] for the purpose of this assessment. Further details of these European sites are provided in Appendix A.

3.4. Identification of Relevant European Sites

The DWMP applies to 382 STW Catchments within the Thames Water region. All European sites within and up to 10 km (predicted zone of influence) of the STW Catchments were identified.

A summary of the constituent STW Catchments and the European sites which fall within and up to 10 km of each area is provided in **Appendix A**.

This HRA is a record of the assessment of LSE from the DWMP on the 48 European sites listed in **Appendix A**. Information regarding their location and reasons for designation has not been included at this stage. Further details regarding the conservation objectives and site vulnerabilities and threats are provided in **Appendix B**.

3.5. Obtaining Information on the European Sites with the Potential to be Affected

Information on the vulnerabilities of all European sites identified was obtained from the European site Standard Data Forms provided on the Joint Nature Conservation Committee (JNCC) website[9].

3.6. Assessing the Impacts of the Plan 'Alone' and 'In-Combination'

Following the gathering of information on the DWMP and the European sites, an assessment has been undertaken to predict the LSE of the DWMP on the European sites 'alone'. In order to inform this process, the GSO within the DWMP were assessed to see if they could result in LSE on the European sites.

Each of the GSOs have been examined to see if the DWMP could have an LSE on the European sites. However, as the DWMP is at a strategic level (i.e. development that may arise as a result these interventions is unknown at this stage), the HRA has also been undertaken at a strategic level.

LSE are assessed by reference to the conservation objectives of the qualifying features (interest feature) of the European sites. Any plan or project that causes the cited interest features of a site to fall into unfavourable condition can be considered to have an LSE on the site. Stage 1 of the HRA process does not assess effects on the integrity of European sites (this forms Stage 2 of the HRA process).

Plans or projects can adversely affect a site by:

[8] http://publications.naturalengland.org.uk/category/6490068894089216
[9] http://jncc.defra.gov.uk

- Causing delays in progress towards achieving the conservation objectives of the site;
- Interrupting progress towards achieving the conservation objectives of the site;
- Disrupting those factors that help to maintain the favourable conditions of the site; and
- Interfering with the balance, distribution and density of key species that are the indicators of the favourable condition of the site.

HRA is an iterative process, where necessary, suggestions can be made of how to amend the DWMP to avoid LSE on a European site.

The precautionary principle (as enshrined in the Habitats Regulations) has been taken into account during this HRA. The precautionary principle is used when a HRA cannot objectively demonstrate that there will be no LSE on the European sites. If this occurs, the subsequent stages of HRA must be completed for the project or plan.

The potential exists for in-combination effects with other plans and projects for a number of effects. However, given the nature of the DWMP, there is inevitably going to be a delay between the adoption of the DWMP and any development. It is not possible to know when (or indeed if) any subsequent project proposal will come forward and it is not therefore possible to predict what other plans and projects will be relevant to such a future project assessment. There is a need to consider the potential for in-combination effects at the plan stage, but that assessment is relevant to any subsequent development in its own right and needs to be scoped accordingly.

Therefore, it is recommended that 'in combination' assessment is undertaken at a lower tier when further details are known.

3.7. Stage 2: Appropriate Assessment

The purpose of this assessment is to establish whether there are elements of the DWMP which could have an adverse effect on the integrity of these sites.

The integrity of a site is defined as "the coherence of the site's ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or population of species for which the site has been designated" (European Commission, 2000a).

European Commission guidance on the provisions of Article 6, emphasises that site integrity involves its ecological functions and that the assessment of adverse effect should focus on and be limited to the site's conservation objectives (European Commission, 2000b).

For the Appropriate Assessment, English Nature (now Natural England) guidance on 'site integrity' has been used[10] to identify suitable criteria for deciding whether impacts would be likely to be deemed 'adverse effects on integrity'.

As described in Natural England's guidance document The Habitats Regulations Assessment of Local Development Documents (Revised Draft)[11]:

> "…*it should be borne in mind that appropriate assessment for a plan is unlikely to be as detailed an assessment as one undertaken at project level*.
>
> *Occasionally, where a proposal in a plan is advancing rapidly at project development level, concurrently with the plan-making process, such detailed information could be available, but usually such detailed assessments are unlikely to be achievable or feasible. The object is to assess whether it can be ascertained that the elements of the plan, alone or in combination with each other, and/or other plans or projects, would not have an adverse effect on the integrity of a European site.*"

Where necessary, mitigation measures have been put forward to address any adverse effects on integrity of the European sites. Policy level HRA offers an opportunity to highlight where lower tier plans and projects will require HRA in order to avoid conflict with conservation objectives for European sites. The purpose of policy level HRAs is to assess whether particular policies will impact on designated sites. If it cannot be ruled out that there will be no adverse effects on the integrity of the European sites, then policies must be amended or

[10] *English Nature, May 2004. European Sites Guidance - Internal Guidance to Decisions on 'Site Integrity': A Framework for Provision of Advice to Competent Authorities*

[11] *The Habitats Regulations Assessment of Local Development Documents*, Natural England, 2009

deleted. Where appropriate, safeguarding conditions can be used and/or deliverable mitigation identified to avoid or remove the potential adverse impacts of a policy. This approach will ensure the plan is robust and deliverable. It is supported by the decision in the case of Feeney v Oxford City Council [2011] EWHC 2699, in which the Court ruled that the use of safeguard conditions is not excluded by the precautionary principle; on the contrary such a condition is based upon advance consideration of potential future risks.

Impacts of a plan depend to a large extent on how policies and proposals are implemented on the ground. Due to the uncertainties inherent in policy-making, the exact effect of a policy or proposal may not be certain until detailed implementation. This can make it difficult to conclude with any certainty that adverse effects on integrity will not take place. Due to the requirement within the Habitats Directive to apply the precautionary principle, if it is not possible to be certain that adverse effects will not occur, this HRA proposes methods to mitigate for adverse effects that could occur. This is important, in order to demonstrate that any development brought forward as a result of policies in the DWMP, can be delivered without adverse effects on integrity. Changes to the detailed design of development schemes, when they arise, may be necessary as well as mitigation.

4. Stage 1 Screening Assessment

4.1. Initial Screening

This section summarises the GSOs that apply to Thames Water's DWMP. The results determine whether the interventions are considered to have an LSE on the European sites. The LSE take into account the measures in the DWMP which seek to protect European sites.

- Policy Type 1: Policies that will not themselves lead to development (e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy);
- Policy Type 2: Policies intended to protect the natural environment, including biodiversity;
- Policy Type 3: Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site; and
- Policy Type 4: Policies that positively steer development away from European sites and associated sensitive areas.

This has been based on The Habitats Regulations Assessment of Regional Spatial Strategies and sub-Regional Strategies (Draft Guidance), David Tyldesley and Associates, produced by Natural England in March 2007.

Where possible, interventions have been categorised into sub policy types based on Natural England published guidance[12], as summarised below.

Table 4-1 – Categories of Potential Effects of Land-Use Plans on European Sites

Category	Sub Category	Description
A – no negative effect	A1	Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy.
	A2	Policies intended to protect the natural environment, including biodiversity.
	A3	Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site.
	A4	Policies that positively steer development away from European sites and associated sensitive areas.
	A5	Policies that would have no effect because no development could occur through the policy itself, the development being implemented through later policies in the same plan, which are more specific and, therefore, more appropriate to assess for their effects on European sites and associated sensitive areas.
B – no significant effect	N/A	Policies that could have a negative effect but would not be likely to have a significant effect on a European site alone or in combination with other plans or projects.
C – likely significant effects alone	C1	The policy could **directly affect** a European site because it provides for, or steers, a quantity or type of development onto a European site, or adjacent to it.
	C2	The policy could **indirectly affect** a European site because it provides for or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it or it may increase disturbance as a result of increased recreational pressures.

[12] The Habitats Regulations Assessment of Local Development Projects (Revised Draft Guidance) (David Tyldesley & Associates for Natural England, February 2009).

Category	Sub Category	Description
	C3	Proposals for a **magnitude of development** that no matter where it was located, the development would be likely to have a significant effect on a European site.
	C4.0	A policy that makes provision for a quantity/type of development, but the effects are uncertain because the detailed location of the development is to be selected following **consideration of options at a later, more specific plan stage.**
	C5	Policies for developments or infrastructure projects that could **block options or alternatives** for the provision of other development or projects in the future which will be required in the public interest that may lead to adverse effects on European sites, which would otherwise be avoided.
	C6	Policies which **depend on how the policies etc. are implemented** in due course. There is a theoretical possibility that if implemented in one or more particular ways the proposals could possibly have a significant effect on a European site.
	C7	Any policies that would be **vulnerable to failure** under the Habitats Regulations at project assessment stage to include them in the plan would be regarded by the EC as 'faulty planning'.
	C8	Any other proposal that may have an adverse effect on a European site which might try to pass the tests of the Habitats Regulations at project assessment stage by arguing that the **plan provides the imperative reasons** of overriding public interest to justify its consent despite a negative assessment.
D – likely significant effects in combination	D1	The policy alone would not be likely to have significant effects but if its effects are combined with the effects of other policies or proposals **provided for or coordinated** by the Local Development Database (LDD) (internally) the **cumulative** effects would be likely to be significant.
	D2	Policies that alone would not be likely to have significant effects but if their effects are **combined with the effects of other plans or projects** and possibly the effects of other developments provided for in the LDD as well the combined effects would be likely to be significant.
	D3.0	Policies that are or could be part of a **programme or sequence of development** delivered over a period where the implementation of the early stages would not have a significant effect on the location, timing of the whole project, the later stages of which could have an adverse effect on such sites.

The above guidance sets out criteria to assist with the screening process and addresses the management of uncertainty in the assessment process. Proposals falling within categories A and B are considered not to have an effect on a European site and can be eliminated from the assessment procedure. Proposals falling within category C and category D require further analysis, including the consideration of 'in-combination' effects to determine whether they should be included in the next stage of the HRA process.

Table 4-2 below provides the initial screening assessment of the GSO using the criteria detailed above.

Table 4-2: GSO Initial Screening

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
B1.1	Source control SuDS measures	Installation of surface water management devices to collect, store and infiltrate surface water from buildings and surrounding impermeable areas such as driveways and car parks. This option includes residential properties, schools and other public buildings, commercial and industrial buildings. Installation of surface water management devices to collect, store and infiltrate surface water from roads, pavements and pedestrianised areas.	No	**Category A2:** Policies intended to protect the natural environment, including biodiversity. Whilst this option will lead to development of SuDS, these will be associated with future development and are intended to control the risk of pollution and control the rate of discharge to foul and surface waters. This intervention would lead to improved water quality discharges.
B1.2	Targeted source control SuDS measures at opportunity areas	Delivery of large-scale surface water management strategies across the catchment's opportunity areas to significantly reduce the total flow entering the sewer network at these locations.	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it or ecologically, hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures. The option will result in development of large scale surface water management strategies which are likely to result in development which could impact European sites.
B2.1	Combined sewer separation. Convert existing combined sewers to surface water only and construct new foul water sewers.	Progressively convert existing combined sewer networks into surface water networks by constructing a parallel foul sewer network (gravity, vacuum or pressurised).	Yes	**Category C4.0:** A policy that makes provision for a quantity/type of development, but the effects are uncertain because the detailed location of the development is to be selected following consideration of options at a later, more specific plan stage. This GSO could lead to major works. Although the locations are not detailed, following the

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
				precautionary principle, there is a risk that such works could be within or near to European sites.
B2.2	Combined sewer separation. Construct new surface water sewers.	Fully below/above ground surface water sewer network collecting different types of run off and conveying to receptor which could be a local watercourse, a major watercourse or a water reuse point.	Yes	**Category C4.0:** A policy that makes provision for a quantity/ type of development, but the effects are uncertain because the detailed location of the development is to be selected following consideration of options at a later, more specific plan stage. This GSO could lead to major works. Although the locations are not detailed, following the precautionary principle, there is a risk that such works could be within or near to European sites.
B2.3	Disconnect existing surface water systems from combined sewers and discharge to watercourse	Progressively disconnect surface water sewers from existing combined sewer networks and direct discharge to suitable receptors (gravity, vacuum or pressurised).	Yes	**Category C4.0:** A policy that makes provision for a quantity/ type of development, but the effects are uncertain because the detailed location of the development is to be selected following consideration of options at a later, more specific plan stage. This GSO could lead to major works. Although the locations are not detailed, following the precautionary principle, there is a risk that such works could be within or near to European sites.
B2.4	Deep tunnel(s) to connect surface water networks to major reuse or discharge location(s)	Deep tunnel network to capture SW flows from major strategic sink points across the city and convey it to a major reuse or discharge location. Assumed that this approach would only be used where natural surface level pathways are insufficient.	Yes	**Category C4.0:** A policy that makes provision for a quantity/ type of development, but the effects are uncertain because the detailed location of the development is to be selected following consideration of options at a later, more specific plan stage.

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
				This GSO could lead to major works. Although the locations are not detailed, following the precautionary principle, there is a risk that such works could be within or near to European sites.
B2.5	Combined sewer separation. Convert existing combined sewers to foul water only and convey surface water on the surface using SuDS measures.	Fully above ground system (highways, swales, channels, etc.) collecting highway and building flows and conveying to local watercourse or re-use point.	Yes	**Category C4:** A policy that makes provision for a quantity/ type of development, but the effects are uncertain because the detailed location of the development is to be selected following consideration of options at a later, more specific plan stage. This GSO could lead to major works. Although the locations are not detailed, following the precautionary principle, there is a risk that such works could be within or near to European sites.
B2.6	Re-create historical rivers to convey surface water	As per description – this option would require activities to open up the lost watercourse and the conveyance infrastructure to get the surface water to the water course.	Yes	**Category C1:** The policy could directly affect a European site because it provides for, or steers, a quantity or type of development onto a European site, or adjacent to it. The location or extent of this intervention are unknown and therefore using the precautionary principle, it is possible that such measures could result in effects on European sites.
B2.7	Use parks and urban spaces to store excess surface water during rainfall events	Daylight surface water systems through parks to create a water-based public amenity with a well-defined flood plain to be used for exceedance events and/or allow surface water systems running through/under urban social spaces to flood (during extreme events) into a well-defined sacrificial storage area within the urban space. Could involve daylighting	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to and/ or hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures.

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
		some or all of the surface water flow path but keep buried if more appropriate.		This option will result in the development of surface water storage during flooding events which may lead to effects on the European sites, subject to the chosen locations.
B2.8	Use highways to store and convey surface water during rainfall events	Highways designed to retain water when gullies and/ or the sewer network are unable to accept any more flow and/or highways to convey exceedance flows as a secondary function when sewer network capacity is reached with further protective receptor measures to be taken at topographical low points.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The GSO will seek to provide temporary storage on existing hardstanding only.
B3.0	Property-level protection measures to prevent buildings from flooding	Provide vulnerable homes with passive flood protection measures such as flood proof doors and/or provide vulnerable homes with active property flood resilience measures such as self-sealing bath/shower systems (non-return valves). Active measures could also include the installation of FLIPs devices. Temporary raised barriers erected in response to flood predictors in order to create a flow retention storage volume to avoid damage to property. Increase thresholds of commercial properties to protect from more severe floods (future-proof). Develop and build partnerships with strategic asset owners and operators to provide resilient flood protection measures. Develop and build partnerships with property developers, product suppliers	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The GSO will seek to provide passive flood protection measures only which would have no effect on the European sites.

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
		and the insurance industry to provide a framework for offering high quality affordable property flood protection measures.		
C1.0	"Intelligent" sewer network to control flows	ASM at key points in the network to optimise available network capacity by balancing network flows, e.g. automation of weir chambers on trunk sewers. Requires deployment of sewer monitors for live/predictive modelling. ASM at key pumping stations across the network to optimise available network capacity by balancing network flows. Requires deployment of sewer monitors for live/predictive modelling. Ability to monitor and control flow at pipe/chamber level. Integrate energy and cost monitoring from operational sites into ASM decision-making process.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The GSO will seek to provide the ability to better manage storage waters.
C2.0	Proactive maintenance	Condition based maintenance at all pumping stations; use of intelligent autonomous vehicles to survey sewer network, highlight/prioritise repairs and carry out repair and maintenance work from within the sewer.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The GSO deals with the management of existing maintenance measures and will thus not have an effect on European sites.
C3.1	Increase network capacity by installing larger sewers	Replace existing sewers in most beneficial locations with larger sewers to increase network capacity.	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it or ecologically,

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
				hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures. The option may result in works to replace and upgrade sewers which could result in impacts on European sites.
C3.2	Deep tunnel(s) to convey combined sewage	Deep tunnels to convey combined sewage to treatment location. Creates conveyance capacity for storm water.	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures. The option may result in works which could result in impacts on European sites.
C4.0	Deep tank(s) and tunnel(s) to store combined sewage	Deep tanks and tunnels to convey combined sewage to treatment location. Creates conveyance capacity for storm water.	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures. The option may result in works which could result in impacts on European sites.
C5.0	Sewer lining to target infiltration hotspots	Programme of sewer and manhole lining in areas of high infiltration and high potential benefit.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The proposed GSO is related to lining of existing sewers and, therefore, will not result in any new development.

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
C6.0	Transfer flow between catchments via existing connections	Connections exist between the catchments and also between some of the STWs. These connections could be used to transfer flows between catchments without capacity to those with short term capacity.	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it or ecologically, hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures. The option may result in works which could result in impacts on European sites.
C7.0	Transfer flow between catchments via new connections	This option is about creating new connections between the STW catchments to optimise capacities and to find the best balance of flow and load i.e., removing catchment boundaries. It would allow utilisation of the short term capacity in some STWs whilst other STWs are expanded or redeveloped. Similar to the London Water Ring Main this could be a large infrastructure project that would allow most/all catchments to discharge into a single infrastructure pipe/tunnel and then allow any or all of the STWs to extract from this ring main and treat the flows. Reliant on availability of suitable STWs - London may be the only possible location for such a strategic option	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it or ecologically, hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures. The option may result in works which could result in impacts on European sites.
C9.0	Intercompany wastewater transfers	This option would be about transferring sewage effluent from catchments within the TW operating area to STWs in neighbouring water and waste companies that may have spare capacity.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy.

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
				The proposed GSO would utilise existing networks and, therefore, will not result in any new development.
D1.1	Screening in the network	Removing screenings in the network would result in less blockages and optimal use of sewer capacity. Less screenings arriving at STW would reduce the risk of screens being overwhelmed on the site resulting in out of service plant thus increasing the sites resilience. Technology such as coarse or fine screens could be used. Skips and odour control would be required.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The proposed GSO would not result in any new development.
D1.2	Remove FOG in the network	Removing FOG in the network would result in less blockages and optimal use of sewer capacity. For removal in the catchment then technology such as DAFs could be used to remove grease. This would require additional storage tanks in the network.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The proposed GSO would not result in any new development.
D1.3	Primary settlement in the network	Primary treatment in the network would reduce the requirement for similar capacity at STW. This would only be possible where the volume of settled flow can subsequently be diverted directly to secondary treatment. Compact technology with associated sludge holding tanks could be located near major pumping stations.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The proposed GSO would not result in any new development.
D1.4	Chemical treatment within the network (ferric iron)	Adding iron (Fe) to the network reduces septicity and enhances primary treatment at the site. This improves the treatability	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
		of the sewage and also improves the performance of existing processes.		development, or they are not a land use planning policy. The proposed GSO would not result in any new development.
D1.5	Biological treatment within the network	Adding RAS to a sewer system would provide additional biological treatment within the network allowing for reduced secondary treatment on site. Periodically oxygen would have to be added to continue the biological treatment. Typically, this would involve blowing air into the flow. Multiple aeration points within the network would be required.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The proposed GSO would not result in any new development.
D1.6	Other within-sewer treatment	Within-sewer treatment options (e.g. fatberg dissolving enzymes, peroxide) to begin treatment processes in advance of sewage treatment works. Eliminates or reduces risk of blockages and corrosive by-products.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The proposed GSO would not result in any new development.
D2.1	Optimising maintenance performance	Opportunities presented by digitisation are being used to offset the issues of ageing infrastructure and capacity shortfalls to meet increasing demand. Digitisation can provide a better understanding of both networks and treatment processes thereby extending asset life and increasing treatment capacity. In addition, digitisation can generate “Smart Data” to make informed decisions to increase plant capacity and performance.	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy. The proposed GSO would not result in any new development.

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
		Capital maintenance regimes can vary from a 'fix on fail' approach for less critical assets to a more proactive rolling replacement programme for some key assets such as aeration domes. Enhanced capital maintenance is about a strict planned rolling programme of proactive maintenance that not only ensures that the assets are fixed quickly when failed but likely they are maintained (e.g. oiled and greased or strengthened) to prevent failure or premature failure. Operations teams are under increasing pressure to maintain availability, throughput and consent. The increasingly tight process and control envelope, the bolstering options being considered, and the potential new process solutions mean that a successful 'in consent' works requires the operations team to be 'on board' and fully conversant with all solutions & installations. An aim from this initiative would be to facilitate a greater understanding of the impact of operational changes. The management of these STWs can involve complex biological and chemical interactions and flow management. A better understanding of the elements of the system and the use of the data available may allow the sites to be run with less headroom.		
D2.2	Real Time Control Implementation (including	RTC is about managing and controlling the works based on the actual flows and	No	**Category A1:** Policies that will not themselves lead to development, e.g. because they relate

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
	SCADA upgrades and automation)	loads arriving at the site rather than on a set profile. This could be on secondary treatment plant, sludge thickening or even in reaction to rainfall radar and smart sewer sensors that allow the works to prepare for high flows by dropping the sludge blankets, desludging primary settlement tanks or changing DO targets.		to design or other qualitative criteria for development, or they are not a land use planning policy. The proposed GSO would not result in any new development.
D3.0	Replace/retrofit/expand existing primary/secondary treatment processes using existing process types or more intensive processes	CAPS, DAF, Lamellas, and sand ballasted primary treatment are some of the 5+ methods of getting more intensive Primary treatment from a smaller area of land than traditional processes. There are a range of different technologies that have been identified for increasing the intensity of secondary treatment processes at the STW either with retrofitting or new build, e.g. modular stacked treatment processes.	No	**Category B:** Policies that could have a negative effect but would not be likely to have a significant effect on a European site alone, or in combination with other plans or projects. Any development would be within existing sewage treatment works and therefore any development would be within existing development and unlikely to effect a European site.
D4.1	Buy land and expand STW (effluent and sludge treatment)	Buy land and expand STW (effluent and sludge treatment)	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it or ecologically, hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures. The option may result in works which could result in impacts on European sites.
D4.2	Buy land and move sludge treatment to new location. Expand effluent stream on remaining land.	Buy land and move sludge treatment to new location. Expand effluent stream on remaining land.	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it, or it

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
				may increase disturbance as a result of increased recreational pressures. The option may result in works which could result in impacts on European sites.
D5.0	Construct new/additional STWs	Option involves construction of new treatment works within the catchment (meeting either single or multiple catchment needs) - effective decentralisation of treatment. Increased centralisation of STWs with decommissioning of those considered as surplus to requirement.	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures. The option may result in works which could result in impacts on European sites.
D7.1	River catchment-based discharge permitting	Catchment-based discharge permitting (optimising operational and environmental headroom). Some deterioration or less stringent discharge permit criteria allowed in certain locations with conditions improved elsewhere (potentially more stringent permit criteria at certain sites). Net overall benefit.	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it or ecologically, hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures. The option may result in changes to water quality which could result in impacts on European sites.
D7.2	Environmental effects based permitting	Discharge permitting based on bioavailability or ecological impact rather than water quality. Reflects the fact that the relationship between water quality and ecological quality is often non-linear and difficult to predict.	No	**Category A3:** Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site. The GSO would seek to improve water quality which could only have a positive effect on the European sites.

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
D7.3	Treatment process-based permitting	Treatment process-based permitting where the permit requires specific treatment processes and conditions to be deployed at a site (rather than the discharge quality that should be achieved) - permit compliance determined through provision of evidence that influents have been subject to the agreed treatment processes (follows example of sludge treatment principles).	No	**Category A3:** Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site. The GSO would seek to improve water quality which could only have a positive effect on the European sites.
D8.1	Real-time quality monitoring and dynamic consenting	Real-time effluent and receiving water quality monitoring to improve statistical confidence, reduce uncertainty and allow for dynamic consenting.	No	**Category A3:** Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site. The GSO would seek to improve water quality which could only have a positive effect on the European sites.
D8.2	Real-time quality monitoring with automated process response	Real-time / continuous effluent and receiving water quality monitoring (improves confidence / reduces uncertainty) in conjunction with automated re-treatment / selective recirculation (or diversion to emergency tertiary treatment process) of low quality effluent to maximise discharge of quality effluent. Permit criteria considers ecological sensitivity of receiving water (seasonality, specific species requirements etc.).	No	**Category A3:** Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site. The GSO would seek to improve water quality which could only have a positive effect on the European sites.

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
D9.1	Treatment of diffuse pollution sources (inputs to river)	Treat the chemical inputs to the river from sources other than STWs (e.g. from agriculture, road and trading estate run-off) in lieu of STW-based treatment options to achieve the equivalent environmental outcome.	No	**Category A3:** Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site. The GSO would seek to improve water quality which could only have a positive effect on the European sites.
D9.2	Treatment of diffuse pollution sources (inputs to sewer)	Treat chemical inputs from non-water sector sources to reduce ultimate wastewater process treatment requirement.	No	**Category A3:** Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site. The GSO would seek to improve water quality which could only have a positive effect on the European sites.
D9.3	Treatment of point pollution sources (inputs to sewer)	Pre-treat trade/industrial effluent. In combination with active/continuous trade-effluent monitoring (to check and verify compliance). This would be treatment at source before it is input to the sewers.	No	**Category A3:** Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site. The GSO would seek to improve water quality which could only have a positive effect the European sites.
D9.4	Control of chemicals at source	Source control / supply chain management and engagement - setting procurement standards that preclude the use of (or limit) certain chemicals.	No	**Category A3:** Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site. The GSO would seek to improve water quality which could only have a positive effect on the European sites.

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
D12.1	Sludge transfers (cross-company, internal, from centralised STW)	Sludge transfers as described.	No	**Category A3:** Policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site. The GSO would seek to improve water quality which could only have a positive effect on the European sites.
WC01	Beckton STW	New STW at Luxborough Lane, Barking town centre surface water disconnection	Yes	**Category C2:** The policy could indirectly affect a European site because it provides for or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it, or it may increase disturbance as a result of increased recreational pressures. The option will result in development which may lead to effects on the European sites, subject to the chosen locations.
WC02	Hogsmill STW	Major upgrade to inlet pumping station at Hogsmill STW	No	**Category A2:** Policies intended to protect the natural environment, including biodiversity. Whilst this option will lead to development, this will be in the existing STW and will improve water quality.
WC03	Iver South STW	Mixed liquors alternative discharge location (discharge to sewer for treatment at STW)	No	**Category A2:** Policies intended to protect the natural environment, including biodiversity. Whilst this option will lead to development, this will be in the existing STW and will improve water quality.
WC04	Maple Lodge STW	Additional grit removal, IFAS retrofit into ASP lanes (total volume of 4000 m^3), 2 additional FSTs	No	**Category A2:** Policies intended to protect the natural environment, including biodiversity.

GSO and SSO ID	Solution Name	Solution Description	Will the GSO lead to LSE on the European sites?	Justification
				Whilst this option will lead to development, this will be in the existing STW and will improve water quality.
WC05	Blackbirds STW	Additional grit removal and screening, 1 x additional PST, bring 2 ASP lanes back into service and retrofit with 450 m^3 IFAS.	No	**Category A2:** Policies intended to protect the natural environment, including biodiversity. Whilst this option will lead to development, this will be in the existing STW and will improve water quality.

The initial screening has identified the following GSOs and SSOs which may result in an LSE on the European sites:

- B1.2 - Targeted source control SuDS measures at opportunity areas;
- B2.1 - Combined sewer separation. Convert existing combined sewers to surface water only and construct new foul water sewers;
- B2.2 - Combined sewer separation. Construct new surface water sewers;
- B2.3 - Disconnect existing surface water systems from combined sewers and discharge to watercourse;
- B2.4 - Deep tunnel(s) to connect surface water networks to major reuse or discharge location(s);
- B2.5 - Combined sewer separation. Convert existing combined sewers to foul water only and convey surface water on the surface using SuDS measures;
- B2.6 - Re-create historical rivers to convey surface water;
- B2.7 - Use parks and urban spaces to store excess surface water during rainfall events;
- C3.1 - Increase network capacity by installing larger sewers;
- C3.2 - Deep tunnel(s) to convey combined sewage;
- C4.0 - Deep tank(s) and tunnel(s) to store combined sewage;
- C6.0 - Transfer flow between catchments via existing connections;
- C7.0 - Transfer flow between catchments via new connections;
- D4.1 - Buy land and expand STW (Effluent and sludge treatment);
- D4.2 - Buy land and move sludge treatment to new location. Expand effluent stream on remaining land;
- D5.0 - Construct new/additional STWs;
- D7.1 - River catchment-based discharge permitting; and
- WC01 – Beckton STW.

4.2. Detailed Screening

Following the identification of those GSO which may result in an LSE on the European sites, a more detailed assessment has been undertaken of GSO per STW Catchment. These were individually assessed based on whether any of the 17 GSO or one site-specific intervention that may result in an LSE are proposed for that STW Catchment, and if so, whether there were any European sites within 10 km of the STW Catchment that could be affected by the proposals. This assessment is detailed in **Appendix D**.

The assessment concluded the following:

- 99 STW Catchments had no European sites within 10 km of the STW Catchment boundary and were, therefore, screened out;
- 94 STW Catchments had no proposed GSO interventions and were, therefore, screened out;
- 107 STW Catchments had European sites within 10 km but were screened out based on the proposed GSO and the distance from the STW catchment; and
- 82 STW Catchments had European sites located sufficiently close enough to the GSO to result in potential LSEs.

The 82 STW Catchments were subsequently reviewed against the preferred plan.

5. Stage 1 Screening Conclusions

This HRA has assessed whether the GSO set out within the DWMP are likely to lead to significant effects on the European sites and what these likely impacts are.

The initial screening identified 17 of the proposed GSO and one site specific intervention which could result in development that has the potential to have an effect on European sites. The STW Catchments were then individually assessed. The assessment has concluded that of the 382 STW Catchments, it was considered that 82 may result in an LSE on the European sites.

Due to the strategic nature of the DWMP, the GSO set out are high level only and provide limited detail (to STW Catchment level) of potential locations. However, using the precautionary principle, it is considered that the DWMP may have an LSE on European sites associated with 82 STW Catchments. Therefore, a Stage 2 Appropriate Assessment will be required to assess if the DWMP will have an effect on the integrity of the European sites.

6. Stage 2 Appropriate Assessment

6.1. Introduction

Following completion of the HRA Stage 1 Screening assessment, it was concluded that the following GSO may result in likely significant effects on European sites within 10 km of 82 of the 382 STW Catchments and that as such these policies would require a Stage 2 Appropriate Assessment:

- B1.2 - Targeted source control SuDS measures at opportunity areas;
- B2.1 - Combined sewer separation (1). Convert existing combined sewers to surface water only and construct new foul water sewers;
- B2.2 - Combined sewer separation. Construct new surface water sewers;
- B2.3 - Disconnect existing surface water systems from combined sewers and discharge to watercourse
- B2.4 - Deep tunnel(s) to connect surface water networks to major reuse or discharge location(s)
- B2.5 - Combined sewer separation. Convert existing combined sewers to foul water only and convey surface water on the surface using SuDS measures.
- B2.6 - Re-create historical rivers to convey surface water;
- B2.7 - Use parks and urban spaces to store excess surface water during rainfall events;
- C3.1 - Increase network capacity by installing larger sewers;
- C3.2 - Deep tunnel(s) to convey combined sewage;
- C4.0 - Deep tank(s) and tunnel(s) to store combined sewage;
- C6.0 - Transfer flow between catchments via existing connections;
- C7.0 - Transfer flow between catchments via new connections;
- D4.1 - Buy land and expand STW (Effluent and sludge treatment);
- D4.2 - Buy land and move sludge treatment to new location. Expand effluent stream on remaining land;
- D5.0 - Construct new/additional STWs;
- D7.1 - River catchment-based discharge permitting; and
- WC01 – Beckton STW.

The 82 STW Catchments were subsequently reviewed against the preferred plan.

Two pieces of case law have clarified that an appropriate assessment of a plan does not have to provide a conclusive answer to all the questions legitimately raised about the potential for significant adverse effect on the integrity of the site.

In the Opinion of Advocate General Kokott at paragraph 49 she noted that an assessment of plans cannot by definition take into account all effects because “Many details are regularly not settled until the time of the final permission” and “[i]t would also hardly be proper to require a greater level of detail in preceding plans or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure”.

6.2. Stage 2 Appropriate Assessment of the Plan Alone

The potential impacts on the European sites were considered to include the potential for the following:

- direct land take;
- water pollution;
- noise;
- air pollution;
- changes in hydrology; and
- increased recreation.

These impacts may result from construction works within or in proximity to European sites, or as operational consequence.

6.2.1. Mitigation

The assessment has identified mitigation measures that could be applied at a project HRA level and may be sufficient to avoid, or mitigate, any adverse effect on European site integrity. However, mitigation is project-specific and without sufficient information about a project, it can only be considered in generic terms at this strategic level. However, the use of policy-specific caveats provides additional assurance to the decision maker that implementation of the plan will not adversely affect site integrity.

These provisions act as an 'additional safeguard' in the event of an unforeseen adverse effect being subsequently identified at project stage which cannot be resolved by mitigation. It can be relied upon to ensure that, in order for any development proposals coming forward to be in accordance with the policy statement, they must first demonstrate compliance with the requirements of the Habitats Regulations.

As the detailed potential impacts of the DWMP GSO alone and in-combination cannot be identified on a site-by-site basis at this stage, it is not possible to detail potential detailed mitigation measures. However, it is considered that any potential impacts could be mitigated through the following:

- all development through the implementation of the DWMP will be subject to HRA;
- habitat loss within the European sites will be avoided through sensitive siting and design;
- construction will seek to avoid the most sensitive times of year for qualifying species for which the European sites are designated within the respective zone of influence of those species;
- works will not be undertaken which risk changing the hydrology and/or hydrogeology of European designated sites;
- measures will be taken to minimise noise and visual disturbance impacts on species, where these are a likely impact on the European site; and
- standard working practices, pollution prevention and control measures will be implemented where there is the potential for changes in air or water quality.

6.3. Stage 2 Appropriate Assessment Conclusions

In addition to the above, it is recommended that the DWMP acknowledges and ensures that as schemes are further developed, they shall consider the potential impact on European sites, and where appropriate undertake HRA.

Taking into account the proposed outline mitigation measures and the addition of text specifically committing to the protection of the European sites within the DWMP, it can be concluded that it is unlikely that the DWMP will have an adverse effect on the integrity of the European sites either alone or in-combination with other plans and projects.

The only exception will be in situations where no alternative solutions exist for a scheme and where adverse impacts remain. In these situations, if it is deemed that the scheme should be allowed to proceed, the identification of imperative reasons of overriding public interest (IROPI) will be necessary and compensatory measures will need to be identified. This can only be decided at the next stage of project development.

Appendices

Appendix A. European Sites Designated for Nature Conservation within and up to 10 km from Catchment Areas

STW Catchment Area	SAC	SPA	Ramsar site
Abbess Roding STW Catchment			
Abingdon STW Catchment	Cothill Fen		
	Oxford Meadows		
	Little Wittenham		
Adbury Holt STW Catchment	Kennet Valley Alderwoods		
	Kennet and Lambourn Floodplain		
	River Lambourn		
Aldermaston STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
Aldershot (MOD) STW Catchment	Thursley, Ash, Pirbright & Chobham,	Thames Basin Heaths	Thursley & Ockley Bogs
		Thursley, Hankley & Frensham Commons	
Aldershot STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	Thursley & Ockley Bogs
		Thursley, Hankley & Frensham Commons	
		Wealden Heaths Phase II	
Alton STW Catchment	East Hampshire Hangers	Wealden Heaths Phase II	
	Shortheath Common	Thursley, Hankley & Frensham Commons,	
	River Itchen		
	Woolmer Forest		
	Thursley, Ash, Pirbright & Chobham		
Ampney St Peter STW Catchment	North Meadow & Clattinger Farm		
Andovesford STW Catchment			

STW Catchment Area	SAC	SPA	Ramsar site
Appleton STW Catchment	Cothill Fen, Special Area of Conservation		
	Oxford Meadows		
Arborfield STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	
Ascot STW Catchment	Windsor Forest & Great Park	Thames Basin Heaths	
	Thursley, Ash, Pirbright & Chobham	South West London Waterbodies	
Ash Ridge (Wokingham) STW Catchment		Thames Basin Heaths	
Ash Vale STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	Thursley & Ockley Bogs
		Thursley, Hankley & Frensham Commons	
Ashampstead STW Catchment	Hartslock Wood		
Ashednon STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
Ashford Hill STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
Ashley Green STW Catchment	Chilterns Beechwoods		
Ashton Abbotts STW Catchment			
Ashton Keynes STW Catchment	North Meadow & Clattinger Farm		
Aston Le Walls STW Catchment			
Avon Dassett STW Catchment			
Aylesbury STW Catchment	Chilterns Beechwoods		
Bampton STW Catchment			
Banbury STW Catchment			
Barford STW Catchment			
Barkway STW Catchment			
Basildon Park STW Catchment	Hartslock Wood SAC		
Basingstoke STW Catchment		Thames Basin Heaths	

STW Catchment Area	SAC	SPA	Ramsar site
Baydon STW Catchment	River Lambourn		
	Kennet & Lambourn Floodplain		
	Hackpen Hill		
Beckley STW Catchment	Oxford Meadows		
Beckton STW Catchment	Epping Forest	Lee Valley	Lee Valley
	Wimbledon Common		
	Richmond Park		
Beddington STW Catchment	Mole Gap to Reigate Escarpment		
	Wimbledon Common		
	Richmond Park		
Beenham STW Catchment	Kennet & Lambourn Floodplain		
	Hartslock Wood		
	River Lambourn		
Benson STW Catchment	Little Wittenham		
	Hartslock Wood		
	Aston Rowant		
	Chilterns Beechwoods		
Bentley STW Catchment	East Hampshire Hangers	Wealden Heaths Phase II	Thursley & Ockley Bogs
	Shortheath Common	Thursley, Hankley & Frensham Commons	
	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	
	Woolmer Forest		
Berkhamstead STW Catchment	Chilterns Beechwoods		
Bibury STW Catchment			
Bicester STW Catchment			
Billericay STW Catchment			
Billingbear STW Catchment	Windsor Forest and Great Park	Thames Basin Heaths	
Bishops Green STW Catchment			

STW Catchment Area	SAC	SPA	Ramsar site
Bishops Stortford STW Catchment			
Blackbirds STW Catchment			
Beldington STW Catchment			
Bletchingdon STW Catchment	Oxford Meadows		
Bloxham STW Catchment			
Blunsdon STW Catchment	North Meadow & Clattinger Farm		
Boddington STW Catchment			
Bordon STW Catchment	Woolmer Forest	Wealden Heaths Phase II	Thursley & Ockley Bogs
	Shortheath Common	Thursley, Hankley & Frensham Commons	
	Thursley, Ash, Pirbright & Chobham		
	East Hampshire Hangers		
Bourton-On-The-Water STW Catchment			
Boxford STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
	Kennet Valley Alderwoods		
Bourton Oxon STW Catchment			
Bourton-On-The-Water STW Catchment			
Bracknell STW Catchment	Windsor Forest & Great Park	Thames Basin Heaths	South West London Waterbodies
	Thursley, Ash, Pirbright & Chobham	South West London Waterbodies	
Bramfield STW Catchment	Wormley-Hoddesdonpark Woods	Lee Valley	Lee Valley
Braughing STW Catchment			
Breachwood Green STW Catchment			
Brickendon STW Catchment	Wormley-Hoddesdonpark Woods	Lee Valley	Lee Valley
Briff Lane (Bucklebury) STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
	Kennet Valley Alderwoods		

STW Catchment Area	SAC	SPA	Ramsar site
	Hartslock Wood		
Broad Hinton STW Catchment			
Broadwell STW Catchment			
Broughton STW Catchment			
Buntford STW Catchment			
Buntingford STW Catchment			
Burford STW Catchment			
Burghfield STW Catchment	Hartslock Wood	Thames Basin Heaths	
Burstow STW Catchment	Mole Gap to Reigate Escarpment	Ashdown Forest	
	Ashdown Forest		
Buscot STW Catchment			
Byfield STW Catchment			
Caddington STW Catchment	Chilterns Beechwoods		
Camp Farm STW Catchment	East Hampshire Hangers	Thursley, Hankley, & Frensham Common	
	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	
Camberley STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	
	Windsor Forest & Great Park		
Carterton STW Catchment			
Cassington STW Catchment	Oxford Meadows		
	Cothill Fen		
Castle Eaton STW Catchment	North Meadow & Clattinger Farm		
Chacombe STW Catchment			
Chadlington STW Catchment			
Chalgrove STW Catchment	Little Wittenham		
	Aston Rowant		
	Chilterns Beechwoods		

STW Catchment Area	SAC	SPA	Ramsar site
Chalton (AW) STW Catchment	Chilterns Beechwoods		
Charlbury STW Catchment			
Chapel Row STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
	Hartslock Wood		
Chapmore End STW Catchment	Wormley-Hoddesdonpark Woods	Lee Valley	Lee Valley
Charlton-On-Otmoor Catchment	Oxford Meadows		
Charney Basset STW Catchment	Cothill Fen		
	Hackpen Hill		
Charwelton STW Catchment	Cothill Fen		
	Hackpen Hill		
Chatter Alley (Dogmersfield) STW Catchment		Thames Basin Heaths	
Chennies STW Catchment			
Chertsey STW Catchment	Windsor Forest & Great Park	Thames Basin Heaths	South West London Waterbodies
	Thursley, Ash, Pirbright & Chobham	South West London Waterbodies	
Chesham STW Catchment	Chilterns Beechwoods		
Chieveley STW Catchment	River Lambourn		
	Kennet & Lambourn Floodplain		
	Kennet Valley Alderwoods		
Chilton STW Catchment			
Chiltom Foliat STW Catchment			
Chinnor STW Catchment	Aston Rowant		
	Chilterns Beechwoods		
Chipping Norton STW Catchment			
Chipping Wordon STW Catchment			
Chobham STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	South West London Waterbodies

STW Catchment Area	SAC	SPA	Ramsar site
	Windsor Forest & Great Park	South West London Waterbodies	
Cholsey STW Catchment	Little Wittenham		
	Hartslock Wood		
Church Hanborough STW Catchment	Oxford Meadows		
Cirencester STW Catchment	North Meadow & Clattinger Farm		
	Cotswold Beechwoods		
Clanfield STW Catchment			
Clavering STW Catchment			
Claydon STW Catchment			
Clifton STW Catchment			
Coates STW Catchment	North Meadow & Clattinger Farm		
	Cotswold Beechwoods		
	Rodborough Common		
Coberley STW Catchment	Cotswold Beechwoods		
Coleshill STW Catchment			
Colgate STW Catchment			
Combe STW Catchment	Oxford Meadows		
Compton STW Catchment	Hartslock Wood		
Cottered STW Catchment			
Cranleigh STW Catchment	Thursley, Ash, Pirbright & Chobham	Thursley, Hankley & Frensham Commons	Thursley & Ockley Bogs
	Ebernoe Common	Wealden Heaths Phase II	
	The Mens		
Crawley STW Catchment	Ashdown Forest	Ashdown Forest	
	Mole Gap to Reigate Escarpment		
Cricklade STW Catchment	North Meadow & Clattinger Farm		
Crondall STW Catchment	East Hampshire Hangers	Thames Basin Heaths	

STW Catchment Area	SAC	SPA	Ramsar site
	Thursley, Ash, Pirbright & Chobham	Thursley, Hankley & Frensham Commons	
		Wealden Heaths Phase II	
Cropredy STW Catchment			
Crossness STW Catchment	Wimbledon Common	South West London Waterbodies	Lee Valley
	Richmond Park	Lee Valley	South West London Waterbodies
	Epping Forest		
Croughton STW Catchment			
Cuddesdon STW Catchment			
Cuddington STW Catchment	Chilterns Beechwoods		
Culham STW Catchment	Little Wittenham		
	Cothill Fen		
Culworth STW Catchment			
Dagnall STW Catchment	Chilterns Beechwoods		
Dane End STW Catchment		Lee Valley	Lee Valley
Deephams SRW Catchment	Epping Forest	Lee Valley	Lee Valley
	Wormley-Hoddesdonpark Woods		
Dewcot (AW) Catchment (Fewcott)	Little Wittenham		
	Cothill Fen		
Didcot STW Catchment	Little Wittenham		
	Cothill Fen		
	Hartslock Wood		
Doddinghurst (AW) STW Catchment			
Dorchester STW Catchment	Little Wittenham		
Dorking STW Catchment	Mole Gap to Reigate Escarpment	Thames Basin Heaths	
Dorton STW Catchment			
Drayton STW Catchment	Cothill Fen		

STW Catchment Area	SAC	SPA	Ramsar site
	Little Wittenham		
Dunstable STW Catchment	Chiltern Beechwoods		
Earlswood STW Catchment	Mole Gap to Reigate Escarpment		
East Grafton STW Catchment	River Avon	Salisbury Plain	
	Salisbury Plain		
East Hyde STW Catchment	Chilterns Beechwoods		
East Ilsley STW Catchment			
East Shefford STW Catchment	River Lambourn		
	Kennet & Lambourn Floodplain		
	Hackpen Hill		
	Kennet Valley Alderwoods		
Easthampstead Park STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	
	Windsor Forest & Great Park		
Ebrington STW CAtchment			
Elsfield STW Catchment	Oxford Meadows		
Elstead STW Catchment	Thursley, Ash, Pirbright & Chobham	Thursley, Hankley & Frensham Commons	Thursley & Ockley Bogs
	East Hampshire Hangers	Wealden Heaths Phase II	
	Shortheath Common	Thames Basin Heaths	
	Woolmer Forest		
Enstone STW Catchment			
Esher STW Catchment	Richmond Park	South West London Waterbodies	South West London Waterbodies
	Mole Gap to Reigate Escarpment	Thames Basin Heaths	
	Wimbledon Common		
	Thursley, Ash, Pirbright & Chobham		
Eydon STW Catchment			
Fairford STW Catchment	North Meadow & Clattinger Farm		
Faringdon STW Catchment			

STW Catchment Area	SAC	SPA	Ramsar site
Farnborough STW Catchment			
Farnham STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	Thursley & Ockley Bogs
	East Hampshire Hangers	Thursley, Hankley & Frensham Commons	
	Shortheath Common	Wealden Heaths Phase II	
	Woolmer Forest		
Fawley STW Catchment			
Fiddlers Hamlet STW Catchment	Epping Forest	Lee Valley	Lee Valley
	Wormley-Hoddesdonpark Woods		
Finstock STW Catchment	Oxford Meadows		
Fleet STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	
	East Hampshire Hangers	Thursley, Hankley & Frensham Commons	
Forest Hill STW Catchment	Oxford Meadows		
Froxfield STW Catchment	Kennet & Lambourn Floodplain		
	Kennet Valley Alderwoods		
Foscot STW Catchment			
Frieth STW Atchment	Aston Rowant		
	Chiltern Beechwoods		
Froxfield STW Catchment	Kennet & Lambourn Floodplain		
	Kennet Valley Alderwoods		
Furneux Pelham STW Catchment			
Fyfield STW Catchment	Pewsey Downs		
	River Avon		
Gerrards Cross STW Catchment	Burnham Beeches		
Godalming STW Catchment	Thursley, Ash, Pirbright & Chobham	Thursley, Hankley & Frensham Commons	Thursley & Ockley Bogs
		Wealden Heaths Phase II	

STW Catchment Area	SAC	SPA	Ramsar site
		Thames Basin Heaths	
Gostone (SW) STW Catchment	Mole Gap to Reigate Escarpment		
Goring STW Catchment	Hartslock Wood		
	Little Wittenham		
Great Bedwyn STW Catchment	Kennet & Lambourn Floodplain		
Great Gaddesden STW Catchment	Chilterns Beechwoods		
Great Milton STW Catchment	Aston Rowant		
	Little Wittenham		
Great Rollright STW Catchment			
Greatworth STW Catchment			
Greenham Common STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
	Kennet Valley Alderwoods		
Grendon Underwood STW Catchment			
Guildford STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	Thursley & Ockley Bogs
	Mole Gap to Reigate Escarpment	Thursley, Hankley & Frensham Commons	
Guiting Power STW Catchment			
Haddenham STW Catchment	Chilterns Beechwoods		
	Aston Rowan		
Hambleden Catchment	Chilterns Beechwoods		
	Aston Rowant		
Halton MOD STW (Private)	Chilterns Beechwoods		
Ham Hill (SW) STW Catchment	North Downs Woodland		
	Peters Pit		
Hampden Row STW Catchment	Chilterns Beechwood		
	Aston Rowant		

STW Catchment Area	SAC	SPA	Ramsar site
Hampsted Norreys STW Catchment	Hartslock Wood		
	Kennet & Lambourn Floodplain		
	River Lambourn		
Hamstead Marshall STW Catchment	Kennet Valley Alderwoods		
	Kennet & Lambourn Floodplain		
	River Lambourn		
Handcross (SW) STW Catchment			
Hannington (Hants) STW Catchment			
Hannington (Wilts) STW Catchment	North Meadows and Clattinger Farm		
Hanwell STW Catchment			
Harpenden STW Catchment			
Hartley Wintney STW Catchment	East Hampshire Hangers	Thames Basin Heaths	
Haslemere STW Catchment	Thursley, Ash, Pirbright & Chobham	Thursley, Hankley & Frensham Commons	Thursley & Ockley Bogs
	Woolmer Forest	Wealden Heaths Phase II	
	Shortheath Common		
	Ebernoe Common		
Hatfield Heath STW Catchment			
Headley STW Catchment	Mole Gap to Reigate Escarpment		
Henley STW Catchment	Chilterns Beechwoods		
High Roding STW Catchment			
Highfields (Frampton Mansell) STW Catchment	Rodborough Common		
	Cotswild Beechwoods		
Highworth STW Catchment	North Meadow & Clattinger Farm		
Hitchin STW Catchment			
Hockford STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	Thursley & Ockley Bogs
		Thursley, Hankley & Frensham Commons	

STW Catchment Area	SAC	SPA	Ramsar site
		Wealden Heaths Phase II	
Hogsmill STW Catchment	Richmond Park	Thames Basin Heaths	South West London Waterbodies
	Wimbledon Common	South West London Waterbodies	
	Mole Gap to Reigate Escarpment		
Holmwood STW Catchment	Mole Gap to Reigate Escarpment		
Hook Northon STW Catchment			
Horley (Oxon) STW Catchment			
Horley (Surrey) STW Catchment	Mole Gap to Reigate Escarpment		
Hornton STW Catchment			
Horton Cum Studley STW Catchment	Oxford Meadows		
Hungerford STW Catchment	Kennet & Lambourn Floodplain		
	Kennet Valley Alderwoods		
	River Lambourn		
Huntercombe STW Catchment	Hartslock Wood		
	Little Wittenham		
	Chilterns Beechwood		
	Aston Rowant		
Hurley STW Catchment	Chilterns Beechwoods		
	Burnham Beeches		
Ironsbottom STW Catchment	Mole Gap to Reigate Escarpment		
Islip STW Catchment	Oxford Meadows		
Iver (north) STW Catchment	Burnham Beeches,	South West London Waterbodies	South West London Waterbodies
	Windsor Forest & Great Park		
Iver (South) STW Catchment	Burnham Beeches		South West London Waterbodies
	Windsor Forest & Great Park		
Kempsford STW Catchment	North Meadow & Clattinger Farm		
Kimpton STW Catchment			

STW Catchment Area	SAC	SPA	Ramsar site
King Sutton STW Catchment			
Kingsclere STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
	Kennet Valley Alderwoods		
Kingston Bagpuize STW Catchment	Cothill Fen		
Kintbury STW Catchment	Kennet Valley Alderwoods		
	Kennet & Lambourn Floodplain		
	River Lambourn		
Leaden Roding STW Catchment			
Leatherhead STW Catchment	Mole Gap to Reigate Escarpment	South West London Waterbodies	South West London Waterbodies
		Thames Basin Heaths	
Lechlade STW Catchment			
Leckhampstead STW Catchment	Hackpen Hill		
	Kennet & Lambourn Floodplan		
	Kennet Valley Alderwoods		
	River Lambourn		
Lewknor STW Catchment	Aston Rowant		
	Chilterns Beechwoods		
Lightwater STW Catchment	Thursley, Ash, Pirbright & Chobham,	Thames Basin Heaths	South West London Waterbodies
	Windsor Forest & Great Park		
Little Berkhamsted STW Catchment	Wormley-Hoddesdonpark	Lee Valley	Lee Valley
Little Compton STW Catchment			
Little Hallingbury STW Catchment			
Little Marlow STW Catchment	Chilterns Beechwoods		
	Aston Rowant		
	Burnham Beeches		
Little Milton STW Catchment	Little Wittenham		

STW Catchment Area	SAC	SPA	Ramsar site
	Aston Rowant		
	Chilterns Beechwoods		
Littleworth STW Catchment			
Long Crendin STW Catchment	Chilterns Beechwoods		
Long Sutton STW Catchment	East Hampshire Hangers	Thames Basin Heaths	
Long Wittenham STW Catchment	Little Wittenham		
	Cothill Fen		
Long Reach STW Catchment	North Downs Woodlands	Thames Estuary & Marshes	Thames Estuary & Marshes
	Wimbledon Common		
Longborough STW Catchment			
Longwater STW Catchment		Thames Basin Heaths	
Lower Basildon STW Catchment	Hartslock Wood		
Loxwood (SW) STW Catchment	The Mens		
	Ebernoe Common		
Ludgershall STW Catchment			
Maidenhead STW Catchment	Chilterns Beechwoods	South West London Waterbodies	South West London Waterbodies
	Windsor Forest & Great Park	Thames Basin Heaths	
	Burnham Beeches		
Manuden STW Catchment			
Maple Lodge STW Catchment	Chilterns Beechwoods		Lee Valley
	Wormley-Hoddesdonpark Woods		
Markyate STW Catchment	Burnham Beeches	Lee Valley	
	Chilterns Beechwoods		
Marlborough STW Catchment	Pewsey Downs		
	River Avon		
	Kennet & Lambourn Floodplain		
Marsh Gibbon STW Catchment			

STW Catchment Area	SAC	SPA	Ramsar site
Mattingley STW Catchment		Thames Basin Heaths	
Merstham STW Catchment	Mole Gap to Reigate Escarpment		
Middle Barton STW Catchment			
Middleton Cheney STW Catchment			
Middleton Stoney STW Catchment			
Midgham STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
Mill Green STW Catchment	Wormley-Hoddesdonpark Wood	Lee Valley	Lee Valley
Milton Under-Wychwood STW Catchment			
Mogden STW Catchment	Richmond Park	South West London Waterbodies	South West London Waterbodies
	Windsor Forest & Great Park	Thames Basin Heaths	Lee Valley
	Wimbledon Common	Lee Valley	
	Thursley, Ash, Pirbright & Chobham		
	Burnham Beeches		
Mollingoton STW Catchment			
Moreton Pinkney STW Catchment			
Moreton STW Catchment	Epping Forest, Special		
Moreton-In-Marsh STW Catchment			
Mortimer STW Catchment			
Nags Head Lane STW Catchment			
Naunton STW Catchment			
Nettlebed STW Catchment	Aston Rowant		
New MillSTW Catchment		Thames Basin Heaths	
Newbury STW Catchment	River Lambourn		
	Kennet & Lambourn Floodplain		
	Kennet Valley Alderwoods		

STW Catchment Area	SAC	SPA	Ramsar site
North Weald STW Catchment	Epping Forest		
Northleach STW Catchment			
Nuneham Courtenay STW Catchment	Little Wittenham		
	Cothill Fen		
	Oxford Meadows		
Oving (AW) STW Catchment			
Oxford STW Catchment	Oxford Meadows		
	Cothill Fen		
	Little Wittenham		
Oxted & Limpsfield (SW) STW			
Pangbourne STW Catchment	Hartslock Wood		
Pike Hill Rise STW Catchment			
Princes Risborough STW Catchment	Chilterns Beechwoods		
	Aston Rowant		
Priors Marston STW Catchment			
Purton STW Catchment	North Meadow & Clattinger Farm		
Quendon STW Catchment			
Ramsbury STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
Ratkey STW Catchment			
Reading STW Catchment	Hartslock Wood	Thames Basin Heaths	
	Kennet & Lambourn Floodplain		
	River Lambourn		
Remenham STW Catchment	Chilterns Beechwoods		
Ripley STW Catchment	Mole Gap to Reigate Escarpment	Thames Basin Heaths	
	Thursley, Ash, Pirbright & Chobham		
Riverside STW Catchment	Epping Forest	Lee Valley	Lee Valley

STW Catchment Area	SAC	SPA	Ramsar site
Rowsham STW Catchment	Chilterns Beechwoods		
Rudgewick STW Catchment			
Rusper STW Catchment			
Rye Common STW Catchment		Thames Basin Heaths	
Rye Meads STW Catchment	Wormley-Hoddesdonpark Woods	Lee Valley	Lee Valley
	Epping Forest		
Sandford St Martin STW Catchment			
Sandhurst STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	
Sandon (AW) STW Catchment			
Selborne STW Catchment	East Hampshire Hangers	Wealden Heaths Phase II	
	Shortheath Common		
	Woolmer Forest		
Sevenhampton STW Catchment			
Shabbington STW Catchment			
Shalbourne STW Catchment	Kennet & Lambourn Floodplain		
	Kennet Valley Alderwoods		
Shamley Green STW Catchment	Thursley, Ash, Pirbright & Chobham	Thursley, Hankley & Frensham Commons	Thursley & Ockley Bogs
		Thames Basin Heaths	
Shellingford STW Catchment	Hackpen Hill, Special Area of Conservation		
Sherbourne St John STW Catchment			
Sherfield-On-Loddon STW Catchment		Thames Basin Heaths,	
Shirburn STW Catchment	Aston Rowant		
	Little Wittenham		
	Chilterns Beechoods		
Shotteswell STW Catchment			
Shrivenham STW Catchment	River Lambourn		

STW Catchment Area	SAC	SPA	Ramsar site
	Hackpen Hill		
Shutford STW Catchment			
Silchester STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
Slough STW Catchment	Burnham Beeches	South West London Waterbodies	South West London Waterbodies
	Windsor Forest & Great Park	Thames Basin Heaths	
	Chilterns Beechwoods		
	Thursley, Ash, Pirbright & Chobham		
Sonning Common STW Catchment	Hartslock Wood		
South Leigh STW Catchment	Oxford Meadows		
	Cothill Fen		
South Moreton STW Catchment	Little Wittenham		
	Hartslock Wood		
Southrop STW Catchment			
Spelsbury STW Catchment			
St Stephens CloseSTW Catchment		Thames Basin Heaths SPA	
Stadhampton STW Catchment	Little Wittenham		
Standlake STW Catchment	Cothill Fen		
	Oxford Meadows		
Standon STW Catchment		Lee Valley	Lee Valley
Stanford In The Vale STW Catchment	Hackpen Hill		
Stanford Rivers Catchment	Epping Forest		
Stansted Mountfitchet STW Catchment			
Stanton Harcourt STW Catchment	Cothill Fen		
	Oxford Meadows		
Stanton St John STW Catchment	Oxford Meadows		

STW Catchment Area	SAC	SPA	Ramsar site
Steeple Claydon (AW) STW Catchment			
Stewkley STW Catchment			
Stone STW Catchment	Chilterns Beechwoods		
Stratfield Saye STW Catchment		Thames Basin Heaths	
Streatley STW Catchment	Hartslock Wood		
Studham STW Catchment	Chilterns Beechwoods		
Sulhamstead STW Catchment	Hartslock Wood		
Swindon STW Catchment	North Meadow & Clattinger Farm		
Syreford STW Catchment			
Tackley STW Catchment	Oxford Meadows		
Takeley STW Catchment			
Tarlton STW Catchment	North Meadow and Clattinger Farm		
	Rodborough		
Temple Guiting STW Catchment	Dixton Wood SAC		
Tetsworth STW Catchment	Aston Rowant		
	Chilterns Beechwoods		
Thame STW Catchment	Chilterns Beechwoods		
	Aston Rowant		
Therfield STW Catchment			
Theydon Bois Catchment	Epping Forest	Lee Valley	Lee Valley
Thornwood STW Catchment	Epping Forest	Lee Valley	Lee Valley
Thorpe Mandeville STW Catchment			
Tiddington STW Catchment			
Towersey STW Catchment	Chilterns Beechwoods		
	Aston Rowant		
Tring STW Catchment	Chilterns Beechwoods		

STW Catchment Area	SAC	SPA	Ramsar site
Twyford STW Catchment			
Tylers Lane (Bucklebury) STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
	Kennet Valley Alderwoods		
Uffington STW Catchment	Hackpen Hill,		
	River Lambourn		
Upminster STW Catchment			
Upper Heyford STW Catchment			
Upper Sundon (AW) STW Catchment			
Upper Winchendon STW Catchment	Chilterns Beechwoods		
Uttlesford STW Catchment			
Waddesdon STW Catchment			
Wanborough STW Catchment	River Lambourn		
Wantage STW Catchment	Hackpen Hill		
	Cothill Fen		
	River Lambourn		
Wargrave STW Catchment	Chilterns Beechwoods	Thames Basin Heaths	
Warmington STW Catchment			
Warwick Wold STW Catchment	Mole Gap to Reigate Escarpment		
Wash Water STW Catchment	Kennet Valley Alderwoods		
	Kennet & Lambourn Floodplain		
	River Lambourn		
Watlington STW Catchment	Aston Rowant		
	Chilterns Beechwoods		
	Little Wittenham		
Welford STW Catchment	Hackpen Hill		
	Kennet & Lambourn Floodplain		

STW Catchment Area	SAC	SPA	Ramsar site
	Kennet & Valley Alderwoods		
	River Lambourn		
Westcott STW (Private)			
Weston-On-The-Green STW Catchment	Oxford Meadows		
Weston STW Catchment			
Weybridge STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	South West London Waterbodies
	Mole Gap to Reigate Escarpment	South West London Waterbodies	
Wheatley STW Catchment	Oxford Meadows		
Whitchurch STW Catchment	Hartslock Wood		
White Roding STW Catchment			
White Waltham STW Catchment	Chilterns Beechwoods	Thames Basin Heaths	
	Windsor Forest & Great Park		
	Burnham Beeches		
Whittington STW Catchment			
Whitwell STW Catchment			
Wickham STW Catchment	Kennet & Lambourn Floodplain		
	Kennet Valley Alderwoods		
	Rive Lambourn		
Widford STW Catchment	Wormley-Hoddesdonpark Woods	Lee Valley	Lee Valley
Willingale STW Catchment			
Wilton STW Catchment	River Avon		
	Kennet & Lambourn Floodplain		
Windsor STW Catchment	Windsor Forest & Great Park	Thames Basin Heaths	South West London Waterbodies
	Burnham Beeches,	South West London Waterbodies	
	Thursley, Ash, Pirbright & Chobham		
Wing (Anglian Water) STW Catchment			

STW Catchment Area	SAC	SPA	Ramsar site
Wingrave STW Catchment	Chilterns Beechwoods		
Winterboune STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
	Kennet Valley Alderwoods		
Wisley STW Catchment	Thursley, Ash, Pirbright & Chobham	Thames Basin Heaths	South West London Waterbodies
	Windsor Forest & Great Park	South West London Waterbodies	
	Mole Gap to Reigate Escarpment		
Withington STW Catchment	Cotswold Beechwoods		
Witney STW Catchment	Oxford Meadows		
Woking STW Catchment	Thursley, Ash, Pirbright & Chobham	South West London Waterbodies	South West London Waterbodies
	Windsor Forest & Great Park	Thames Basin Heaths	
Wolverton Common STW (Private)	Kennet & Lambourn Floodplain		
Wolverton Townsend STW (Private)	Kennet & Lambourn Floodplain		
Woodeaton STW Catchment	Oxford Meadows		
Woodstock STW Catchment	Oxford Meadows		
Woolhampton STW Catchment	Kennet & Lambourn Floodplain		
	River Lambourn		
	Kennet Valley Alderwoods		
Wooton Bassett (WW) STW Catchment	North Meadow & Clattinger Farm		
Worminghall STW Catchment			
Yattendon STW Catchment	Hartslock Wood		
	Kennet & Lambourn		
	River Lambourn		

Appendix B. European Sites Conservation Objectives

B.1. European Sites Conservation Objectives

Conservation objectives do not exist for Ramsar sites

European Site Designation	Site Name	Conservation Objectives
SAC	Ashdown Forest	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and, • The distribution of qualifying species within the site.
	Chilterns Beechwoods	
	East Hampshire Hangers	
	Ebernoe Common	
	Epping Forest	
	Hackpen Hill	
	Mole Gap to Reigate Escarpment	
	Oxford Meadows	
	Pewsey Downs	
	River Avon	
	River Itchen	
	River Lambourn	
	Salisbury Plain	
	The Mens	
	Wimbledon Common	
	Windsor Forest & Great Park	
	Aston Rowant	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and, • The supporting processes on which the qualifying natural habitats rely
	Burnham Beeches	
	Cothill Fen	
	Cotswold Beechwoods	
	Hartslock Wood	
	Kennet Valley Alderwoods	
	North Meadow & Clattinger Farm	
	Rodborough Common	
	Shortheath Common	
	Thursley, Ash, Pirbright & Chobham	
	Woolmer Forest	
	Wormley-Hoddesdonpark Woods	
	Dixton Wood	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; • The extent and distribution of the habitats of qualifying species • The structure and function of the habitats of qualifying species • The supporting processes on which the habitats of qualifying species rely • The populations of qualifying species, and, • The distribution of qualifying species within the site.
	Peters Pit	
	Richmond Park	
	Kennet & Lambourn Floodplain	
	Little Wittenham	
	Thames Basin Heaths	
SPA	Ashdown Forest	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely • The population of each of the qualifying features, and, • The distribution of the qualifying features within the site
	Lee Valley	
	Salisbury Plain	
	South West London Waterbodies	
	Thames Basin Heaths	
	Thursley, Hankley & Frensham Commons	
	Wealden Heaths Phase II	

Appendix C. European Sites Vulnerabilities

All threats and vulnerabilities for each SAC, SPA and Ramsar site have been identified using the Natura 2000 Stand Data Forms or Ramsar Information Sheets taken from the JNCC website (http://jncc.defra.gov.uk) accessed in January 2022.

C.1. Threat Codes for SACs and SPAs

CODE	DESCRIPTION
A01	Cultivation
A02	Modification of cultivation practices
A03	Mowing/ cutting of grassland
A04	Grazing
A05	Livestock farming and animal breeding (without grazing)
A06	Annual and perennial non-timber crops
A07	Use of biocides, hormones and chemicals
A08	Fertilisation
A10	Restructuring agricultural land holding
A11	Agriculture activities not referred to above
B01	Forest planting on open ground
B02	Forest and Plantation management & use
B03	Forest exploitation without replanting or natural regrowth
B04	Use of biocides, hormones and chemicals (forestry)
B06	Grazing in forests/ woodland
B07	Forestry activities not referred to above
C01	Mining and quarrying
C02	Exploration and extraction of oil or gas
C03	Renewable abiotic energy use
D01	Roads, paths and railroads
D02	Utility and service lines
D03	Shipping lanes, ports, marine constructions
D04	Airports, flightpaths
D05	Improved access to site
E01	Urbanised areas, human habitation
E02	Industrial or commercial areas
E03	Discharges
E04	Structures, buildings in the landscape
E06	Other urbanisation, industrial and similar activities
F01	Marine and Freshwater Aquaculture
F02	Fishing and harvesting aquatic resources
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects,

CODE	DESCRIPTION
	reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)
F04	Taking/ Removal of terrestrial plants, general
F05	Illegal taking/ removal of marine fauna
F06	Hunting, fishing or collecting activities not referred to above
G01	Outdoor sports and leisure activities, recreational activities
G02	Sport and leisure structures
G03	Interpretative centres
G04	Military use and civil unrest
G05	Other human intrusions and disturbances
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)
H02	Pollution to groundwater (point sources and diffuse sources)
H03	Marine water pollution
H04	Air pollution, air-borne pollutants
H05	Soil pollution and solid waste (excluding discharges)
H06	Excess energy
H07	Other forms of pollution
I01	Invasive non-native species
I02	Problematic native species
I03	Introduced genetic material, GMO
J01	Fire and fire suppression
J02	Human induced changes in hydraulic conditions
J03	Other ecosystem modifications
K01	Abiotic (slow) natural processes
K02	Biocenotic evolution, succession
K03	Interspecific faunal relations
K04	Interspecific floral relations
K05	Reduced fecundity/ genetic depression
L05	Collapse of terrain, landslide
L07	Storm, cyclone
L08	Inundation (natural processes)
L10	Other natural catastrophes
M01	Changes in abiotic conditions
M02	Changes in biotic conditions
U	Unknown threat or pressure
XO	Threats and pressures from outside the Member State

C.2. Threats, pressures and activities on European sites

Key: I = inside, O = outside and B = both

Designation	Sites	No threats/vulnerabilities reported	Grazing / Mowing	Interspecific faunal and floral relations, ecosystem modifications and natural processes (including erosion*[13])	Fire/ fire suppression	Modification of agricultural practices	Air pollution	Use of fertilisers/chemicals, eutrophication*	Forest management and associated activities	Water pollution	Problem native/ non-native species	Change to hydraulic conditions, including sedimentation/siltation*	Changes to abiotic and/or biotic conditions	Unknown threat or pressure	Human disturbance / Recreation (including fishing/hunting)	Industry and other urbanisation	Urbanisation (airports, roads, paths, railroads and utilities)	Mining and quarrying	Renewable energy use	Military activities	Other forms of pollution	Soil pollution and solid waste
Threat codes		**N/A**	**A03, A04**	**K01-K05, J03,**	**J01**	**A01, A02, A05, A11**	**H04**	**B04, A07, A08,**	**B02, B07**	**H01-H03**	**I01, I02**	**J02**	**M01, M02**	**U**	**G01-G05, F01-F05**	**E02, E04, E06**	**D01, D02, D04**	**C01**	**C03**	**G04**	**H07**	**H05**
SAC	Ashdown Forest					I	B					B			I							
SAC	Chilterns Beechwoods			I					I		B											
SAC	East Hampshire Hangers						B		I		B											
SAC	Ebernoe Common			B		I			I			B	B									
SAC	Epping Forest		I				B					B	B		I							
SAC	Hackpen Hill																					
SAC	Mole Gap to Reigate Escarpment			I		I	B															
SAC	Oxford Meadows									B	B	B										
SAC	Pewsey Downs		I	B			B															
SAC	River Avon									B		B	B									
SAC	River Itchen		I							B		B										
SPA	River Lambourn									B	B	B										
SAC	Salisbury Plain		1	I									B									
SAC	The Mens			B		I			I				B									
SAC	Wimbledon Common			B			B		I		B											
SAC	Windsor Forest & Great Park			I			B		I		B											
SAC	Aston Rowant			I							B		B	O								
SAC	Burnham Beeches			B			B				B		B		I							
SAC	Cothill Fen									B		B										
SAC	Cotswold Beechwoods			I							B				I							
SAC	Hartslock Wood						B															

[13] Those threats that have asterisk only apply to Ramsar sites.

Designation	Sites	No threats/vulnerabilities reported	Grazing / Mowing	Interspecific faunal and floral relations, ecosystem modifications and natural processes (including erosion*[13])	Fire/ fire suppression	Modification of agricultural practices	Air pollution	Use of fertilisers/chemicals, eutrophication*	Forest management and associated activities	Water pollution	Problem native/ non-native species	Change to hydraulic conditions, including sedimentation/siltation*	Changes to abiotic and/or biotic conditions	Unknown threat or pressure	Human disturbance / Recreation (including fishing/hunting)	Industry and other urbanisation	Urbanisation (airports, roads, paths, railroads and utilities)	Mining and quarrying	Renewable energy use	Military activities	Other forms of pollution	Soil pollution and solid waste
Threat codes		**N/A**	**A03, A04**	**K01-K05, J03,**	**J01**	**A01, A02, A05, A11**	**H04**	**B04, A07, A08,**	**B02, B07**	**H01-H03**	**I01, I02**	**J02**	**M01, M02**	**U**	**G01-G05, F01-F05**	**E02, E04, E06**	**D01, D02, D04**	**C01**	**C03**	**G04**	**H07**	**H05**
SAC	Kennet Valley Alderwoods			I								B										
SAC	North Meadow & Clattinger Farm		I	B						B		B			I							
SAC	Shortheath Common			I											I							
SAC	Thursley, Ash, Pirbright & Chobham		I	I			B					B			I							
SAC	Peters Pit																					
SAC	Woolmer Forest					I					B	B		O	I							
SAC	Wormley-Hoddesdonpark Woods			I			B				B				I							
SAC	Richmond Park																					
SAC	Kennet & Lambourn Floodplain					I				B		B										
SAC	Little Wittenham										B											
SAC	Rodborough Common		I				B								I							
SAC	Dixton Wood			I					I				B									
SPA	Ashdown Forest					I	B					B			I							
SPA	Lee Valley			I						B		B			I & B							
SPA	Salisbury Plain						B						B									
SPA	South West London Waterbodies			I							B		B		B & I							
SPA	Thames Basin Heaths			I			B		I						I							
SPA	Thursley, Hankley & Frensham Commons			I			B								I							
SPA	Wealden Heaths Phase II					I					B	B		O	I							
Ramsar site	Thursley & Ockley Bogs																					
Ramsar site	South West London Waterbodies																					
Ramsar site	Lee Valley																					

Appendix D. HRA GSO and GSO Detailed Screening Assessment

The assessment in Table D-1 below has assumed the following in respect of potential zone of influences in relation to GSO that may result in development:

GSO	Zone of influence	Reasoning
B1.2 - Targeted source control SuDS measures at opportunity areas;	2 km	Any development would be localised and unlikely to create significant effects
B2.1 - Combined sewer separation. Convert existing combined sewers to surface water only and construct new foul water sewers;	2 km	Any development would be localised and unlikely to create significant effects
B2.2 - Combined sewer separation. Construct new surface water sewers;	5 km	The development of new sewers could be extensive.
B2.3 - Disconnect existing surface water systems from combined sewers and discharge to watercourse	2 km	Any development would be localised and unlikely to create significant effects
B2.4 - Deep tunnel(s) to connect surface water networks to major reuse or discharge location(s)	5 km	Any development could be extensive creating potential significant effects
B2.5 - Combined sewer separation. Convert existing combined sewers to foul water only and convey surface water on the surface using SuDS measures.	2 km	Any development would be localised and unlikely to create significant effects
B2.6 - Re-create historical rivers to convey surface water;	10 km	Such development would be significant and could lead to hydrological changes
B2.7 - Use parks and urban spaces to store excess surface water during rainfall events;	5 km	Any development could be extensive creating potential significant effects
C3.1 - Increase network capacity by installing larger sewers;	5 km	Any development could be extensive creating potential significant effects
C3.2 - Deep tunnel(s) to convey combined sewage;	5 km	Any development could be extensive creating potential significant effects
C4.0 - Deep tank(s) and tunnel(s) to store combined sewage;	2 km	Any development would be localised and unlikely to create significant effects
C6.0 - Transfer flow between catchments via existing connections;	5 km	Any development could be extensive creating potential significant effects
C7.0 - Transfer flow between catchments via new connections;	2 km	Any development would be localised and unlikely to create significant effects
D4.1 - Buy land and expand STW (Effluent and sludge treatment);	2 km	Any development would be localised and unlikely to create significant effects
D4.2 - Buy land and move sludge treatment to new location. Expand effluent stream on remaining land;	2 km	Any development would be localised and unlikely to create significant effects
D5.0 - Construct new/additional STWs;	5 km	Any development could be extensive creating potential significant effects
D7.1 - River catchment-based discharge permitting.	2 km	Any discharges would likely be significantly diluted beyond 2 km
WC01 - Beckton STW.	2 km	Any discharges would likely be significantly diluted beyond 2 km

Table D-1: GSO Detailed Screening Assessment

Those rows highlighted in orange are catchments where this is a potential LSE.

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Abbess Roding STW Catchment	N/A	N/A	No European sites within 10 km, therefore, no LSE.	✓													✓	✓						
Abingdon STW Catchment	N/A	Cothill Fen SAC Oxford Meadows SAC Little Wittenham SAC	GSO B1.1, B3.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further. Oxford Meadow SAC is located approximately 4 km upstream of the STW catchment and, therefore, there would not be an LSE on the SAC as a result of the GSO C4.0. Little Wittenham SAC is located approximately 7 km from the STW catchment and is at threat from non-native invasive species, therefore there would not be an LSE on the SAC as a result of the GSO C4.0. Cothill Fen is located approximately 1.8 km west of the STW catchment and is not linked hydrologically and, therefore, there would not be an LSE on the SAC as a result of the GSO C4.0.	✓									✓				✓				✓			
Aldermaston STW Catchment	N/A	Kennet & Lambourn Floodplain, SAC River Lambourn SAC	GSO B1.1, B3.0 and C5.0 were screened out at the initial screening and are, therefore, not considered further.	✓														✓			✓			
Aldershot STW Catchment	Thames Basin Heaths SPA	Thursley & Ockley Bogs, Ramsar site Thursley, Ash, Pirbright & Chobham, SAC Thames Basin Heaths, SPA Thursley, Hankley & Frensham Commons SPA	GSO B1.1, B3.0 and D3.0 was screened out at the initial screening and are, therefore, not considered further. Owing to the presence of Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that the GSO C3.1 and C4.0 may have an	✓									✓			✓	✓				✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
		Wealden Heaths Phase II SPA	LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																					
Alton STW Catchment	N/A	East Hampshire Hangers SAC Shortheath Common SAC River Itchen SAC Woolmer Forest SAC Thursley, Ash, Pirbright & Chobham SAC Wealden Heaths Phase II SPA Thursley, Hankley & Frensham Commons SPA	GSO B1.1, B3.0 and C5.0 were screened out at the initial screening and are, therefore, not considered further. The East Hampshire Hangers SAC is located over 1 km from the STW catchment. The Shortheath Common SAC is located over 4 km from the STW catchment. The River Itchen SAC is located over 6 km from the STW catchment. The Woolmer Forest SAC is located over 8 km from the STW catchment. The Little Thursley, Ash, Pirbright & Chobham SAC is located over 9 km from the STW catchment. The Wealden Heaths Phase II SPA is located over 5 km from the STW catchment. The Thursley, Hankley & Frensham Commons SPA is located over 9 km from the STW catchment. Owing to the European sites' proximity to the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓	✓								
Ampney St Peter STW Catchment	N/A	North Meadow & Clattinger Farm SAC	GSO B1.1, B3.0, C5.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further. North Meadow & Clattinger Farm SAC is located over 7 km from the STW catchment. Although GSO C3.1 and C4.0 may result in major earthworks it is considered that the site is located sufficient distance from any works to not be at risk of an LSE.	✓									✓			✓	✓	✓			✓				
Andovesford STW Catchment	N/A	N/A	No European sites within 10 km, therefore, no LSE.	✓													✓	✓			✓			
Appleton STW Catchment	Cothill Fen SAC	Cothill Fen SAC Oxford Meadows SAC	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further. Owing to the presence of Cothill Fen SAC within 2 km of the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓													✓	✓			✓				
Arborfield STW Catchment	N/A	Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA	GSO B1.1, B3.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further. The Thursley, Ash, Pirbright & Chobham SAC is located over 7 km from the STW catchment. The Thames Basin Heaths SPA is located over 2 km from the STW catchment. Owing to the presence of Thames Basin Heaths SPA within 5 km of the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C.3.1 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓				✓				
Ascot STW Catchment	Windsor Forest & Great Park SAC Thames Basin Heaths SPA	Windsor Forest & Great Park SAC Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA South West London Waterbodies SPA	GSO B1.1, B3.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further. Owing to the presence of Windsor Forest & Great Park SAC and Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites.	✓									✓				✓				✓				

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			Therefore, a Stage 2 Appropriate Assessment will be required.																				
Ash Ridge (Wokingham) STW Catchment	N/A	Thames Basin Heaths SPA	GSO B1.1 was screened out at the initial screening and is, therefore, not considered further. The Thames Basin Heaths SPA is located over 3 km from the STW catchment. Owing to the nature of the catchment area and the species for which the SPA is designated it is not considered that the catchment area would be functionally linked to the SPA. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and, therefore, there is no risk of LSE.	✓													✓							
Ash Vale STW Catchment	Thursley, Ash, Pirbright & Chobham SPA Thames Basin Heaths SPA	Thursley & Ockley Bogs Ramsar site Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA Thursley, Hankley & Frensham Commons SPA	GSO B1.1 and B3.0 were screened out at the initial screening and are, therefore, not considered further. Owing to the presence of Thursley, Ash, Pirbright & Chobham SPA and Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓							
Aston Le Walls STW Catchment	N/A	N/A	No European sites within 10 km – Therefore, no LSE	✓													✓				✓			
Avon Dassett STW Catchment	N/A	N/A	No European sites within 10 km – Therefore, no LSE																		✓			
Aylesbury STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1 and B3.0 were screened out at the initial screening and are, therefore, not considered further. The Chilterns Beechwoods SAC is located over 3 km from the STW catchment. Owing to the European sites' proximity to the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C3.1 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓							
Bampton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Banbury STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓							
Barford STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Barkway STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓		✓					
Baydon STW Catchment	N/A	River Lambourn SAC Kennet & Lambourn Floodplain SAC Hackpen Hill SAC	GSO B1.1 was screened out at the initial screening and is, therefore, not considered further. The River Lambourn SAC is located over 3 km from the STW catchment. The Kennet & Lambourn Floodplain SAC is located over 6 km from the STW catchment. The Hackpen Hill SAC is located over 8 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and, therefore, there is no risk of LSE	✓													✓							
Basingstoke STW Catchment	N/A	Thames Basin Heaths SPA	GSO B1.1, B3.0, C5.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further. The Thames Basin Heaths SPA is located over 8 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and, therefore, there is no risk of LSE.	✓									✓				✓	✓			✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Beckley STW Catchment	N/A	Oxford Meadows SAC	GSO D3.0 was screened out at the initial screening and is, therefore, not considered further.																		✓			
Beckton STW Catchment	Lee Valley Ramsar site Epping Forest SAC Lee Valley SPA	Lee Valley Ramsar site Epping Forest SAC Wimbledon Common SAC Richmond Park SAC Lee Valley SPA	GSO B1.1, B3.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further. Owing to the presence of Lee Valley Ramsar site, Epping Forest SAC and Lee Valley SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓	✓			✓					✓			✓	✓				✓			WC 01
Beddington STW Catchment	N/A	Mole Gap to Reigate Escarpment SAC Wimbledon Common SAC Richmond Park SAC	GSO B1.1, and C5.0 were screened out at the initial screening and are, therefore, not considered further. Owing to the European sites' proximity to the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓												✓	✓	✓						
Beenham STW Catchment	N/A	Kennet & Lambourn Floodplain SAC Hartslock Wood SAC River Lambourn SAC	The Kennet & Lambourn Floodplain SAC is located over 6 km from the STW catchment. The Hartslock Wood SAC is located over 7 km from the STW catchment. The River Lambourn SAC is located over 8 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and, therefore, there is no risk of LSE.														✓							
Benson STW Catchment	N/A	Little Wittenham SAC Hartslock Wood SAC Aston Rowant SAC	GSO B1.1, B3.0, C5.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further.	✓									✓					✓			✓			
Bentley STW Catchment	N/A	Thursley & Ockley Bogs Ramsar site East Hampshire Hangers SAC Shortheath Common SAC Thursley, Ash, Pirbright & Chobham SAC Woolmer Forest SAC Wealden Heaths Phase II SPA Thursley, Hankley & Frensham Commons SPA Thames Basin Heaths SPA	GSO B3.0 and C5.0 were screened out at the initial screening and are, therefore, not considered further. The East Hampshire Hangers SAC is located 2 km from the STW catchment. The Shortheath Common SAC is located over 5 km from the STW catchment. The Thursley, Ash, Pirbright & Chobham SAC is located over 3 km from the STW catchment. The Woolmer Forest SAC is located over 8 km from the STW catchment. The Thursley & Ockley Bogs Ramsar site is located over 9 km from the STW catchment. The Wealden Heaths Phase II SPA is located over 5 km from the STW catchment. The Thursley, Hankley & Frensham Commons SPA is located over 3 km from the STW catchment. The Thames Basin Heaths SPA is located over 5 km from the STW catchment. Owing to the nature of the catchment area (urban and semi-urban) and the species for which the SPAs are designated it is not considered that the catchment area would provide functionally linked land. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and, therefore, there is no risk of LSE.										✓				✓	✓							
Berkhamstead STW Catchment	Chilterns Beechwoods SAC	Chilterns Beechwoods SAC	GSO B1.1, B3.0 and C5.0 were screened out at the initial screening and are, therefore, not considered further. Owing to the presence of Chilterns Beechwoods SAC within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C3.1 and C4.0 may have an LSE	✓									✓			✓	✓	✓						

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																					
Bibury STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓			✓	✓	✓						
Bicester STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓			✓	✓	✓						
ishops Stortford STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓												✓	✓							
Bledington STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Bishops Stortford STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓												✓	✓							
Bletchingdon STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further. The Oxford Meadows SAC is located over 6 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and furthermore there are no direct hydrological links to the SAC, therefore there is no risk of an LSE.	✓													✓	✓			✓			
Bloxham STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓	✓			✓			
Blunsdon STW Catchment	N/A	North Meadow & Clattinger Farm SAC	GSO B1.1 was screened out at the initial screening and is, therefore, not considered further. The North Meadow & Clattinger Farm SAC is located over 5 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and furthermore there are no direct hydrological links to the SAC, therefore there is no risk of LSE.	✓													✓							
Boddington STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Bordon STW Catchment	Woolmer Forest SAC Shortheath Common SAC Wealden Heaths Phase II SPA	Thursley & Ockley Bogs Ramsar site Woolmer Forest SASC Shortheath Common SAC Thursley, Ash, Pirbright & Chobham SAC East Hampshire Hangers SAC Wealden Heaths Phase II SPA Thursley, Hankley & Frensham Commons SPA	GSO B1.1, B3.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further. Owing to the presence of Woolmer Forest SAC, Shortheath Common SAC and Wealden Heaths Phase II SPA within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓				✓			
Bourton Oxon STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE																					
Bourton-On-The-Water STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓												✓	✓	✓						
Boxford STW Catchment	Kennet & Lambourn Floodplain SAC River Lambourn SAC	Kennet & Lambourn Floodplain SAC River Lambourn SAC Kennet Valley Alderwoods SAC	GSO B1.1 and B3.0 were screened out at the initial screening and are, therefore, not considered further. Owing to the presence of Kennet & Lambourn Floodplain SAC and River Lambourn SAC within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓							
Bracknell STW Catchment	N/A	South West London Waterbodies Ramsar site	GSO B1.1 and B3.0 were screened out at the initial screening and are, therefore, not considered further.	✓									✓				✓							

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																				
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
		Windsor Forest & Great Park SAC Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA South West London Waterbodies SPA	The South West London Waterbodies Ramsar site is located approximately 6 km from the STW catchment. The Windsor Forest & Great Park SAC is located 10 m from the STW catchment. The Thursley, Ash, Pirbright & Chobham SAC is located over 3 km from the STW catchment. The Thames Basin Heaths SPA is located approximately 10 m from the STW catchment. Owing to the European sites' proximity to the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																							
Bramfield STW Catchment	N/A	Lee Valley Ramsar site Wormley-Hoddesdonpark Woods SAC Lee Valley SPA	GSO B1.1 was screened out at the initial screening and is, therefore, not considered further. The Wormley-Hoddesdonpark Woods SAC is located 7 km from the STW catchment. The Lee Valley Ramsar site is located over 8 km from the STW catchment. The Lee Valley SPA is located over 8 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and, therefore, there is no risk of an LSE.	✓													✓							
Braughing STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓							
Brickendon STW Catchment	N/A	Lee Valley Ramsar site Wormley-Hoddesdonpark Woods SAC Lee Valley SPA	GSO B1.1 and C5.0 were screened out at the initial screening and are, therefore, not considered further.	✓														✓						
Briff Lane (Bucklebury) STW Catchment	N/A	Kennet & Lambourn Floodplain SAC River Lambourn SAC Kennet Valley Alderwoods SAC Hartslock Wood SAC	GSO B3.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further.										✓								✓			
Broadwell STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓			✓	✓				✓			
Broughton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Buntingford STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓												✓	✓							
Burford STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓	✓			✓			
Burghfield STW Catchment	N/A	Hartslock Wood SAC Thames Basin Heaths SPA	GSO B1.1, B3.0 and C5.0 were screened out at the initial screening and are, therefore, not considered further. The Thames Basin Heaths SPA is located over 10 km from the STW catchment. The Hartslock Wood SAC is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and, therefore, there is no risk of an LSE.	✓									✓				✓	✓						
Burstow STW Catchment	N/A	Mole Gap to Reigate Escarpment SAC Ashdown Forest SAC Ashdown Forest SPA	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are, therefore, not considered further. The Mole Gap to Reigate Escarpment SAC is located over 7 km from the STW catchment. The Ashdown Forest SAC is located over 10 km from the STW catchment.	✓												✓		✓			✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			The Ashdown Forest SPA is located over 10 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of an LSE.																					
Byfield STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Caddington STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1 was screened out at the initial screening and is, therefore, not considered further. The Chilterns Beechwoods SAC is located over 8 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and furthermore there are no direct hydrological links to the SAC therefore there is no risk of LSE.	✓													✓							
Camberley STW Catchment	Thames Basin Heaths SPA	Thursley, Ash, Pirbright & Chobham SAC Windsor Forest & Great Park SAC Thames Basin Heaths SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that the GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓				✓			
Carterton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓			✓	✓	✓						
Cassington STW Catchment	N/A	Oxford Meadows SAC Cothill Fen SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 360 m from the STW catchment. The Cothill Fen SAC is located over 7 km from the STW catchment. Owing to the European sites' proximity to the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓	✓			✓			
Chacombe STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Chadlington STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Chalgrove STW Catchment	N/A	Little Wittenham SAC Aston Rowant SAC Chilterns Beechwoods SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Little Wittenham SAC is located over 6 km from the STW catchment. The Aston Rowant SAC is located over 6 km from the STW catchment. The Chilterns Beechwoods SAC is located over 8 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of LSE.	✓									✓				✓	✓			✓			
Chalton (AW) STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1 was screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and furthermore there are no direct hydrological links to the SAC therefore there is no risk of LSE.	✓													✓							

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Chapel Row STW Catchment	N/A	Kennet & Lambourn Floodplain SAC River Lambourn SAC Hartslock Wood SAC	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further.	✓														✓			✓			
Charlbury STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Charlton-On-Moor Catchment	N/A	Oxford Meadows SAC	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 9 km from the STW catchment. Although GSO C5.0 and D4.1 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and furthermore there are no direct hydrological links to the SAC therefore there is no risk of LSE.	✓													✓	✓			✓	✓		
Chertsey STW Catchment	South West London Waterbodies Ramsar site Windsor Forest & Great Park SAC Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA South West London Waterbodies SPA	South West London Waterbodies Ramsar site Windsor Forest & Great Park SAC Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA South West London Waterbodies SPA	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of South West London Waterbodies Ramsar site, Windsor Forest & Great Park SAC, Thursley, Ash, Pirbright & Chobham SAC, Thames Basin Heaths SPA and South West London Waterbodies SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C3may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓												✓	✓			✓			
Chesham STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1, B3 and C5.0 were screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located over 1.5 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the European sites, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓	✓						
Chieveley STW Catchment	N/A	River Lambourn SAC Kennet & Lambourn Floodplain SAC Kennet Valley Alderwoods SAC	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. The River Lambourn SAC is located over 4 km from the STW catchment. The Kennet & Lambourn Floodplain SAC is located over 5 km from the STW catchment. The Kennet Valley Alderwoods SAC is located over 7 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of LSE.	✓									✓				✓							
Chilton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE										✓											
Chiltom Foliat STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓				✓		
Chinnor STW Catchment	N/A	Aston Rowant SAC Chilterns Beechwoods SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Aston Rowant SAC is located over 425 m from the STW catchment. The Chilterns Beechwoods SAC is located over 530 m from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the European sites, using the precautionary principle, it is considered that GSO C4.0 and C4.0 may have an LSE on European sites.	✓												✓	✓	✓			✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			Therefore, a Stage 2 Appropriate Assessment will be required.																					
Chipping Norton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Chipping Wordon STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Chobham STW Catchment	Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SAC	South West London Waterbodies Ramsar site Thursley, Ash, Pirbright & Chobham SAC Windsor Forest & Great Park SAC Thames Basin Heaths SPA South West London Waterbodies SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Thursley, Ash, Pirbright & Chobham SAC and Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓				✓			
Cholsey STW Catchment	N/A	Little Wittenham SAC Hartslock Wood SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Little Wittenham SAC is located over 950 m from the STW catchment. The Hartslock Wood SAC is located over 6 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the European sites, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓				✓			
Church Hanborough STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 6 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and furthermore there are no direct hydrological links to the SAC therefore there is no risk of LSE	✓													✓				✓			
Cirencester STW Catchment	N/A	North Meadow & Clattinger Farm SAC Cotswold Beechwoods SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The North Meadow & Clattinger Farm SAC is located over 3 km from the STW catchment. The Cotswold Beechwoods SAC is located over 10 km from the STW catchment. Although the exact location of any works is unknown, due to GSO being within 5 km of GSCO C3.1 using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓	✓			✓			
Clanfield STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓	✓		
Clavering STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓	✓		
Clifton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Colgate STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE																		✓			
Combe STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1 and C5.0 were screened out at the initial screening and are therefore not considered further.	✓														✓						
Compton STW Catchment	N/A	Hartslock Wood SAC	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further.	✓													✓	✓			✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			The Hartslock Wood SAC is located over 8 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of LSE.																					
Cottered STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓ ✓						
Cranleigh STW Catchment	N/A	Thursley & Ockley Bogs, Ramsar site Thursley, Ash, Pirbright & Chobham SAC Ebernoe Common SAC The Mens SAC Thursley, Hankley & Frensham Commons SPA Wealden Heaths Phase II SPA	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Thursley & Ockley Bogs, Ramsar site is located over 6 km from the STW catchment. The Thursley, Ash, Pirbright & Chobham SAC is located over 5 km from the STW catchment. The Ebernoe Common SAC is located over 6 km from the STW catchment. The Mens SAC is located over 9 km from the STW catchment. The Thursley, Hankley & Frensham Commons SPA is located over 5 km from the STW catchment. The Wealden Heaths Phase II SPA is located over 9 km from the STW catchment. Although GSO C3.1 and C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of LSE.	✓									✓			✓	✓	✓			✓				
Crawley STW Catchment	N/A	Ashdown Forest SAC Mole Gap to Reigate Escarpment SAC Ashdown Forest SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Ashdown Forest SAC is located over 5 km from the STW catchment. The Mole Gap to Reigate Escarpment SAC is located over 9 km from the STW catchment. The Ashdown Forest SPA is located over 5 km from the STW catchment. Although GSO C3.1 and C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of LSE.	✓									✓			✓	✓				✓				
Cricklade STW Catchment	N/A	North Meadow & Clattinger Farm SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The North Meadow & Clattinger Farm SAC is located approximately 170 m from the STW catchment. Although the location of any works is unknown, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓													✓			✓				
Crondall STW Catchment	N/A	East Hampshire Hangers SAC Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA Thursley, Hankley & Frensham Commons SPA Wealden Heaths Phase II SPA	GSO B1.1, B3 and C5were screened out at the initial screening and are therefore not considered further. The East Hampshire Hangers SAC is located over 7 km from the STW catchment. The Thursley, Ash, Pirbright & Chobham SAC is located over 7 km from the STW catchment. The Thames Basin Heaths SPA is located over 1 km from the STW catchment. The Thursley, Hankley & Frensham Commons SPA is located over 7 km from the STW catchment. The Wealden Heaths Phase II SPA is located over 9 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Thames Basin Heaths SPA and using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓	✓							

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Cropredy STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Crossness STW Catchment	Wimbledon Common SAC Richmond Park SAC	Lee Valley Ramsar site South West London Waterbodies Ramsar site Wimbledon Common SAC Richmond Park SAC Epping Forest SAC Lee Valley SPA South West London Waterbodies SPA	GSO B1.1, B3 C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Wimbledon Common SAC and Richmond Park SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO B2.2, B2.4, C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓			✓						✓			✓	✓	✓				✓			
Croughton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Cuddesdon STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE										✓											
Cuddington STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1 was screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC SAC is located over 5 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of LSE.	✓													✓							
Culham STW Catchment	N/A	Little Wittenham SAC Cothill Fen SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Little Wittenham SAC is located over 2 km from the STW catchment. The Cothill Fen SAC is located over 5 km from the STW catchment. Although the exact location and scale of any works associated with C4.0 is unknown Little Wittenham SAC is designated for its population of great crested newts it is considered that any works would not have an LSE on the SAC	✓													✓					✓			
Dagnall STW Catchment	N/A	Chilterns Beechwoods SAC	GSO D3.0 was screened out at the initial screening and are therefore not considered further.																		✓			
Deephams SRW Catchment	Lee Valley Ramsar site Epping Forest SAC Lee Valley SPA	Lee Valley Ramsar site Epping Forest SAC Wormley-Hoddesdonpark Woods SAC Lee Valley SPA	Owing to the presence of Lee Valley Ramsar site, Epping Forest SAC and Lee Valley SPA within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO B1.2, C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.		✓											✓	✓								
Didcot STW Catchment	N/A	Little Wittenham SAC Cothill Fen SAC Hartslock Wood SAC	GSO B1.1, B3 and C5.0 were screened out at the initial screening and are therefore not considered further. The Cothill Fen SAC is located over 7 km from the STW catchment. The Little Wittenham SAC is located over 3 km from the STW catchment. The Hartslock Wood SAC is located over 9 km from the STW catchment. Although the exact location of any works is unknown, due to GSO C3,1 being within 5 km of Little Wittenham SAC using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓												✓	✓	✓							
Dorchester STW Catchment	N/A	Little Wittenham SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Little Wittenham SAC is located over 530 m from the STW catchment.	✓												✓	✓				✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			Although the exact location of any works is unknown, due to the close proximity of the Little Wittenham SAC and using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																					
Dorking STW Catchment	Mole Gap to Reigate Escarpment SAC	Mole Gap to Reigate Escarpment SAC Thames Basin Heaths SPA	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Mole Gap to Reigate Escarpment SAC within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓													✓				✓			
Dorton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓				✓			
Drayton STW Catchment	N/A	Cothill Fen SAC Little Wittenham SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Cothill Fen SAC is located over 4 km from the STW catchment. The Little Wittenham SAC is located over 5 km from the STW catchment. Although GSO C4 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of LSE.	✓													✓				✓			
Earlswood STW Catchment	Mole Gap to Reigate Escarpment SAC	Mole Gap to Reigate Escarpment SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Mole Gap to Reigate Escarpment SAC within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓				✓			
East Grafton STW Catchment	N/A	River Avon SAC Salisbury Plain SAC Salisbury Plain SPA	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The River Avon SAC is located over 8 km from the STW catchment. The Salisbury Plain SAC is located over 8 km from the STW catchment. The Salisbury Plain SPA is located over 8 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of LSE.	✓													✓	✓			✓			
East Hyde STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located sufficient distance from the STW catchment that no impacts could occur to the SAC as a result of GSO C5. Therefore, there is no risk of LSE.	✓									✓			✓	✓				✓			
East Ilsley STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓						
East Shefford STW Catchment	River Lambourn SAC	River Lambourn SAC Kennet & Lambourn Floodplain SAC Hackpen Hill, Special Area of Conservation SAC Kennet Valley Alderwoods SAC	GSO B1.1 and C5.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of River Lambourn SAC within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C3.1, C4.0 and D4.1may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓												✓	✓	✓	✓				✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Easthampstead Park STW Catchment	N/A	Thursley, Ash, Pirbright & Chobham SAC Windsor Forest & Great Park SAC Thames Basin Heaths SPA	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Thursley, Ash, Pirbright & Chobham SAC is located over 6 km from the STW catchment. The Windsor Forest & Great Park SAC is located over 9 km from the STW catchment. The Thames Basin Heaths SPA is located over 35 m from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Thames Basin Heaths SPA and using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓													✓				✓				
Elstead STW Catchment	Thursley & Ockley Bogs, Ramsar site Thursley, Ash, Pirbright & Chobham SAC Thursley, Hankley & Frensham Commons SPA	Thursley & Ockley Bogs, Ramsar site Thursley, Ash, Pirbright & Chobham SAC East Hampshire Hangers SAC Shortheath Common SAC Woolmer Forest SAC Thursley, Hankley & Frensham Commons SPA Wealden Heaths Phase II SPA Thames Basin Heaths SPA	GSO B1.1 was screened out at the initial screening and are therefore not considered further. Owing to the presence of Thursley & Ockley Bogs Ramsar site, Thursley, Ash, Pirbright & Chobham SAC and Thursley, Hankley & Frensham Commons SPA within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓													✓								
Esher STW Catchment	South West London Waterbodies Ramsar site South West London Waterbodies SPA	South West London Waterbodies Ramsar site Richmond Park SAC Mole Gap to Reigate Escarpment SAC Wimbledon Common SAC Thursley, Ash, Pirbright & Chobham SAC South West London Waterbodies SPA Thames Basin Heaths SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of South West London Waterbodies Ramsar site and South West London Waterbodies SPA within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓					✓			
Eydon STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓														✓						
Fairford STW Catchment	N/A	North Meadow & Clattinger Farm SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The North Meadow & Clattinger Farm SAC is located over 7 km from the STW catchment. Although GSO C3.1 and C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and furthermore there are no direct hydrological links to the SAC. Therefore, there is no risk of LSE.	✓									✓			✓	✓	✓				✓			
Faringdon STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓				✓			
Farnborough STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓														✓			✓			
Farnham STW Catchment	Thames Basin Heaths SPA	Thursley & Ockley Bogs Ramsar site Thursley, Ash, Pirbright & Chobham SAC East Hampshire Hangers SAC Shortheath Common SAC Woolmer Forest SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Thames Basin Heaths SPA within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓												✓	✓					✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
		Thames Basin Heaths SPA Thursley, Hankley & Frensham Commons SPA Wealden Heaths Phase II SPA																						
Fiddlers Hamlet STW Catchment	N/A	Lee Valley Ramsar site Epping Forest SAC Lee Valley SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Lee Valley Ramsar site is located over 6 km from the STW catchment. The Epping Forest SAC is located over 80 m from the STW catchment. The Lee Valley SPA is located over 6 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Epping Forest SAC and using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓				✓			
Finstock STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 10 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and furthermore there are no direct hydrological links to the SAC. Therefore, there is no risk of LSE.	✓									✓				✓				✓			
Fleet STW Catchment	Thames Basin Heaths SPA	Thursley, Ash, Pirbright & Chobham SAC East Hampshire Hangers SAC Thames Basin Heaths SPA Thursley, Hankley & Frensham Commons SPA	GSO B1.1 was screened out at the initial screening and are therefore not considered further. Owing to the presence of Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓												✓	✓							
Forest Hill STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 7 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and furthermore there are no direct hydrological links to the SAC. Therefore, there is no risk of LSE.	✓													✓				✓			
Furneux Pelham STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Fyfield STW Catchment	N/A	Pewsey Downs SAC River Avon SAC	GSO B1.1., B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Pewsey Downs SAC is located over 2 km from the STW catchment. The River Avon SAC is located over 2 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of LSE.	✓									✓				✓	✓			✓			
Gerrards Cross STW Catchment	N/A	Burnham Beeches SAC	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. The Burnham Beeches SAC is located over 3 km from the STW catchment. Although GSO C3.1 and C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and	✓									✓				✓	✓						

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																				
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			furthermore there are no direct hydrological links to the SAC. Therefore, there is no risk of LSE.																					
Godalming STW Catchment	Thursley, Ash, Pirbright & Chobham SAC Thursley, Hankley & Frensham Commons SPA	Thursley & Ockley Bogs Ramsar site Thursley, Ash, Pirbright & Chobham SAC Thursley, Hankley & Frensham Commons SPA Wealden Heaths Phase II SPA Thames Basin Heaths SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Thursley, Ash, Pirbright & Chobham SAC and Thursley, Hankley & Frensham Commons SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓				✓			
Goring STW Catchment	N/A	Hartslock Wood SAC Little Wittenham SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Hartslock Wood SAC is located over 1 km from the STW catchment. The Little Wittenham SAC is located over 9 km from the STW catchment. Owing to the European sites' proximity to the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓				✓			
Great Bedwyn STW Catchment	N/A	Kennet & Lambourn Floodplain SAC	GSO D3.0 was screened out at the initial screening and is therefore not considered further. The Kennet & Lambourn Floodplain SAC is located over 7 km from the STW catchment. Although GSO C3.1 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.													✓						✓			
Great Rollright STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Grreatworth STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Grreatworth STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Greenham Common STW Catchment	N/A	Kennet & Lambourn Floodplain SAC River Lambourn SAC Kennet Valley Alderwoods SAC	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. The Kennet & Lambourn Floodplain SAC is located over 2 km from the STW catchment. The River Lambourn SAC is located over 2 km from the STW catchment. The Kennet Valley Alderwoods SAC is located over 5 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance and therefore there is no risk of LSE.	✓									✓				✓							
Grendon Underwood STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Guildford STW Catchment	N/A	Thursley & Ockley Bogs, Ramsar site Thursley, Ash, Pirbright & Chobham SAC Mole Gap to Reigate Escarpment SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Thursley & Ockley Bogs Ramsar site is located over 8 km from the STW catchment.	✓									✓			✓	✓				✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																				
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
		Thames Basin Heaths SPA Thursley, Hankley & Frensham Commons SPA	The Thursley, Ash, Pirbright & Chobham SAC is located over 2 km from the STW catchment. The Mole Gap to Reigate Escarpment SAC is located over 5 km from the STW catchment. The Thames Basin Heaths SPA is located over 45 m from the STW catchment. The Thursley, Hankley & Frensham Commons SPA is located over 7 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Thames Basin Heaths SPA and using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																						
Guiting Power STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE										✓											
Haddenham STW Catchment	N/A	Chilterns Beechwoods SAC Aston Rowant SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located over 7 km from the STW catchment. The Aston Rowant SAC is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓									✓				✓				✓			
Ham Hill (SW) STW Catchment	N/A	North Downs Woodland SAC Peters Pit SAC	Owing to the European sites' proximity to the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.														✓							
Hambledon STW Catchment	N/A	Chilterns Beechwoods SAC Aston Rowant SAC	GSO C5.0 and D3.0 were screened out at the initial screening and is therefore not considered further. The Chilterns Beechwoods SAC is located over 1 km from the STW catchment. The Aston Rowant SAC is located over 9 km from the STW catchment. Owing to the European sites' proximity to the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C3.1 and D4.1 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.													✓		✓				✓	✓		
Hampsted Norreys STW Catchment	N/A	Hartslock Wood SAC Kennet & Lambourn Floodplain SAC River Lambourn SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further.. The Hartslock Wood SAC is located over 8 km from the STW catchment. The Kennet & Lambourn Floodplain SAC is located over 9 km from the STW catchment. The River Lambourn SAC is located over 9 km from the STW catchment. Although GSO C3.1 and D4.1may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓												✓						✓	✓		
Hamstead Marshall STW Catchment	N/A	Kennet Valley Alderwoods SAC Kennet & Lambourn Floodplain SAC River Lambourn SAC	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further.	✓														✓			✓			
Hannington (Wilts) STW Catchment	N/A	North Meadows and Clattinger Farm SAC	Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.														✓							

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Hanwell STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Harpenden STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓				✓			
Hartley Wintney STW Catchment	Thames Basin Heaths SPA	East Hampshire Hangers SAC Thames Basin Heaths SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓			✓			
Haslemere STW Catchment	Wealden Heaths Phase II SPA	Thursley & Ockley Bogs Ramsar site Thursley, Ash, Pirbright & Chobham SAC Woolmer Forest SAC Ebernoe Common SAC Shortheath Common SAC Wealden Heaths Phase II SPA Thursley, Hankley & Frensham Commons SPA	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Wealden Heaths Phase II SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓						
Hatfield Heath STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓						
Headley STW Catchment	Mole Gap to Reigate Escarpment SAC	Mole Gap to Reigate Escarpment SAC	GSO B1.1 was screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located over 3 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓													✓						
Henley STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1 and. B3 were screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located over 5 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓									✓				✓						
Highworth STW Catchment	N/A	North Meadow & Clattinger Farm SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The North Meadow & Clattinger Farm SAC is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓									✓				✓				✓		
Hockford STW Catchment	Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA	Thursley & Ockley Bogs, Ramsar site Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA Thursley, Hankley & Frensham Commons SPA Wealden Heaths Phase II SPA	GSO B1.1 was screened out at the initial screening and are therefore not considered further. Owing to the presence of Thursley, Ash, Pirbright & Chobham SAC and Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓													✓						
Hogsmill STW Catchment	Richmond Park SAC	South West London Waterbodies Ramsar site Richmond Park SAC Wimbledon Common SAC	GSO B1.1 was screened out at the initial screening and is therefore not considered further. Owing to the presence of designated sites within and in close proximity to the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0	✓	✓											✓	✓						

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
		Mole Gap to Reigate Escarpment SAC South West London Waterbodies SPA Thames Basin Heaths SPA	may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																					
Holmwood STW Catchment	N/A	Mole Gap to Reigate Escarpment SAC	GSO D3.0 was screened out at the initial screening and is therefore not considered further. The Mole Gap to Reigate Escarpment SAC is located over 2 km from the STW catchment. Although GSO C3.1 and C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.													✓	✓				✓			
Hook Northon STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Horley (Oxon) STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓														✓			✓			
Horley (Surrey) STW Catchment	N/A	Mole Gap to Reigate Escarpment SAC	GSO B3 and D3.0 were screened out at the initial screening and is therefore not considered further. The Mole Gap to Reigate Escarpment SAC is located over 6 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.										✓				✓				✓			
Hornton STW Catchment	N/A	N/A	GSO B1.1 and. C5.0 were screened out at the initial screening and are therefore not considered further.	✓														✓						
Horton Cum Studley STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓									✓				✓	✓			✓			
Hungerford STW Catchment	N/A	Kennet & Lambourn Floodplain SAC Kennet Valley Alderwoods SAC River Lambourn SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Kennet & Lambourn Floodplain SAC is located over 600 m from the STW catchment. The Kennet Valley Alderwoods SAC is located over 3 km from the STW catchment. The River Lambourn SAC is located over 7 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Kennet & Lambourn Floodplain SAC and using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓				✓			
Hurley STW Catchment	Chilterns Beechwoods SAC	Chilterns Beechwoods SAC Burnham Beeches SAC	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Chilterns Beechwoods SAC within the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓							
Ironsbottom STW Catchment	N/A	Mole Gap to Reigate Escarpment SAC	GSO B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Mole Gap to Reigate Escarpment SAC is located over 6 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.														✓				✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Islip STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 5 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓													✓				✓			
Iver (north) STW Catchment	N/A	South West London Waterbodies Ramsar site Burnham Beeches SAC Windsor Forest & Great Park SAC South West London Waterbodies SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The South West London Waterbodies Ramsar site is located over 4 km from the STW catchment. The Burnham Beeches SAC is located over 5 km from the STW catchment. The Windsor Forest & Great Park SAC is located over 7 km from the STW catchment. The South West London Waterbodies SPA is located over 4 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓									✓				✓				✓			
Kimpton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
King Sutton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓				✓			
Kingsclere STW Catchment	N/A	Kennet & Lambourn Floodplain SAC River Lambourn SAC Kennet Valley Alderwoods SAC	GSO C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Kennet & Lambourn Floodplain SAC is located over 3 km from the STW catchment. The Kennet Valley Alderwoods SAC is located over 6 km from the STW catchment. The River Lambourn SAC is located over 4 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.														✓	✓			✓			
Kingston Bagpuize STW Catchment	N/A	Cothill Fen SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Cothill Fen SAC is located 5 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓									✓				✓				✓			
Kintbury STW Catchment	N/A	Kennet & Lambourn Floodplain SAC River Lambourn SAC Kennet Valley Alderwoods SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Kennet & Lambourn Floodplain SAC is located over 3 km from the STW catchment. The Kennet Valley Alderwoods SAC is located over 110 m from the STW catchment. The River Lambourn SAC is located over 4 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Kennet Valley Alderwoods SAC and using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓	✓			✓			
Leaden Roding STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE																		✓			
Leatherhead STW Catchment	N/A	South West London Waterbodies Ramsar site	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further.	✓												✓	✓				✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
		Mole Gap to Reigate Escarpment SAC Thames Basin Heaths SPA South West London Waterbodies SPA	The South West London Waterbodies Ramsar site is located over 8 km from the STW catchment. The Mole Gap to Reigate Escarpment SAC is located over 320 m from the STW catchment. The Thames Basin Heaths SPA is located over 4 km from the STW catchment. The South West London Waterbodies SPA is located over 8 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Mole Gap to Reigate Escarpment SAC and using the precautionary principle, it is considered that GSO C3.1 and C4.0may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																						
Lechlade STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓												✓	✓					✓			
Lewknor STW Catchment	N/A	Aston Rowant SAC Chilterns Beechwoods SAC	GSO B3 was screened out at the initial screening and is therefore not considered further.										✓											
Lightwater STW Catchment	Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA	South West London Waterbodies Ramsar site Thursley, Ash, Pirbright & Chobham SAC Windsor Forest & Great Park SAC Thames Basin Heaths SPA South West London Waterbodies SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Thursley, Ash, Pirbright & Chobham SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓				✓			
Little Berkhamsted STW Catchment	N/A	Lee Valley Ramsar site Wormley-Hoddesdonpark Woods SAC Lee Valley SPA	No GSO proposed therefore no LSE																					
Little Compton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Little Hallingbury STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓														✓			✓			
Little Marlow STW Catchment	Chilterns Beechwoods SAC	Chilterns Beechwoods SAC Aston Rowant SAC Burnham Beeches SAC	GSO B1.1, B3 and C5.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Chilterns Beechwoods SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓	✓						
Little Milton STW Catchment	N/A	Little Wittenham SAC Aston Rowant SAC Chilterns Beechwoods SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Little Wittenham SAC is located over 8 km from the STW catchment. The Aston Rowant SAC is located over 10 km from the STW catchment. The Chilterns Beechwoods SAC is located over 10 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE	✓													✓				✓			
Littleworth STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE														✓				✓			
Long Crendin STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located 10 km from the STW catchment. Although GSO C4.0 may result	✓									✓				✓				✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																				
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.																					
Long Reach STW Catchment	N/A	Thames Estuary & Marshes Ramsar site North Downs Woodlands SAC Wimbledon Common SAC Thames Estuary & Marshes SPA	GSO B1.1 and C5.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of designated sites within close proximity to the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO B1.2, C3,1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓	✓											✓	✓	✓							
Long Wittenham STW Catchment	Little Wittenham SAC	Little Wittenham SAC Cothill Fen SAC	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Little Wittenham SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓							
Longborough STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓							
Longwater STW Catchment	N/A	Thames Basin Heaths SPA	GSO B1.1 were screened out at the initial screening and are therefore not considered further. The Thames Basin Heaths SPA is located over 680 m from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Thames Basin Heaths SPA and using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓												✓	✓							
Lower Basildon STW Catchment	N/A	Hartslock Wood SAC	GSO B3 was screened out at the initial screening and is therefore not considered further.										✓											
Loxwood (SW) STW Catchment	N/A	The Mens SAC Ebernoe Common SAC	Although the exact location of any works is unknown, due to the close proximity of the Thames Basin Heaths SPA and using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.													✓	✓							
Ludgershall STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Maidenhead STW Catchment	N/A	South West London Waterbodies Ramsar site Chilterns Beechwoods SAC Windsor Forest & Great Park SAC Burnham Beeches SAC Thames Basin Heaths SPA South West London Waterbodies SPA	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The South West London Waterbodies Ramsar site is located over 9 km from the STW catchment. The Chilterns Beechwoods SAC is located over 100 m from the STW catchment. The Windsor Forest & Great Park SAC is located over 1 km from the STW catchment. The Burnham Beeches SAC is located over 3 km from the STW catchment. The Thames Basin Heaths SPA is located over 8 km from the STW catchment. The South West London Waterbodies SPA is located over 9 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Chilterns Beechwoods SAC and using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓	✓			✓				
Manuden STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE										✓											

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																				
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Maple Lodge STW Catchment	Chilterns Beechwoods SAC	Lee Valley Ramsar site Chilterns Beechwoods SAC Wormley-Hoddesdonpark Woods SAC Burnham Beeches SAC Lee Valley SPA	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Chilterns Beechwoods SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓	✓			✓			
Markyate STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further.The Chilterns Beechwoods SAC is located 4 km from the STW catchment. Although GSO C3.1 and C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓	✓			✓			
Marlborough STW Catchment	N/A	Pewsey Downs SAC River Avon SAC Kennet & Lambourn Floodplain SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Pewsey Downs SAC is located over 6 km from the STW catchment. The River Avon SAC is located over 6 km from the STW catchment. The Kennet & Lambourn Floodplain SAC is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓	✓			✓			
Marsh Gibbon STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓	✓			✓			
Merstham STW Catchment	N/A	Mole Gap to Reigate Escarpment SAC	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. The Mole Gap to Reigate Escarpment SAC is located 2 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓							
Middle Barton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓												✓	✓				✓			
Middleton Cheney STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓												✓	✓				✓			
Midgham STW Catchment	N/A	Kennet & Lambourn Floodplain SAC River Lambourn SAC	GSO D3.0 was screened out at the initial screening and is therefore not considered further.																		✓			
Mill Green STW Catchment	N/A	Lee Valley Ramsar site Wormley-Hoddesdonpark Woods SAC Lee Valley SPA	GSO B1.1, B3, and D3.0 were screened out at the initial screening and are therefore not considered further. The Lee Valley Ramsar site is located over 9 km from the STW catchment. The Wormley-Hoddesdonpark Woods SAC is located over 4 km from the STW catchment. The Lee Valley SPA is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓				✓			
Milton Under-Wychwood STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓												✓	✓	✓			✓			
Mogden STW Catchment	South West London Waterbodies Ramsar site	South West London Waterbodies Ramsar site Lee Valley Ramsar site	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further.	✓									✓			✓	✓	✓			✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
	Richmond Park SAC South West London Waterbodies SPA	Richmond Park SAC Windsor Forest & Great Park SAC Wimbledon Common SAC Thursley, Ash, Pirbright & Chobham SAC Burnham Beeches SAC South West London Waterbodies SPA Thames Basin Heaths SPA Lee Valley SPA	Owing to the presence of SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																					
Mollingoton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE										✓											
Moreton Pinkney STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE														✓				✓			
Moreton-In-Marsh STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓						
Mortimer STW Catchment	N/A	Thames Basin Heaths SPA	GSO B1.1, and C5.0 were screened out at the initial screening and are therefore not considered further. The Thames Basin Heaths SPA is located over 4 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓													✓	✓						
Nags Head Lane STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓				✓			
Naunton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓	✓						
Nettlebed STW Catchment	N/A	Aston Rowant SAC	GSO B1.1 was screened out at the initial screening and are therefore not considered further. The Aston Rowant SAC is located 7 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓							
New Mill STW Catchment	Thames Basin Heaths SPA	Thames Basin Heaths SPA	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further.	✓														✓			✓			
Newbury STW Catchment	River Lambourn SAC Kennet & Lambourn Floodplain SAC	River Lambourn SAC Kennet & Lambourn Floodplain SAC Kennet Valley Alderwoods SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of River Lambourn SAC and Kennet & Lambourn Floodplain SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓	✓			✓			
North Weald STW Catchment	N/A	Epping Forest SAC	GSO B1.1 was screened out at the initial screening and are therefore not considered further. The Epping Forest SAC is located 4 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓							
Northleach STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Nuneham Courtenay STW Catchment	N/A	Little Wittenham SAC Cothill Fen SAC Oxford Meadows SAC	GSO B1.1 was screened out at the initial screening and are therefore not considered further. The Little Wittenham SAC is located over 5 km from the STW catchment. The Cothill Fen SAC is located over 8 km from the STW catchment. The Oxford Meadows SAC is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE	✓													✓							
Oxford STW Catchment	Oxford Meadows SAC	Oxford Meadows SAC Cothill Fen SAC Little Wittenham SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Oxford Meadows SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓	✓			✓			
Pangbourne STW Catchment	N/A	Hartslock Wood SAC	GSO B1.1, B3, and D3.0 were screened out at the initial screening and are therefore not considered further. The Hartslock Wood SAC is located over 1 km from the STW catchment. Owing to the European sites' proximity to the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓				✓			
Princes Risborough STW Catchment	Chilterns Beechwoods SAC	Chilterns Beechwoods SAC Aston Rowant SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Chilterns Beechwoods SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓	✓			✓			
Purton STW Catchment	N/A	North Meadow & Clattinger Farm SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The North Meadow & Clattinger Farm SAC is located 3 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓				✓			
Ramsbury STW Catchment	N/A	Kennet & Lambourn Floodplain SAC River Lambourn SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Kennet & Lambourn Floodplain SAC is located over 2 km from the STW catchment. The River Lambourn SAC is located over 6 km from the STW catchment. Owing to the presence of Kennet & Lambourn Floodplain SAC within 5 km of the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓	✓			✓			
Ratkey STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE										✓								✓			
Reading STW Catchment	N/A	Hartslock Wood SAC Kennet & Lambourn Floodplain SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further.	✓									✓			✓	✓	✓			✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
		River Lambourn SAC Thames Basin Heaths SPA	The Hartslock Wood SAC is located over 4 km from the STW catchment. The Kennet & Lambourn Floodplain SAC is located over 6 km from the STW catchment. The River Lambourn SAC is located over 7 km from the STW catchment. The Thames Basin Heaths SPA is located over 4 km from the STW catchment. Owing to the presence of Hartslock Wood SAC within 5 km of the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																						
Ripley STW Catchment	N/A	Mole Gap to Reigate Escarpment SAC Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA	The Mole Gap to Reigate Escarpment SAC is located over 2 km from the STW catchment. The Thursley, Ash, Pirbright & Chobham SAC is located over 5 km from the STW catchment. The Thames Basin Heaths SPA is located over 750 m from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Thames Basin Heaths SPA and using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.														✓								
Rowsham STW Catchment	N/A	Chilterns Beechwoods SAC	GSO D3.0 was screened out at the initial screening and are therefore not considered further.																		✓			
Rudgewick STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE														✓							
Rusper STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE														✓							
Rye Meads STW Catchment	Lee Valley Ramsar site Lee Valley SPA	Lee Valley Ramsar site Wormley-Hoddesdonpark Woods SAC Epping Forest SAC Lee Valley SPA	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Lee Valley Ramsar site and Lee Valley SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓								
Riverside STW Catchment	N/A	Lee Valley Ramsar site Epping Forest SAC Lee Valley SPA	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of designated sites within close proximity to the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO B1.2, C3,1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓	✓											✓	✓	✓			✓			
Sandford St Martin STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE										✓											
Sandhurst STW Catchment	Thames Basin Heaths SPA	Thursley, Ash, Pirbright & Chobham SAC Thames Basin Heaths SPA	GSO B1.1 was screened out at the initial screening and are therefore not considered further. Owing to the presence of Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓												✓	✓							
Selborne STW Catchment	East Hampshire Hangers SAC	East Hampshire Hangers SAC Shortheath Common SAC	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further.	✓													✓	✓			✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
		Woolmer Forest SAC Wealden Heaths Phase II SPA	Owing to the presence of East Hampshire Hangers SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																					
Sevenhampton STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE																		✓			
Shabbington STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓									✓				✓				✓			
Shalbourne STW Catchment	N/A	Kennet & Lambourn Floodplain SAC Kennet Valley Alderwoods SAC	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. The Kennet & Lambourn Floodplain SAC is located over 5 km from the STW catchment. The Kennet Valley Alderwoods SAC is located over 7 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓							
Shamley Green STW Catchment	N/A	Thursley & Ockley Bogs Ramsar site Thursley, Ash, Pirbright & Chobham SAC Thursley, Hankley & Frensham Commons SPA Thames Basin Heaths SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Thursley & Ockley Bogs Ramsar site is located over 7 km from the STW catchment. The Thursley, Ash, Pirbright & Chobham SAC is located over 5 km from the STW catchment. The Thursley, Hankley & Frensham Commons SPA is located over 5 km from the STW catchment. The Thames Basin Heaths SPA is located over 7 km from the STW catchment. Although GSO C3.1 and C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓			✓	✓				✓			
Sherbourne St John STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓						
Sherfield-On-Loddon STW Catchment	N/A	Thames Basin Heaths SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Thames Basin Heaths SPA is located over 5 km from the STW catchment. Although GSO C3.1 and C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓												✓	✓				✓			
Shotteswell STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Shrivenham STW Catchment	N/A	River Lambourn SAC Hackpen Hill SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The River Lambourn SAC is located over 7 km from the STW catchment. The Hackpen Hill SAC is located over 7 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓				✓			
Shutford STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓	✓		
Silchester STW Catchment	N/A	Kennet & Lambourn Floodplain SAC River Lambourn SAC	GSO B1.1, B3 and C5.0 were screened out at the initial screening and are therefore not considered further.	✓									✓				✓	✓						

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			The River Lambourn SAC is located over 9 km from the STW catchment. The Kennet & Lambourn Floodplain SAC is located over 7 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE																					
Slough STW Catchment	South West London Waterbodies Ramsar site Burnham Beeches SAC South West London Waterbodies SPA	South West London Waterbodies Ramsar site Burnham Beeches SAC Windsor Forest & Great Park SAC Chilterns Beechwoods SAC Thursley, Ash, Pirbright & Chobham SAC South West London Waterbodies SPA Thames Basin Heaths SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of South West London Waterbodies Ramsar site, Burnham Beeches SAC and South West London Waterbodies SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓				✓			
Sonning Common STW Catchment	N/A	Hartslock Wood SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Hartslock Wood SAC is located over 7 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓				✓			
South Leigh STW Catchment	N/A	Oxford Meadows SAC Cothill Fen SAC	GSO B1.1 and D3.0 were screened out at the initial screening and therefore there is no risk of an LSE. The Oxford Meadows SAC and Cothill Fen SAC are located over 2 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓				✓			
South Moreton STW Catchment	N/A	Little Wittenham SAC Hartslock Wood SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further .The Little Wittenham SAC is located over 2 km from the STW catchment. The Hartslock Wood SAC is located over 8 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE	✓													✓				✓			
Stadhampton STW Catchment	N/A	Little Wittenham SAC	The Little Wittenham SAC is located over 7 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.														✓							
Standlake STW Catchment	N/A	Cothill Fen SAC Oxford Meadows SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Cothill Fen SAC is located over 4 km from the STW catchment. The Oxford Meadows SAC is located over 8 km from the STW catchment. Although GSO C4.0 and D4.1 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓	✓			✓	✓		
Standon STW Catchment	N/A	Lee Valley Ramsar site Lee Valley SPA	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Lee Valley Ramsar site is located over 7 km from the STW catchment.	✓									✓				✓	✓			✓	✓		

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			The Lee Valley SPA is located over 7 km from the STW catchment. Although GSO C4.0 and D4.1 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.																					
Stanford In The Vale STW Catchment	N/A	Hackpen Hill SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Hackpen Hill SAC is located over 7 km from the STW catchment. Although GSO C4.0.1 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓				✓			
Stanford Rivers STW Catchment	N/A	Epping Forest SAC	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. The Epping Forest SAC is located over 6 km from the STW catchment. Although GSO C4.0may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓							
Stansted Mountfitchet STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Stanton Harcourt STW Catchment	N/A	Cothill Fen SAC Oxford Meadows SAC	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Cothill Fen SAC is located over 3 km from the STW catchment. The Oxford Meadows SAC is located over 6 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓	✓			✓			
Stanton St John STW Catchment	N/A	Oxford Meadows SAC	GSO B3 and D3.0 were screened out at the initial screening and therefore there is no risk of an LSE. The Oxford Meadows SAC is located over 2 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓				✓			
Stewkley STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓														✓						
Stone STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1 C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located over 4 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓	✓			✓			
Streatley STW Catchment	N/A	Hartslock Wood SAC	GSO B1.1 and, B3 were screened out at the initial screening and are therefore not considered further. The Hartslock Wood SAC is located over 2 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓							
Swindon STW Catchment	N/A	North Meadow & Clattinger Farm SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The North Meadow & Clattinger Farm SAC is located over 3 km from the STW catchment. Owing to the presence of North Meadow & Clattinger Farm SAC within 5 km of the STW catchment and the	✓									✓			✓	✓				✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			unknown location of any works, using the precautionary principle, it is considered that GSO C3.1 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																					
Tackley STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓							
Takeley STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Tetsworth STW Catchment	N/A	Aston Rowant SAC Chilterns Beechwoods SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Aston Rowant SAC is located over 3 km from the STW catchment. The Chilterns Beechwoods SAC is located over 4 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance therefore there is no risk of LSE.	✓													✓				✓			
Thame STW Catchment	N/A	Aston Rowant SAC Chilterns Beechwoods SAC	GSO B1.1 was screened out at the initial screening and are therefore not considered further. The Aston Rowant SAC is located over 7 km from the STW catchment. The Chilterns Beechwoods SAC is located over 6 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓							
Therfield STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Theydon Bois Catchment	Epping Forest SAC	Lee Valley Ramsar site Epping Forest SAC Lee Valley SPA	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Epping Forest SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓	✓			✓			
Thornwood STW Catchment	N/A	Lee Valley Ramsar site Epping Forest SAC Lee Valley SPA	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Lee Valley Ramsar site is located over 8 km from the STW catchment. The Lee Valley SPA is located over 8 km from the STW catchment. The Epping Forest SAC is located over 3 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓	✓			✓			
Thorpe Mandeville STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Tiddington STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Towersey STW Catchment	N/A	Aston Rowant SAC Chilterns Beechwoods SAC	The GSO were screened out at the initial screening, therefore, there is no risk of LSE.										✓											

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Tring STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located over 165 m from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Chilterns Beechwoods SAC and using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓				✓			
Uffington STW Catchment	N/A	Hackpen Hill SAC River Lambourn SAC	GSO B1.1 C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further.	✓														✓			✓			
Upper Heyford STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Waddesdon STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Wanborough STW Catchment	N/A	River Lambourn SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The River Lambourn SAC is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓				✓			
Wantage STW Catchment	N/A	Hackpen Hill SAC Cothill Fen SAC River Lambourn SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Hackpen Hill SAC is located over 2 km from the STW catchment. The Cothill Fen SAC is located over 6 km from the STW catchment. The River Lambourn SAC is located over 10 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓				✓			
Wargrave STW Catchment	N/A	Chilterns Beechwoods SAC Thames Basin Heaths SPA	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located over 5 km from the STW catchment. The Thames Basin Heaths SPA is located over 1 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Thames Basin Heaths SPA and using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓												✓	✓				✓			
Warmington STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE																		✓			
Wash Water STW Catchment	N/A	Kennet Valley Alderwoods SAC Kennet & Lambourn Floodplain SAC River Lambourn SAC	Although the exact location of any works is unknown, due to the close proximity of the Thames Basin Heaths SPA and using the precautionary principle, it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.													✓	✓							
Watlington STW Catchment	N/A	Aston Rowant SAC Chilterns Beechwoods SAC Little Wittenham SAC	GSO B1.1, B3 and C5.0 were screened out at the initial screening and are therefore not considered further. The Aston Rowant SAC is located over 2 km from the STW catchment. The Chilterns Beechwoods SAC is located over 4 km from the STW catchment.	✓									✓			✓	✓	✓						

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			The Little Wittenham SAC is located over 9 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Aston Rowant SAC and Chilterns Beechwoods SAC and using the precautionary principle, it is considered that GSO C3.1 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.																						
Weston-On-The-Green STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 9 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓				✓			
Weston STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Weybridge STW Catchment	N/A	South West London Waterbodies Ramsar site Thursley, Ash, Pirbright & Chobham SAC Mole Gap to Reigate Escarpment SAC Thames Basin Heaths SPA South West London Waterbodies SPA	GSO B1.1, B3 and D3.0 were screened out at the initial screening and are therefore not considered further. The South West London Waterbodies Ramsar site is located over 2 km from the STW catchment. The Thursley, Ash, Pirbright & Chobham SAC is located over 6 km from the STW catchment. The Mole Gap to Reigate Escarpment SAC is located over 8 km from the STW catchment. The Thames Basin Heaths SPA is located over 1 km from the STW catchment. The South West London Waterbodies SPA is located over 2 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Thames Basin Heaths SPA and using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓				✓			
Wheatley STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1, B3 and C5.0 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 7 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓	✓						
White Roding STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE														✓				✓			
White Waltham STW Catchment	N/A	Chilterns Beechwoods SAC Windsor Forest & Great Park SAC Burnham Beeches SAC Thames Basin Heaths SPA	GSO B1.1, B3 and C5.0 were screened out at the initial screening and are therefore not considered further. The Chilterns Beechwoods SAC is located over 2 km from the STW catchment. The Windsor Forest & Great Park SAC is located over 4 km from the STW catchment. The Burnham Beeches SAC is located over 8 km from the STW catchment. The Thames Basin Heaths SPA is located over 8 km from the STW catchment. Although the exact location of any works is unknown, due to the close proximity of the Chilterns Beechwoods SAC and Windsor Forest & Great Park SAC and using the precautionary principle, it is considered that GSO C3.1 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓												✓	✓				✓			

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
Whitwell STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓	✓			✓			
Widford STW Catchment	N/A	Lee Valley Ramsar site Wormley-Hoddesdonpark Woods SAC Lee Valley SPA	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. The Lee Valley Ramsar site is located over 2 km from the STW catchment. The Lee Valley SPA is located over 2 km from the STW catchment. The Wormley-Hoddesdonpark Woods SAC is located over 7 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓	✓			✓			
Willingale STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓				✓			
Wilton STW Catchment	N/A	River Avon SAC Kennet & Lambourn Floodplain SAC	GSO B3 was screened out at the initial screening and is therefore not considered further. T										✓											
Windsor STW Catchment	Windsor Forest & Great Park SAC	South West London Waterbodies Ramsar site Windsor Forest & Great Park SAC Burnham Beeches SAC Thursley, Ash, Pirbright & Chobham SAC South West London Waterbodies SPA Thames Basin Heaths SPA	GSO B1.1 and B3 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Windsor Forest & Great Park SAC within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓							
Wingrave STW Catchment	N/A	Chilterns Beechwoods SAC	GSO B1.1, B3, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. Chilterns Beechwoods SAC is located over 2 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓									✓				✓	✓			✓			
Winterboune STW Catchment	N/A	Kennet & Lambourn Floodplain SAC River Lambourn SAC Kennet Valley Alderwoods SAC	GSO C5.0 was screened out at the initial screening and is therefore not considered further. The River Lambourn SAC is located over 2 km from the STW catchment. The Kennet & Lambourn Floodplain SAC is located over 2 km from the STW catchment. The Kennet Valley Alderwoods SAC is located over 5 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.														✓	✓						
Wisley STW Catchment	Thames Basin Heaths SPA	South West London Waterbodies Ramsar site Thursley, Ash, Pirbright & Chobham SAC Windsor Forest & Great Park SAC Mole Gap to Reigate Escarpment SAC Thames Basin Heaths SPA South West London Waterbodies SPA	GSO B1.1, C5.0 and D3.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓													✓	✓			✓			
Witney STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1, B3 and C5.0 were screened out at the initial screening and are therefore not considered further.	✓									✓				✓	✓						

Catchment	Designated sites within catchment	Designated sites within 10 km	Comments	GSO																			
				B1.1	B1.2	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B3.0	C1.0	C2.0	C3.1	C4.0	C5.0	C6.0	C7.0	D3.0	D4.1	D5.0	WC
			The Oxford Meadows SAC is located over 8 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.																					
Woking STW Catchment	Thames Basin Heaths SPA	South West London Waterbodies Ramsar site Thursley, Ash, Pirbright & Chobham SAC Windsor Forest & Great Park SAC Thames Basin Heaths SPA South West London Waterbodies SPA	GSO B1.1, B3 and C5.0 were screened out at the initial screening and are therefore not considered further. Owing to the presence of Thames Basin Heaths SPA within the STW catchment and the unknown location of any works, using the precautionary principle, it is considered that GSO C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓				✓	✓							
Woodstock STW Catchment	N/A	Oxford Meadows SAC	GSO B1.1 and D3.0 were screened out at the initial screening and are therefore not considered further. The Oxford Meadows SAC is located over 5 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓				✓			
Woolhampton STW Catchment	N/A	Kennet & Lambourn Floodplain SAC River Lambourn SAC Kennet Valley Alderwoods SAC	GSO B1.1, B3 and C5.0 were screened out at the initial screening and are therefore not considered further. The River Lambourn SAC is located over 4 km from the STW catchment. The Kennet & Lambourn Floodplain SAC is located over 1 km from the STW catchment. The Kennet Valley Alderwoods SAC is located over 7 km from the STW catchment. Owing to the European sites' proximity to the STW catchment and the unknown location of any works using the precautionary principle it is considered that GSO C3.1 and C4.0 may have an LSE on European sites. Therefore, a Stage 2 Appropriate Assessment will be required.	✓									✓			✓	✓	✓							
Worminghall STW Catchment	N/A	N/A	No European sites within 10 km – Therefore no LSE	✓													✓							
Yattendon STW Catchment	N/A	Hartslock Wood SAC Kennet & Lambourn Floodplain SAC River Lambourn SAC	GSO B1.1 was screened out at the initial screening and are therefore not considered further. The River Lambourn SAC is located over 9 km from the STW catchment. The Kennet & Lambourn Floodplain SAC is located over 8 km from the STW catchment. The Kennet Valley Alderwoods SAC is located over 10 km from the STW catchment. Although GSO C4.0 may result in major earthworks it is considered unlikely that any impacts could occur at this distance, therefore, there is no risk of LSE.	✓													✓							

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Glossary

Term	Description
1 in 30-year storm	A storm that has a 1 in 30 chance (3.33% probability) of being equalled or exceeded in any given year. This does not mean that a 30-year flood will happen regularly every 30 years, or only once in 30 years.
1 in 50-year storm	A storm that has a 1 in 50 chance (2% probability) of being equalled or exceeded in any given year. This does not mean that a 50-year flood will happen regularly every 50 years, or only once in 50 years.
Asset Management Plan (AMP)	A five-year planning cycle used by English and Welsh water industry regulators to set allowable price increases for privately owned water companies and for the assessment of performance indicators such as water quality and customer service.
Baseline Risk And Vulnerability Assessment (BRAVA)	Following Risk Based Catchment Screening (RBCS), more detailed risk assessments on those catchments where we believed there was an adverse risk to performance over time. We modelled their performance to 2020 (baseline), 2030, 2035 and 2050.
Business Plan	Business Plans are produced by water companies every 5 years. They set out their investment programme to ensure delivery of water and wastewater services to customers. These plans are drawn up through consultation with the regulators, stakeholders and customers and submitted to Ofwat for detailed scrutiny and review.
Catchment Strategic Plans (CSPs)	Summary reports to promote system thinking across large wastewater catchments. These provide early sight of our final plans enabling co-authoring opportunities for our stakeholders. Each document outlines the challenges that the catchment will face in the future and the long-term plans to address these issues.
Combined sewer	A sewer designed to receive both wastewater and surface water from domestic and industrial sources to a treatment works in a single pipe.
Customer Challenge Group (CCG)	An independent body that challenges both our current performance and our engagement with customers on building our future plans.
Cycle 1 and Cycle 2 DWMP	Our current DWMP is referred to as Cycle 1, it covers a planning period of 2025-2050. Our next plan will be published in five years' time and is referred to as our Cycle 2 DWMP, it will cover a planning period of 2030-2055.
Department for Environment, Food and Rural Affairs (Defra)	UK government department responsible for safeguarding the natural environment, food and farming industry, and the rural economy.
Drainage and Wastewater Management Plan (DWMP)	A Drainage and Wastewater Management Plan (DWMP) is '*a long-term strategic plan that sets out how wastewater systems, and the drainage networks that impact them, are to be extended, improved and maintained to ensure they are robust and resilient to future pressures*'. The planning period is 25 years, from 2025 to 2050. DWMP is iterated every five years; the first known as 'Cycle 1', published as a final plan in May 2023.
dDWMP	The draft version of the Drainage and Wastewater Management Plan, published in June 2022[1].
fDWMP	The final version of the Drainage and Wastewater Management Plan, to be published in May 2023.

[1] https://www.thameswater.co.uk/about-us/regulation/drainage-and-wastewater-management

Dry Weather Flow (DWF)	Dry Weather Flow is the average daily flow to a Sewage Treatment Works (STW) during a period without rain.
Environment Agency (EA)	UK government agency whose principal aim is to protect and enhance the environment in England and Wales.
EA Pollution Categories 1 to 3	Category 1 incidents have a serious, extensive or persistent impact on the environment, people or property. Category 2 incidents have a lesser, yet significant, impact. Category 3 incidents have a minor or minimal impact on the environment, people or property with only a limited or localised effect on water quality. Further Ofwat guidance available here: WatCoPerfEPAmethodology v3-Nov-2017-Final.pdf (ofwat.gov.uk)
Event Duration Monitoring (EDM)	Event duration monitoring (EDM) measures the frequency and duration of storm discharges to the environment from storm overflows.
External hydraulic sewer flooding	External flooding occurs within the curtilage of a property due to hydraulic sewer overload. Further Ofwat guidance available here: Reporting-guidance-sewer-flooding.pdf (ofwat.gov.uk)
Foul sewer	A foul sewer is designed to carry domestic or commercial wastewater to a sewage works for treatment. Typically, it takes wastewater from sources including toilets, baths, showers, kitchen sinks, washing machines and dishwashers from residential and commercial premises.
Grey infrastructure	New sewers, sewer upsizing and attenuation storage to provide additional capacity in the wastewater networks. Also covers new pumping stations, rising mains and/or civil structures at STWs.
Green infrastructure	Sustainable surface water management solutions, including sustainable drainage systems (SuDS), that are designed to mimic naturally draining surfaces. Typically applied to surface water or combined sewerage systems, but can also be applied to land, highway or other forms of surface drainage.
Historic England (HE)	A non-departmental public body of the government whose aim is to protect the historical environment of England by preserving and listing historic buildings, ancient monuments.
Hydraulic overload	Hydraulic overload occurs when a sewer or sewerage system is unable to cope with the receiving flow.
Internal hydraulic sewer flooding	Flooding which enters a building or passes below a suspended floor caused by flow from a sewer. Further Ofwat guidance available here: Reporting-guidance-sewer-flooding.pdf (ofwat.gov.uk)
L2 Area (Strategic Planning Area)	An aggregation of level 3 catchments (tactical planning units) into larger level 2 strategic planning areas. The level 2 strategic planning areas allow us to describe strategic drivers for change (relevant at the level 2 strategic planning area scale) as well as facilitating a more strategic level of planning above the detailed catchment assessments.
L3 Catchment (Tactical Planning Unit)	Geographical area in which a wastewater network drains to a single STW. Stakeholders may be specifically associated with this area. Includes for surface water sewerage that may exist which serves the wastewater geographical area but drains to a water course.
Lead Local Flood Authorities (LLFAs)	LLFAs are Risk Management Authorities as defined by the Flood and Water Management Act 2010. They have statutory duties with respect to flood risk management, investigating flooding and the compilation of surface water management plans.

Long-Term Delivery Strategy (LTDS)	A requirement by Ofwat on water companies, to ensure that short term expenditure meets long term objectives for customers, communities, and the environment. These will be submitted as part of the Price Review.
Misconnections	Misconnections are where either surface water drainage or foul water is connected to the wrong system e.g., surface water to foul only or foul to surface water systems.
Natural capital accounting	The process of calculating the total stocks and flows of natural resources in a given system, either in terms of monetary value or in physical terms.
Natural England (NE)	A non-departmental public body sponsored by the Department for Environment, Food and Rural Affairs to protect the natural environment in England, helping to protect England's nature and landscapes.
Non-governmental organisation (NGO)	An organisation that operates independently of any government, typically one whose purpose is to address a social or political issue.
Options Development and Appraisal (ODA)	A method to focus the level of planning effort, i.e., proportionate to the risks identified, with a view to providing a measure of consistency across the industry.
Ofwat	The regulatory body responsible for economic regulation of the privatised water and wastewater industry in England and Wales.
PR24	Every five years, water companies set out their plans for what they'll deliver and how much they'll charge customers[2]. Their plans over the next five years should include how they will: • Provide a safe and clean water supply • Provide efficient sewerage pumping and treatment services • Control leaks • Install meters • Maintain pipes and sewers • Maintain and improve environmental standards This process is known as the price review, and the next one will be in 2024, when Ofwat will make its final decisions. We call this PR24.
Risk-Based Catchments Screening (RBCS)	A first-pass screening exercise of catchment vulnerability against 17 different risk indicators. To understand which catchments are low risk catchments and those that are likely to be at risk in the future if not supported by our long-term plan.
Risk Management Authorities (RMAs)	Authorities responsible for Flood Risk as defined in the Flood and Water Management At 2010. These include, Lead Local Flood Authorities, Highway Authorities, Local Planning Authorities, Natural England and the Environment Agency.
Sewage Treatment Works (STW)	A sewage treatment works receives and treats wastewater to a standard legally agreed with the Environment Agency, before it is released back into the environment.
Specific, Measurable, Achievable, Relevant, and Time-Bound (SMART)	A framework for setting effective targets.
Storm overflow discharges	Storm overflows are used to manage excess flows, which typically occur as a result of heavy rainfall. Excess flow that may otherwise have caused flooding is released through a designated outfall to a water course, land area or alternative drainage system.

[2] https://www.ccwater.org.uk/priorities/price-review/

Strategic Environmental Assessment (SEA)	A systematic decision support process to ensure that environmental and other sustainability aspects are considered effectively in policy, plan and programme making.
Surface water sewer	A surface water sewer collects rainwater from domestic and commercial roofs, driveways, patios etc to a local watercourse or suitable surface water drainage system.
Sustainable Drainage systems (SuDS)	Drainage solutions that provide an alternative to the direct channelling of surface water through networks of pipes and sewers to nearby watercourses. SuDS aim to reduce surface water flooding, improve water quality, and enhance the amenity and biodiversity value of the environment. SuDS achieve this by lowering flow rates, increasing water storage capacity and reducing the transport of pollution to the water environment.
Thames Regional Flood and Coastal Committee (TRFCC) area	The TRFCC area was established by the Environment Agency under the Flood and Water Management Act 2010 that brings together members representing the Constituent Authority. Featured TRFCCs are listed here on our DWMP portal: Drainage and Wastewater Management Plan (arcgis.com)
Water Industry National Environmental Programme (WINEP)	The framework under which Defra and the EA require environmental improvements to be delivered by water companies. Guidance is released by regulators, which water companies interpret for their geographical area, and resubmit the outputs back to regulators for endorsement.

Navigating our DWMP

We've developed a comprehensive document suite to share our final DWMP. This includes five summary documents that contain increasing levels of detail. To help you to navigate around our document suite and to find key DWMP content, we provide a Navigation index below and on our DWMP webpage. The orange cells refer to where key DWMP content can be found across our final document suite.

Navigation index		Protecting the environment and providing a reliable, sustainable wastewater service							Best value and delivery					Working together		DWMP stages and data				
		Storm overflows	Sewer flooding	Level of ambition & pace of delivery	Growth & climate change	Resilience: flooding & power	Groundwater	Environmental assessments	Affordability & bill impact	Best Value	Base vs Enhancement	Solutions & deliverability	Programme alignment	Partnership working	Stakeholder & customer engagement	DWMP stages & process	Level 2 regional summaries	Level 3 regional summaries	Data tables	Risk & Assurance
Summary documents	Customer summary	■	■											■	■	■				
	Non-technical summary	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
	Technical summary	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
	The Plan	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
	Catchment Strategic Plans x13	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■		
Technical appendices x11	Appendix A - Strategic context												■			■				
	Appendix B - Risk-Based catchment screening															■				
	Appendix C - Baseline risk and Vulnerability assessment				■	■										■				
	Appendix D - Options development and appraisal	■										■				■				
	Appendix E - Programme appraisal	■		■		■			■	■	■	■	■			■				
	Appendix F - Stakeholder engagement														■	■				
	Appendix G - Adaptive pathway planning	■	■		■															
	Appendix H – Customer engagement Part A – Draft DWMP														■	■				
	Appendix I - Risk and uncertainty											■								■
	Appendix J - DWMP and WRMP alignment												■							
	Appendix M - Assurance																			■
New technical appendices x9	Appendix N - You Said, We Did (YSWD)	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
	Appendix O - What base buys										■									
	Appendix P - Response to July 2021 Floods		■	■	■	■			■			■	■	■	■					
	Appendix Q - Storm overflows	■		■	■				■				■							
	Appendix R - Delivery of SuDS and nature-based solutions	■	■	■	■	■			■	■		■	■	■	■					
	Appendix S - Partnership opportunities and working			■								■		■	■					
	Appendix T - Groundwater quality						■													
	Appendix U - Resilience		■		■	■							■	■	■					
	Appendix V – Customer engagement Part B – Consultation Survey Report														■					
Environmental assessments	Appendix K - Strategic environmental assessment (SEA)							■												
	Appendix L - Habitats regulations assessment (HRA)							■												
Portals and data	Customer portal	■	■							■		■		■	■	■	■	■		
	Practitioner portal	■	■											■	■		■	■		
	Data tables			■							■								■	
	Data tables commentary																		■	

We welcome your views on our DWMP. Please share them with us by emailing: DWMP@thameswater.co.uk.

This document reflects our DWMP 2025-2050 as published in May 2023.