Southampton to London Pipeline Project

Construction Environmental Management Plan (CEMP)

Appendix B: Water Management Plan

Revision No. 2.0

June 2021

East Hampshire District Council

Contents

Acronyms and Abbreviations

Acronym	Definition
CEMP	Construction Environmental Management Plan
CIRIA	Construction Industry Research and Information Association
CoCP	Code of Construction Practice
DCO	Development Consent Order
EA	Environment Agency
ECoW	Environmental Clerk of Works
ES	Environmental Statement
GWDTE	Groundwater Dependent Terrestrial Ecosystem
GWSA	Groundwater study area
HDPE	High-density polyethylene
LEMP	Landscape and Ecological Management Plan
LLFA	Lead Local Flood Authority
PWS	Private water supply
RoFSW	Risk of Flooding from Surface Water
SINC	Site of Importance for Nature Conservation
SPZ	Source Protection Zone
WMP	Water Management Plan

1 Introduction

1.1 Overview of the Project

1.1.1 Esso Petroleum Company, Limited (Esso) has been granted a Development Consent Order (DCO) by the Secretary of State to replace 90km (56 miles) of an existing pipeline with 97km of new pipeline to transport aviation fuel between Boorley Green in Hampshire and the Esso West London Terminal storage facility in Hounslow. The replacement pipeline is 97km long, taking into account that it cannot follow the line of the existing pipeline along its whole length due to new developments and environmental constraints.

1.1.2 Esso has already replaced 10km of pipeline between Hamble and Boorley Green in Hampshire. The replacement pipeline starts near Boorley Green at the end point of the previously replaced pipeline. The route runs generally in a northeast direction via Esso's Pumping Station in Alton. It terminates at the Esso West London Terminal storage facility. The areas of land to be permanently or temporarily used for the project are known as the Order Limits.

1.1.3 The project within this local authority area is broken down into six stages. These are based on geographical areas. East Hampshire District Council is host to 17.73km of the 97km pipeline route. This Water Management Plan (WMP) specifically applies to the section of works between (465 956E, 130 454N) and (468 528E, 134 052N), and between (472 166E, 137 621N) and (478 779E, 146 499N) in the District of East Hampshire. This is shown on Sheets 4, 5, 6 and 7 in the Stages of the Authorised Development.

1.1.4 It is anticipated that works to install the pipeline will start in 2021 and be completed in 2023. The installation of the pipeline is planned to be completed within a two-year construction period. On completion of the installation works the contractor will hydrotest the pipeline and any post-construction monitoring required will be carried out.

1.1.5 The development authorised by the DCO must be undertaken in accordance with the Construction Environmental Management Plan (CEMP) pursuant to Requirement 6 of the DCO.

1.2 Purpose of the Water Management Plan

1.2.1 This Water Management Plan (WMP) for East Hampshire District Council has been produced as Appendix B to the CEMP. The CEMP and appendices have been produced prior to construction and submitted and approved by East Hampshire District Council in accordance with Requirement 6 in the DCO after consultation with the Environment Agency (EA) and Lead Local Flood Authorities (LLFAs). The control measures set out in the WMP will govern the methodologies when undertaking the construction of the project.

1.2.2 The WMP should be read alongside the generic methodology for watercourse crossings which can be found within the Section 2.9 of the Code of Construction Practice (CoCP). This contains details about how watercourses would be crossed

during construction and how they would be reinstated. It should also be read alongside the Landscape and Ecological Management Plan (LEMP) which will contain further details about how watercourses would be reinstated, including vegetation type.

1.2.3 The WMP should also be read alongside the Emergency Action Plan (CEMP Appendix A) which contains information about the processes and measures that would occur during an emergency such as an extreme flood event or a significant pollution incident.

1.2.4 Crossing watercourses is an activity (a 'flood risk activity') under the Environmental Permitting (England and Wales) Regulations 2016, which requires a permit. Likewise, the obstruction of ordinary watercourses is controlled under the Land Drainage Act 1991 and requires an 'ordinary watercourse consent'. In accordance with Article 36 of the DCO, an environmental permit for flood risk activities or an ordinary watercourse consent will not be required as Esso is instead required to comply with the protective provisions agreed with the EA and the LLFAs as set out in Schedule 9 Parts 4 and 5 of the DCO.

1.2.5 Works within watercourses will comply with the protective provisions as well as the working methodology detailed in Section 2.9 of the CoCP, the LEMP and in line with the relevant good practice measures included within this WMP.

1.2.6 As per commitments G44 and G123 the project would take place in compliance with all consents and permits. Appropriate procedures would be followed for surrendering permits, consents and licences following the end of the construction phase, which will be managed by the Permits and Consents Manager.

1.3 Aims and Objectives

1.3.1 The overarching aim of the WMP is to set out the good practice measures that would be employed to reduce impacts on water during the construction of the pipeline and to maintain positive working relationships with local communities, the relevant planning authorities, the EA and the LLFA.

1.3.2 Water includes surface water systems such as rivers and watercourses, and groundwater resources such as aquifers. The WMP covers measures in relation to flood risk, water quality (including pollution prevention) and geomorphology (and other considerations in line with the Water Framework Directive).

1.3.3 The objectives of the WMP are to define:

- the existing good practice measures in relation to water;
- the processes and procedures in place to control the discharge of water;
- how water will be managed including monitoring and sediment control; and
- how the project will monitor water usage and reduce use of potable water.

1.3.4 The WMP relates only to the construction of the project, as there are no significant effects during operation.

1.4 Roles and Responsibilities

1.4.1 Overall roles and responsibilities for the project are presented in the CEMP. The main roles and responsibilities specific to the WMP are set out in Table 1.1 along with the specification for the roles where applicable.

Table 1.1: Roles and Responsibilities

Roles and specification	Responsibilities
Environmental Manager	The Environmental Manager will be responsible for the maintenance of all environmental plans and registers including monitoring that the environmental measures and mitigations are implemented on site and as recorded within the CEMP. They will be the main point of contact for all environmental matters on the project. They will also develop good working relationships with key external stakeholders such as the EA, Natural England and the local authorities.
Environmental Clerk of Works (ECoW)	The ECoW will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required mitigation measures. The ECoW will be supported as necessary by appropriate specialists (G3, G41).
Works Supervisor	Responsible for delivering the site works in accordance with the requirements of the CEMP and implementing good environmental practices required by the Environmental Manager. They are responsible for managing operatives, plant and their areas of work in accordance with the principles of good environmental practice.
Permits and Consent Manager	The Permits and Consents Manager will work with the Environmental Manager to draft and submit permits and consents on behalf of the project, track the progress, provide updates and communicate approvals.

1.5 Structure of the Water Management Plan

1.5.1 The WMP includes:

- Section 2: This contains a summary of the geographical context based on the details set out in Environmental Statement (ES) Chapter 8 (**Application Document APP-048**) and associated appendices (**Application Documents APP-102** to **APP-107**);
- Section 3: This includes good practice commitments and methods to reduce impacts to water during construction;
- Section 4: This outlines the commitments relating to specific aspects of the water environment: abstractions, dewatering and discharges, pollution and erosion prevention measures, and flood-risk reduction; and
- Section 5: This outlines the site checks and reporting that would be undertaken in respect of water.

2 Geographical Context

2.1 Geographical Context and Features

Surface Water Features

2.1.1 The Order Limits pass through two main rivers within East Hampshire District, crossed by trenchless method (indicated by TC reference) and open cut technique. These are detailed below:

- Caker Stream – WCX012; and
- River Wey – WCX 019 (TC008).

2.1.2 The Order Limits within East Hampshire District also have the following ordinary watercourses identified:

- Unnamed Watercourse 11 – WCX013;
- Unnamed Watercourse 90 – WCX114;
- Water Lane – WCX014;
- Unnamed Watercourse 12 – WCX015;
- Unnamed Watercourse 13 – WCX016;
- Unnamed Watercourse 14 – WCX017;
- Unnamed Watercourse 15 – WCX018;
- Unnamed Watercourse 16 – WCX020;
- Ryebridge Stream – WCX021;
- Unnamed Watercourse 87 – WCX111; and
- Unnamed Watercourse 17 – WCX023.

2.1.3 The Order Limits within East Hampshire District have limited areas designated at Risk of Flooding from Surface Water (RoFSW). The key areas at risk are those adjacent to watercourse crossings, adjacent to Meon Valley Railway and Hawthorn Road and Ryebridge Lane.

2.1.4 TC006 and TC008 avoid work within Flood Zones 2 and 3 along the A32 and adjacent to the River Wey. Works at the following watercourse crossings will also interact with Flood Zones 2 and 3: Caker Stream (WCX012), WCX018 and WCX111. See main river crossing point maps Annex 1.

2.1.5 Further details on the baseline surface water environment can be found within ES Chapter 8 (**Application Document** APP-048), ES Appendix 8.6 (**Application Document** APP-107) and the Flood Risk Assessment (**Application Document** APP-134).

Groundwater Features

2.1.6 ES Chapter 8 (**Application Document APP-048**) identified four groundwater study areas (GWSA) which are based on underlying geology and the associated groundwater environment:

- GWSA-B (Bishop's Waltham to Crondall) – This area crosses two principal aquifers, the first from Bishop's Waltham to Crondall and the second near Alton. There is also a Secondary A alluvium aquifer in the vicinity of Alton. Undifferentiated Secondary aquifers are widespread over much of the Chalk south of Alton.
- Peck Copse Site of Importance for Nature Conservation (SINC) adjacent to the Order Limits, the floodplain of River Wey and Ashley Head Spring have been identified as Groundwater Dependent Terrestrial Ecosystems (GWDTEs) within GWSA-B.
- The Order Limits pass through Source Protection Zone (SPZ) 2 (medium value) and SPZ3 (low value) associated with Portsmouth Water's Northbrook abstraction and through SPZ2s (medium value) and SPZ3s (low value) associated with watercress beds near the village of New Alresford.

2.1.7 Further details on the baseline groundwater environment can be found within ES Chapter 8 (**Application Document APP-048**) and Appendix 8.3 (**Application Document APP-104**).

3 Water Management Plan

3.1 Introduction

3.1.1 A generic construction methodology has been developed for watercourses and can be found in Section 2.9 of the CoCP. This sets out the methodology for open cut watercourse crossings and installation of vehicle crossing points. The final detailed methodology will be agreed with the LLFA or EA as appropriate.

3.2 Good Practice Measures

3.2.1 Esso has made a number of good practice commitments which will reduce impacts on the water environment. The commitments are indicated by a reference number, for example (G11).

3.2.2 The purpose of the WMP is to provide information as to how and when the commitments made within the CoCP will be applied to the various aspects of the water environment. Many of the measures will apply to more than one aspect, such as the requirement to create buffer zones alongside watercourses which would reduce the risk of sediment entering the watercourse and also reduce the risk of flooding to the works areas. The project commitments that relate to a number of aspects of the water environment are listed in Table 3.1. Commitments relating to a specific aspect, for example managing flood risk, are contained within the following sections.

Table 3.1: Project Commitments Relevant to the Whole Water Environment

Commitment Number	Commitment
O1	Commitment to only utilise a 10m width when crossing through boundaries between fields where these include hedgerows, trees or watercourses.
O4	Trenchless crossing technology to be used for crossings of waterways over 30m wide.
G12	There would be no intentional discharge of site runoff to ditches, watercourses, drains or sewers without appropriate treatment and agreement of the appropriate authority (except in the case of emergency).
G28	Construction workers would undergo training to increase their awareness of environmental issues. Topics would include but not be limited to… location and protection of sensitive environmental sites and features; adherence to environmental buffer zones; and flood risk response actions.
G39	Appropriate buffer zones would be established within Order Limits adjacent to identified watercourses.
G122	For open cut watercourse crossings and installation of vehicle crossing points, mitigation measures would include to: • only use a 10m working width for open cut crossings of a main or ordinary watercourse whilst still ensuring safe working; • install a pollution boom downstream of the works; • use and maintain temporary lagoons, tanks, bunds, silt fences or silt screens as required; • have spill kits and straw bales readily available at all crossing points for downstream emergency use in the event of a pollution incident; • place all static plant such as pumps in appropriately sized spill trays; • prevent re-fuelling of any plant or vehicle within 15m of a watercourse; • inspect all plant prior to work adjacent to watercourses for leaks of fuel or hydraulic fluids; and

Commitment Number	Commitment
	• reinstate the riparian vegetation and natural bed of the watercourse using the material removed when appropriate on completion of the works and compact as necessary. If additional material is required, appropriately sized material of similar composition would be used.
G130	The CEMP would follow the principles set out in the Outline CEMP and would set out the water mitigation and management measures and where they would need to be used. These measures would include, but not be restricted to, the following: • details of when dewatering would be likely; • measures to segregate construction site runoff from natural catchment runoff; • details of measures to attenuate runoff rates before discharging at controlled rates to receiving watercourses; • design of any holding or settlement lagoons or other treatment system required prior to discharge to the environment; • details of mitigation measures for all work or compound areas located within flood risk areas; • where construction activities would be located, preferably outside of the floodplain; and • details of any water abstraction and discharge points relating to the works.

3.2.3 Commitments O1 and O4 form part of the guiding principles set out at the inception of the project and have been incorporated into the design and construction methodologies. Commitments G12 and G122 relate to construction measures designed to protect the surface water environment from sedimentation, erosion, pollution effects and increasing flood risk.

3.3 Construction Programme

3.3.1 It is anticipated that works to install the pipeline will start in 2021 and be completed in 2023. Within East Hampshire District the programme is anticipated to follow the phasing shown in the Stages of the Authorised Development.

3.3.2 The following commitments have been factored in when developing the construction programme:

- W5: Topsoil and subsoil would be stockpiled for as short a duration as practicable within Flood Zone 3 and areas of High and Medium Risk of Flooding from Surface Water (RoFSW); and
- flexibility has been built into the programme to allow for unplanned events such as heavy rain.

3.4 Pre-construction Commitments

3.4.1 Licences and Consents: Several activities and measures would take place prior to the main construction works commencing. These include applying for consents and licences (or approvals as per the DCO protective provisions for flood risk activities) prior to the works to which those licences apply, commencing. The contractor(s) will comply with all relevant consent conditions or DCO provisions regarding flood risk activities, dewatering and other discharge activities. This would be with particular regard to volumes and discharge rates and would include discharges to land, waterbodies or third-party drains/sewers (G128).

3.4.2 The project Permits and Consents Manager will manage the consents process, with input from the construction team. A number of expected consent requirements at various locations of the project, such as at trenchless crossing locations and at compounds, have been identified. A list of these within East Hampshire District is provided in Table 3.2. Note this list is provisional and highlights locations where there may be a potential requirement. The full detail of the proposed licences and consents will require review and application ahead of mobilisation when specific site requirements can be confirmed.

Table 3.2: Expected Water Consent Requirements and Locations

Location	Reference	Activities requiring consent	Potential Water Consent/Permit Requirement	Consent Granting Body
Compounds				
North of Petersfield Road	Compound 12 (CO-4L)	Surface and foul water connections Mains water abstraction	Environmental Permitting Regulations – Discharge to controlled waters DCO Article 18 – Discharge of Water with consent of owner Water Industry Act 1991 – Discharge to sewer Water Industry Act 1991 – Hydrant Licence	LLFA/ EA/ Statutory Undertaker/ EA/ Owner
South of Hawthorne Road at Wills Lane	Compound 13 (CO-4M)			
North of B3006 Selborne Road at White House Farm	Compound 15 (CO-4O)			
North of B3004 Caker's Lane at Worldham Golf Club	Compound 16 (CO-4P)			
North of Binsted Road at Hawbridge Farm	Compound 17 (CO-4Q)			
Off Alton bypass A31	Compound 18 (CO-4R)			
North West of A31 at Hen & Chicken Services	Compound 19 (CO-4S)			
North of Froyle Road at The Anchor Inn	Compound 20 (CO-4T)			
Watercourse Crossings				
Caker Stream	WCX012	Works in, on, under, over or within 8m of a watercourse	EA or Drainage Authority approval of specified works as per Protective Provisions	EA/LLFA
River Wey	WCX019 (TC008)			
Unnamed Watercourse 11	WCX 013			
Unnamed Watercourse 90	WCX 114			
Water Lane	WCX 014			
Unnamed Watercourse 12	WCX 015			

Location	Reference	Activities requiring consent	Potential Water Consent/Permit Requirement	Consent Granting Body
Unnamed Watercourse 13	WCX 016			
Unnamed Watercourse 14	WCX 017			
Unnamed Watercourse 15	WCX 018			
Unnamed Watercourse 16	WCX 020			
Ryebridge Stream	WCX 021			
Unnamed Watercourse 87	WCX 111			
Unnamed Watercourse 17	WCX 023			
Trenchless Crossings				
Petersfield Road	TC005	Dewatering works not meeting EA Regulatory Position Statement Guidance or exemptions set out in part 2 of the Water Abstraction and Impounding (Exemptions) Regulations 2017 Dewatering to sewer	Environmental Permitting Regulations – Groundwater Environmental Permitting Regulations – Discharge to controlled waters DCO Article 18 – Discharge of Water with consent of owner Water Industry Act 1991 – Discharge to sewer	EA/Statutory Undertaker/ Owner
A32	TC006			
Caker Lane	TC007			
River Wey and Alton-Waterloo Railway Line	TC008			
A31	TC009			
Open Cut Sections				
Various	Various	Dewatering works not meeting EA Regulatory Position Statement Guidance or exemptions set out in part 2 of the Water Abstraction and Impounding (Exemptions) Regulations 2017 Dewatering to sewer Hydrotesting	Environmental Permitting Regulations – Discharge to controlled waters DCO Article 18 – Discharge of Water with consent of owner Water Industry Act 1991 – Discharge to sewer	EA/Statutory Undertaker/ Owner

3.5 Site Planning and Set Up

3.5.1 During site set up the construction site layout will be planned to control potential risks to surface water, groundwater or flooding. This will include identifying the buffer zones at watercourses outside the 10m working width (O1) to a distance from the bank appropriate to the location (G39). The buffer zones will be dependent on factors such as avoiding areas of floodplain and sensitive bank or instream features. These buffer zones may be delineated with silt fencing to provide further protection from potential site runoff. Alternatively, if runoff risk is low, the locations will be demarcated with fencing, such as pedestrian barrier or heras type barrier.

Construction Compounds

3.5.2 Temporary construction compounds will take into account the following commitments:

- G184: Stockpiles would not be located within 10m of any main rivers or ordinary watercourse crossings; and
- W2: Screening and fencing within logistics hubs and construction compounds would be designed to reduce the impedance of flood water. This would be subject to any commitments regarding great crested newts.

3.5.3 Good practice measures G15, G16, G117, G119, G121, G142 and G195 in relation to pollution control, storage of fuels and hazardous materials will be adhered to (see Table 4.2). Compounds will have plans showing surrounding sensitive areas, areas sensitive to flooding, drainage layout, location of substances considered under the Control of Substances Hazardous to Health Regulations 2002 and fuel storage and the location of any spill kits. Contact details will be provided for the relevant authorities, such as the EA, the persons responsible on the construction site and contacts of a spill response company which can be contacted at short notice for an immediate response.

3.5.4 At compounds and across all areas of the site, fuel and oil will be stored in accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001.

3.5.5 Any site drainage to manage surface water that may be required during the mobilisation of the compounds, along with connections for foul, will be undertaken in line with agreement from the relevant authority, as per the consents summary in Table 3.2.

3.5.6 Connection to mains water supply may be used, but this will depend on the logistics of the connection and longevity of the relevant compound. Many of the compounds will use water deliveries to supply potable water to welfare facilities and tanker away foul water as waste.

3.5.7 Compounds will be provided with good practice measures for water conservation including the use of water-efficient taps within welfare, waterless toilet facilities, assessment of whether water can be reused, and regular checks to hoses for water leaks.

Trenchless Crossings

3.5.8 Works at trenchless crossings will also follow the pollution control measures with regard to fuel and storage of hazardous substances as detailed in Sections 3.5.3 and 3.5.4. Commitments O4 and W13 will be adhered to. If shafts are required, prior to their excavation, groundwater levels will be reviewed and controls such as sheet pile installation to control water ingress, and dewatering requirements will be planned. Any consents required to control the dewatering operations will be applied for prior to commencing works as indicated in Table 3.2. Good practice measures identified in Table 4.2 with regard to silt management will be adhered to in these locations.

3.5.9 Bentonite and drilling fluids will be supplied to the work site using a specifically designed unit manufactured to mix and supply the fluid via pumps. Any excess muds will be contained within purpose-made containers or pits which are lined with high-density polyethylene (HDPE) liner. This will contain any drilling fluid or mud within the pit and allow removal as waste, in line with the Site Waste Management Plan. Alternatively, where volumes and logistics allow, a drilling fluid recycling unit will allow re-use of the material.

Open Cut Working

3.5.10 In accordance with G130:

- The design of any settlement or other treatment system required prior to discharge to the environment, is described in Section 4 and Table 4.4.
- Discharge locations for dewatering will be identified on site, depending on the locality and requirements of the specific discharge, and approved as appropriate.

3.5.11 Commitment G122 details how open cut works will be managed through watercourses to control pollution. This involves setting up site to allow capture of runoff and potential pollutants to prevent their entry into the watercourse. In addition, measures are presented to mitigate a spill event, such as the positioning of spill kits, booms and other containment devices downstream of the crossing.

3.5.12 Should excavations go deeper than the 4m LoD for open cut construction works, the EA will be consulted and an assessment undertaken to confirm that the extension does not give rise to any new or materially different environmental effects to those assessed in the Environmental Statement.

Concrete Wash Water

3.5.13 The activities that will require concrete to be used, in temporary and permanent works, include but will not be limited to:

- construction of valve chambers and pressure transducer;
- creation of new access points;
- installation of temporary works shaft bases; and
- utility protections.

3.5.14 Concrete washout from concreting operations will be managed so that no concrete runoff or wash water enters the local drainage systems or watercourses. Methods such as dry brushing of the mixer chutes, to avoid washing out on site, or the use of roadside washout systems and containers to provide designated sealed washout locations, will be provided. The specific method used will be selected based on the level of risk in the area and extent of concrete being poured. Where possible and if there is no risk to the environment or human health, wash water may be used for construction processes such as dust suppression in line with EA Low Risk Waste Position 16 (Reusing wash waters and treating cement and silt washings at construction sites: LRWP 16).

Discharge and Abstraction Locations

3.5.15 Locations of water sources for general water consumption in the use of site cabins, for general cleaning and dust suppression will likely be via mains supply or tankered delivery. Hydrostatic testing of the pipeline prior to commissioning may also use mains water supplies; hydrant licences may be applied for from the water undertaker, to provide access to local mains abstraction points close to the works site.

3.5.16 Discharge locations for dewatering activities will be identified on site, depending on the locality and requirements of the specific discharge, especially during the open cut works, and approved as appropriate.

3.5.17 As part of the pre-construction activities, there will also be negotiations with landowners to identify active private water supplies (PWS) within the Order Limits (G144). To date, no PWSs have been identified within the Order Limits, but one unlicensed PWS has been identified on the boundary of the Order Limits just north of Hawthorn Road. Should supplies be identified, discussions and agreements including protection arrangements and/or provisions of alternative water supplies will be put in place. The following measures in accordance with commitment W12 will be followed:

- In the event of a landowner or tenant complaining that installation activities have affected their PWS, an initial response would be provided within 24 hours.
- Where the installation works have affected a PWS, an alternative water supply would be provided, as appropriate.

3.5.18 In the event of a significant spill during construction, that cannot be immediately contained, managed and cleaned on site:

- all landowners/tenants would be contacted within 24 hours, within 250m of the spill, to determine if there are any PWSs that might be affected;
- an assessment of the likelihood of groundwater contamination supplying identified PWSs would be undertaken;
- where requested by the relevant landowner, monitoring of well water would be undertaken for a determined period of time, taking into account pollution travel time in groundwater, to determine whether pollution has occurred; and
- where a PWS is affected, an alternative water supply would be provided, as appropriate.

3.6 Training for Construction Staff

3.6.1 As detailed in Section 3.4 of the CEMP, all staff and operatives will undergo a site induction which will incorporate water management as a specific topic. Targeted training consisting of toolbox talks and briefings will include topics such as water management, flood risk, dewatering and silt management.

4 Specific Aspects of the Water Environment

4.1 Introduction

4.1.1 This section outlines the commitments and actions relevant to the different aspects of the water environment. The good practice commitments are outlined at the start of each section and then further information is presented about how these would be implemented. It is split into the following three aspects:

- abstractions, dewatering and discharges;
- pollution and erosion prevention measures; and
- flood risk reduction.

4.2 Abstractions, Dewatering and Discharges

4.2.1 This section of the WMP sets out any requirements for abstraction, dewatering and discharges. The project commitments relevant to abstractions, dewatering and discharges are presented in Table 4.1.

Table 4.1: Project Commitments Relevant to Abstractions, Dewatering and Discharges

Commitment Number	Commitment
O7	Where required, water stops (or “stanks”) would be installed at intervals through the pipe bedding and side fill.
G118	The detailed design for Horizontal Directional Drilling would include depth and profile and consider methods to reduce the risk of groundwater breakout during Horizontal Directional Drilling.
G128	The contractor(s) would comply with all relevant consent conditions or DCO provisions regarding dewatering and other discharge activities. This would particularly be with regard to volumes and discharge rates and would include discharges to land, waterbodies or third-party drains/sewers.
G132	The contractor(s) would ensure that the time the trench is open in the vicinity of certain features would only be as long as necessary for the installation of the pipeline. The required dewatering of the trench would be undertaken only as and when necessary to enable safe working and preparation for pipe installation.
G134	Temporary stanks would be installed within the trench prior to undertaking dewatering/draining activities, to prevent migration of water within the trench.
G135	Where localised water abstraction is required, assessments would be carried out to investigate impact. Appropriate working and suitable mitigation would be implemented.
G138	Water levels would be monitored immediately prior to and as dewatering takes place. This would be in the potentially affected abstraction or watercourse as appropriate.
G143	The quality of water generated by dewatering would be tested prior to discharge.
G144	As part of negotiations with landowners within the Order Limits which are affected by the project, active private water supplies (PWSs) would be identified with the landowner. Appropriate mitigation would be considered during construction.
G199	Specific areas in the vicinity of GWDTEs would be identified where increased frequency of stanks would be required to safeguard sensitive habitats which depend on groundwater.
W11	Dewatering would be limited in areas in the vicinity of GWDTEs where abstraction/drainage of shallow groundwater may lead to a fall in groundwater levels or adversely affect surface water quality.
W12	For private water supplies (PWSs) the following would be put in place: • In the event of a landowner or tenant complaining that installation activities have affected their PWS, an initial response would be provided within 24 hours.

Commitment Number	Commitment
	• Where the installation works have affected a PWS, an alternative water supply would be provided, as appropriate. • In the event of a significant spill during construction: ➢ all landowners/tenants would be contacted within 24 hours, within 250m of the spill, to determine if there are any PWSs that might be affected; ➢ an assessment of the likelihood of groundwater contamination supplying identified PWSs would be undertaken; ➢ where requested by the relevant landowner, monitoring of well water would be undertaken for a determined period of time, taking into account pollution travel time in groundwater, to determine whether pollution has occurred; and • where a PWS is affected, an alternative water supply would be provided, as appropriate.

4.2.2 At the present time, dewatering is anticipated:

- in areas where groundwater levels mean that the trench may contain water during excavation;
- following periods of heavy rainfall; and
- during shaft construction at trenchless crossings.

4.2.3 Dewatering may take place to surface water drain or sewer. Consent will be required from the sewerage undertaker for discharge to sewer or surface water manhole. As per G128 and G143, conditions on the quality and flow will be agreed and monitored.

4.2.4 Where dewatering activities are anticipated directly to surface water, such as ditches or watercourses, the project expects to use the EA regulatory position statement guidance with respect to temporary dewatering from excavations to surface water. The project will also apply the relevant exemptions set out in part 2 of the Water Abstraction and Impounding (Exemptions) Regulations 2017, for example small scale dewatering in the course of building and engineering works. As such, no permit requirement is anticipated for a short-term, temporary discharge of uncontaminated water which is wholly or mainly from rainwater, from an excavation to surface water, for example where rainwater has accumulated within the trench. However, the measures detailed in Section 4.2.6 and Table 4.3 to control silt will be implemented.

4.2.5 During dewatering in areas confirmed during ground investigation as not being contaminated, as a minimum visual monitoring will be undertaken for suspended solids and signs of hydrocarbons (oily sheens). Where suspended solids or visual hydrocarbon are present in the water it will be contained, and if the suspended solids or visual hydrocarbon cannot be removed, through filtration, settlement or absorbents locally on site, further permitting would be sought or it will be disposed of in accordance with the SWMP.

4.2.6 When dewatering in line with above EA guidance, commitments G12, G128, G132, G135, G138, G143 and G199 will be implemented. Dewatering methods would be determined based on the surrounding environment and amount of water needing to be discharged in line with one of the following measures:

1) Pumping to sewer with consent from the sewage undertaker.

2) Pumping to an area of open vegetated ground. Water must be uncontaminated and silt will be removed using a settlement tank, straw bales or a geotextile membrane, dewatering filter bag or similar (see Table 4.3).

3) Pumping into an existing surface water channel or ditch with consideration to the final discharge point. Water will need silt removal as per 1) above.

4) Where this cannot be achieved or the water is contaminated, it will be removed from site by vacuum tanker. This will be carried out in accordance with the SWMP.

4.2.7 Where dewatering is required for over three months either from surface water at a rate of over 20m^3 per day or from groundwater at a rate of over 100m^3 per day (reduced to 50m^3, should the dewatering be within 500m of a conservation site or within 250m of a spring, well or borehole used to supply water) then permits and consents would be applied for as necessary, following consultation with the EA, as the EA guidance cannot be applied. This may apply to some trenchless crossings, some rivers running parallel to the works and open cut areas with high groundwater levels.

4.2.8 When dewatering under a permit, all conditions on flow rates and quality will be complied with and monitored as per G128 and G143.

4.2.9 Dewatering of watercourses for the purposes of open cut crossings is not covered in this section as it is not expected to be required. Fluming or similar techniques will be used to maintain water flow during installation. Section 2.9 of the CoCP contains further details about how watercourses would be crossed during construction.

4.2.10 Commitments O7 and G134 relate to the installation of water stops (or stanks) along the route which are designed to reduce the flow of groundwater along the pipeline once it has been backfilled. Such locations could include where the trench crosses a GWDTE, in areas expected to have shallow groundwater or in the vicinity of watercourse crossing locations. Stanks will be installed where required and the spacing of them will be dictated by prevailing ground conditions and water table. This would take into account any GWDTE areas, where the frequency of stanks will be increased as per G199. Commitment G118 commits the project to incorporate groundwater control into the detailed design of Horizontal Directional Drilling, thus reducing the reliance on further measures during construction. See Section 3.5.8.

4.2.11 Commitment G199 and W11 are very specific measures designed to limit the effects of alterations in groundwater levels within GWDTEs such as in the floodplain of the River Wey and Ashley Head Spring.

4.2.12 Commitments G12, G128, G132, G135, G138, G143 and G199 are all general good practice measures to be followed during construction and will be implemented. There are certain features (as mentioned in commitment G132) that would be particularly vulnerable to changes in groundwater levels such as:

- GWDTEs;
- shallow groundwater abstractions;
- watercourses running parallel to the pipeline; and
- unconfined Chalk principal aquifers.

4.2.13 Commitments G144 and W12 relate to the safeguarding of PWSs from possible changes in groundwater during dewatering activities. In the case of mitigation being required, measures that could be implemented to meet the commitments could include the installation of temporary sheet piling or similar barriers to reduce the flow of groundwater.

4.3 Pollution and Erosion Prevention Measures

4.3.1 This section of the WMP sets out any requirements for pollution and erosion prevention. As pollution prevention and erosion control measures are often the same or very similar, the Erosion and Sediment Control Plan, described as Appendix B in the Outline CEMP submitted at application, is incorporated into this section of the WMP. The project commitments relevant to pollution and erosion prevention are presented in Table 4.2.

Table 4.2: Project Commitments Relevant to Pollution and Erosion Prevention Measures

Commitment Number	Commitment
G11	Runoff across the site would be controlled by the use of a variety of methods including header drains, buffer zones around watercourses, on-site ditches, silt traps and bunding.
G12	There would be no intentional discharge of site runoff to ditches, watercourses, drains or sewers without appropriate treatment and agreement of the appropriate authority (except in the case of emergency).
G15	Wheel washing would be provided at all logistics hubs and large compound access points on to the highway. An adequate supply of water would be made available at these locations at all times.
G16	Compound access points to the public highway would be constructed with temporary hard surfacing.
G20	Water assisted road cleaners would be deployed on public roads where necessary to prevent excessive dust or mud deposits.
G117	Wash down of vehicles and equipment would take place in designated areas within construction compounds. Wash water would be prevented from passing untreated into watercourses and groundwater. Appropriate measures would include use of sediment traps.
G119	Potentially hazardous materials used during construction would be safely and securely stored including use of secondary containment where appropriate.
G121	All refuelling, oiling and greasing of construction plant and equipment, would take place above drip trays and also away from drains as far as is reasonably practicable. Vehicles and plant would not be left unattended during refuelling. Appropriate spill kits would be made easily accessible for these activities.
G122	For open cut watercourse crossings and installation of vehicle crossing points, mitigation measures would include to: • only use a 10m working width for open cut crossings of a main or ordinary watercourse whilst still ensuring safe working; • install a pollution boom downstream of the works; • use and maintain temporary lagoons, tanks, bunds, silt fences or silt screens as required; • have spill kits and straw bales readily available at all crossing points for downstream emergency use in the event of a pollution incident; • place all static plant such as pumps in appropriately sized spill trays; • prevent refuelling of any plant or vehicle within 15m of a watercourse; • inspect all plant prior to work adjacent to watercourses for leaks of fuel or hydraulic fluids; and • reinstate the riparian vegetation and natural bed of the watercourse using the material removed when appropriate on completion of the works and compact as necessary. If

Commitment Number	Commitment
	additional material is required, appropriately sized material of similar composition would be used.
G142	Fuels, oils and chemicals would be stored responsibly, away from sensitive water receptors. They would be stored >15m from watercourses, ponds and GWDTE.
G183	Natural substrate would be provided through temporary watercourse crossings box culverts.
G186	Where appropriate, cross-fall would be installed on access and haul roads to direct runoff away from the pipeline trench. Runoff would be collected at the side of the haul road and discharged to ground if relevant or to an appropriate nearby watercourse or sewer in accordance with the provisions of the DCO.
G195	Stored flammable liquids such as diesel would be protected either by double-walled tanks or stored in a bunded area with a capacity of 110% of the maximum stored volume. Spill kits would be located nearby.

4.3.2 An Emergency Action Plan is included in CEMP Appendix A. This sets out procedures to follow should a pollution event occur. The measures set in the Emergency Action Plan will not be reiterated in the final WMP which deals with prevention.

4.3.3 During construction, each work activity method statement will set out how pollution and sediment risk would be managed, including proactive actions and measures to control pollution risks. This could be either directly from the construction works or due to external factors such as extreme weather. Measures will include appropriate storage and handling of fuels and other substances hazardous to the environment in accordance with commitment G8.

4.3.4 Construction method statements will take into account the requirements of the EA and LLFAs as per the protective provisions of the DCO. Works will consider the advice set out in the following guidance documents:

- Former guidance for Pollution Prevention, various publication dates (accessed via http://www.netregs.gov.uk);
- C532 Control of Water Pollution from Construction Sites (Construction Industry Research and Information Association (CIRIA), 2001); and
- C650 Environmental Good Practice on Site (CIRIA, 2005).

4.3.5 While mobilising works areas, various measures such as those described in commitments G11 and G122 will be implemented to manage site surface water, divert clean surface water away from the work site and to prevent silt pollution and erosion of exposed soils. Examples of these types of measures are summarised in Table 4.3 and will be selected for use as necessary dependent on the local conditions, such as level of risk from flooding, weather conditions and surrounding topography.

Table 4.3: Surface Water Control and Silt and Erosion Management Measures

Clean Water Diversion, Silt and Erosion Prevention Measures	Purpose
Cut-off or interception drains	Collection channels constructed to divert runoff water from entering disturbed surfaces. Generally constructed above cuts or fills and in natural, undisturbed ground on the up-side slope of the working area in steep areas.

Clean Water Diversion, Silt and Erosion Prevention Measures	Purpose
Temporary site drains	Control and collection of runoff water from site into temporary drainage channel using the various silt control measures listed below to maintain the water free of silt.
Culverts/flume pipes – cross track drainage	Structures made from pipes (concrete or steel) designed to maintain continuous flow of clean water through the worksite during construction.
Diversion berms	Used to divert clean water runoff to a well-vegetated area by constructing a small berm of compacted earth from material excavated from a shallow trench located on the upslope. Berms are constructed at set intervals from the top of the slope down and with enough fall to allow the water to slowly flow outside of the berm to a well vegetated area.
Protection of exposed soils	To reduce the risk of silt being mobilised by erosion caused during rainfall events. Stockpiles should be compacted and graded to reduce rainwater infiltration. If they are in a sensitive area, e.g. near a watercourse, consideration should be given to covering over, e.g. with tarp or geotextile, to prevent erosion.
Check dams and sumps	Installed within drainage ditches and cut-off trenches to slow down the flow of water, preventing erosion and allowing silt to settle out. Check dams can be made from a variety of materials, including silt fences, stone, straw bales, sandbags, soil or clay. Sumps behind the dam allow for emptying of silt.
Small settlement area/ attenuation ponds	A small swale or depression within the site ditch to intercept and retain silty water before it leaves site, to give it a chance to settle out and to protect sensitive sites and watercourses below the site from silt pollution. These may be provided on the line of cut-off trenches or form part of temporary site drainage, to control flow and silt.
Filter dams	Installed to slow down the flow of water and provide some filtration within drainage ditches. Involves provision of gravel within the channel/ditch lined with geotextile. The geotextile can also be 'lipped' at intervals along the length of the stone, to provide an additional barrier and filtration system for the water flowing through the gravel.
Silt fencing	A geotextile barrier installed on stakes and buried into the ground to provide a barrier to protect sensitive receptors such as adjacent watercourses. The fence captures and slows the flow of silty water, allowing the fence to filter out the silt particles.
Buffer strips	Retained areas of vegetation between the work site and sensitive receptors, to allow natural drainage and protection. These will be demarcated on site.
Silt bags and filters	For water to be pumped into, during dewatering operations, to provide filtration of silt particles. They can also be used to accept a gravity feed from a settlement lagoon or drainage pipe.
Settlement tanks	Use of purpose-made tanks such as Siltbuster, that allow silt-laden water to be pumped through at controlled rates, to allow settlement and discharge of clear water downstream.
Flocculants and coagulants	A chemical solution for very fine silt particles that will not settle out by gravity alone. Their use will require agreement with the EA.

4.3.6 A construction methodology for watercourses has been produced and is presented within Section 2.9 of the CoCP. This outlines how works will be undertaken at watercourse crossings where open cut methods are proposed. It also sets out how

works will be managed to reduce the risk of erosion and sediment mobilisation and how watercourses, in general, would be reinstated.

4.3.7 Commitments G11, G12 and G186 will be implemented to control water flow and discharge across all construction areas. The methods used to control flows, scour and erosion will be decided by the contractor, to be the most appropriate for the location, with reference to any relevant licence conditions. Many of these measures will be installed during the initial set up of the construction area, such as the header drains. However, additional measures may also be used during construction for example at times of heavy rainfall. Commitment G186 is important to prevent runoff entering the pipeline trench. Without this commitment, water and associated sediment could potentially flow unimpeded for large distances. Table 4.3 provides further description of the measures that can be used to manage water flow across the construction site.

4.3.8 Commitment G122 affords particular protection to watercourses during open cut crossings. During open cut crossing, there is potential for runoff from the main construction strip, riverbanks and the trench itself, and pollutants from on-site activities to enter the watercourse. The measures outlined within commitment G122 aim to capture runoff and pollutants to prevent their entry into the watercourse. In addition, measures are presented to mitigate a spill event such as the positioning of spill kits, booms and other containment devices downstream of the crossing.

4.3.9 Works at watercourses will be checked prior to commencement by the ECoW for presence of invasive species. If identified they will be removed in line with the relevant guidance and under supervision of the ECoW. Equipment will be cleaned prior to works starting and before removal from site to prevent transfer of invasive species between sites.

4.3.10 As part of good site practices, vehicles will be maintained and inspected on a regular basis to prevent and identify any leaks, and refuelling undertaken at designated locations. This will limit any drips and spills from vehicles throughout the project.

4.3.11 Commitments G15, G16, G20 and G117 are all measures to reduce the effects of vehicles transporting mud and dust from the construction areas and compounds to where it could enter watercourses. Designated vehicle washing areas will be designed to prevent the release of sediment and other pollutants. Static wheel washers are likely to be used at the larger compounds, but in areas with more limited space, pressure washers could be used, dependent on the ground conditions and whether there is potential to transport mud or dust onto the road. Hard surfacing will be used at compound access points onto the public highway, to prevent muddy areas developing in areas of heavy construction traffic, and road cleaners used to reduce the build-up of mud on nearby roads.

4.3.12 Further measures are set out within the Soil Management Plan and the Dust Management Plan to avoid the creation of airborne dust or runoff from stockpiles to reduce the risk of silt and soil entering watercourses:

- Soil Management Plan: Outlines the methods for managing earthworks and exposed areas or soil stockpiles to prevent windborne dust, which could end up in watercourses. For example, covering, seeding or using water suppression and considering weather conditions when programming the work.

- Dust Management Plan: Outlines methods for wheel washing and road cleaning to reduce the risk of dust.

4.3.13 Commitments G119, G121, G142 and G195 all relate to the safe storage and use of potentially hazardous materials and chemicals such as fuel, oils and lubricants. Drip trays and containment measures will be used extensively across the project to capture potential leakages. Storage of flammable liquids will be within double-walled tanks or surrounded by a containment area of 110% capacity which would capture any spillage/leakage in the event of a breach of containment. Where applicable, all storage will comply with the Control of Pollution (Oil Storage) (England) Regulations 2001. Operations such as refuelling will be located away from potentially sensitive features.

4.4 Flood Risk Reduction

4.4.1 This section of the WMP sets out requirements for flood risk management. The project commitments relevant to flood risk are presented in Table 4.4.

Table 4.4: Project Commitments Relevant to Flood Risk

Commitment Number	Commitment
G11	Runoff across the site would be controlled by the use of a variety of methods including header drains, buffer zones around watercourses, on-site ditches, silt traps and bunding.
G12	There would be no intentional discharge of site runoff to ditches, watercourses, drains or sewers without appropriate treatment and agreement of the appropriate authority (except in the case of emergency).
G123	All works within or adjacent to watercourses would be carried out in accordance with the requirements of permits and licences agreed with either the Environment Agency or relevant Lead Local Flood Authority or in accordance with the provisions of the DCO.
G124	All construction activities within Flood Zone 3 would be undertaken in a manner that reduces any significant increase in flood risk. This may include providing suitable breaks within spoil piles.
G125	With the exception of the Thames floodplain, all construction compounds and logistics hubs would be located outside of Flood Zone 3.
G126	Where new or additional surfacing is required on any access tracks and compound areas, these would be permeable surfaces where ground conditions allow.
G127	The contractor(s) would subscribe to the Environment Agency's Floodline service which provides advance warning of potential local flooding events and subscribe to the Met Office's Weather Warnings email alerts system and any other relevant flood warning information. The contractor(s) would implement a suitable flood risk action plan which would include appropriate evacuation procedures should a flood occur or be forecast.
G130	The CEMP would follow the principles set out in the Outline CEMP and would set out the water mitigation and management measures and where they would need to be used. These measures would include, but not be restricted to, the following: • details of when dewatering would be likely; • measures to segregate construction site runoff from natural catchment runoff; • details of measures to attenuate runoff rates before discharging at controlled rates to receiving watercourses; • design of any holding or settlement lagoons or other treatment system required prior to discharge to the environment; • details of mitigation measures for all work or compound areas located within flood risk areas;

Commitment Number	Commitment
	• where construction activities would be located, preferably outside of the floodplain; and • details of any water abstraction and discharge points relating to the works.
G182	Headwalls to temporary circular culverts would be constructed to the appropriate standard.
G184	Stockpiles would not be located within 10m of any main rivers or ordinary watercourse crossings.
G185	Temporary haul and access road construction material within Flood Zone 3 and areas of High and Medium RoFSW would be removed at the end of the construction phase and the ground surface would be reinstated to pre-project levels.
G186	Where appropriate, cross-fall would be installed on access and haul roads to direct runoff away from the pipeline trench. Runoff would be collected at the side of the haul road and discharged to ground if relevant or to an appropriate nearby watercourse or sewer in accordance with the provisions of the DCO.
G198	The project would incorporate appropriate surface water drainage measures into its final design for the haul roads and access tracks so that they do not lead to a significant increase in flood risk.
W1	The extent of Flood Zone 3 and areas of RoFSW would be identified and marked where appropriate.
W2	Screening and fencing within logistics hubs and construction compounds would be designed to reduce the impedance of flood water. This would be subject to any commitments regarding great crested newts.
W4	Afflux at temporary main rivers and ordinary watercourse crossings would be maintained at less than 100mm.
W5	Topsoil and subsoil would be stockpiled for as short a duration as practicable within Flood Zone 3 and areas of High and Medium RoFSW.
W6	Stockpiles in Flood Zone 3 or areas of High or Medium RoFSW would not exceed 10m between breaks. Breaks in between stockpiles would be at least 1m. Breaks would be located opposite each other on either side of the excavation where practicable.
W19	There would be no land raising undertaken in locations identified as Flood Zone 3.

4.4.2 An Emergency Action Plan is included in the CEMP as Appendix A. This sets out procedures and methods to be implemented in the case of unplanned events such as an extreme flood event and is not duplicated in the WMP. As part of this, the project will subscribe to flood and weather warnings as outlined in commitment G127. Weather reports will also feature in the prestart brief for each worksite on a daily basis.

4.4.3 This section of the WMP sets out the measures that would be taken to reduce flood risk across the project. It also outlines how the commitments would be implemented during construction and the measures that will be taken at specific sites at risk of flooding such as avoiding storage of equipment and materials within the floodplain. Sites with a Risk of Flooding from Surface Water in East Hampshire District include those adjacent to watercourse crossings, adjacent to Meon Valley Railway and Hawthorn Road and Ryebridge Lane. All compounds within East Hampshire District have been located to avoid Flood Zone 3.

4.4.4 Many of the commitments within this section have been developed during discussions held with the EA and the LLFAs. As stated within commitment G123, the project will work in compliance with permits and licences issued by those bodies.

4.4.5 Commitment G39 states that a buffer zone should be maintained along watercourses which would allow for unimpeded rises in water levels during high water events. Commitments specific to flood risk also seek to use good design to reduce the creation of runoff. Commitment G126 states that permeable surfaces should be used for new surfacing on site so that water permeates into the ground, if it is not already saturated, rather than running off into watercourses. At open cut watercourse crossings, commitment W4 seeks to limit the difference in height between water levels above and below the open cut section to less than 100mm to limit the rate of flow downstream of the works. Commitment G182 controls the design of header walls to limit the build-up of water upstream of culverts during high water events.

4.4.6 Commitments G184, W5, W6 and W7 are specifically targeted at controlling the locations of stockpiles across the site but particularly near watercourses, within Flood Zone 3 and areas of high or medium RoFSW. These measures are proposed to reduce the risk that stockpiles inhibit the flow of flood waters or reduce flood storage capacity. To this end, heights of stockpiles and breaks in between are specified.

4.4.7 Activities within Flood Zone 3 and areas of high and medium RoFSW are controlled by commitments G124, G125, G185, W1 and W19. This is to locate activities and storage outside those areas with a greater annual probability of river flooding.

4.4.8 Positioning and specification of screening and fencing across the project would be such that flood waters would not be impeded in line with commitment W2.

5 Site Checks and Reporting

5.1 Site Checks

5.1.1 The contractor(s) will be responsible for record keeping and site checks during the construction period. Site checks and inspections will be undertaken regularly throughout the construction period as set out below, to monitor compliance with the requirements of the WMP. This will be in addition to the regular environmental inspections undertaken as identified in Table 3.2 of the CEMP.

5.1.2 Table 5.1 sets out the site checks that would be undertaken during construction.

Table 5.1: Site Checks

Action	Responsibility	Frequency
Visual inspections to monitor storage of materials and soils	Works Supervisor	Once a month and after heavy rainfall
Monitoring weather conditions and flood alerts (when work site is within flood zone)	Works Supervisor	Daily
Review conditional and effectiveness of silt mitigating measures	Works Supervisor	Weekly. Daily during wet weather
Visual watercourse inspections	Works Supervisor	Daily (when working within 10m of watercourse)

5.2 Complaints Procedure

5.2.1 The name and contact details for the project will be displayed at the entrance to all compounds. This will include an emergency telephone number (G27). In addition, details of the works including contact details will be provided to each community ahead of the work commencing. This will be as set out in the Community Engagement Plan.

5.2.2 Any complaints regarding environmental issues will be discussed with the construction manager and the environmental manager, and appropriate action will be taken, and the conclusion recorded. A record will be made of the incident for audit purposes.

ANNEX 1 – Main River Crossing Points East Hampshire

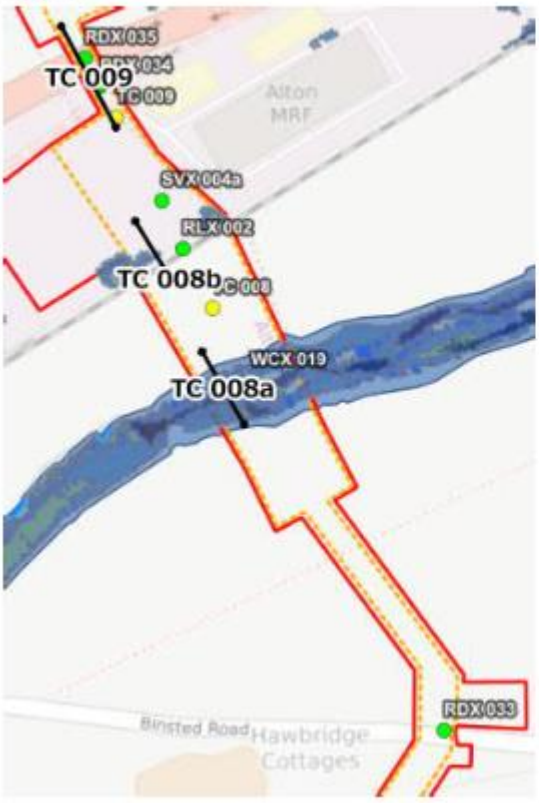
WCX 012 – Caker Stream: Chawton

RoSWF

Flood Zone 3

WCX 019 – River Wey: Alton Pumping Station

RoSWF



Flood Zone 3