

Cambridge Waste Water Treatment Plant Relocation Project  
Anglian Water Services Limited

# Environmental Statement

## Appendix 2.3:

# Outline Decommissioning Plan

Application Document Reference: 5.4.2.3  
PINS Project Reference: WW010003  
APFP Regulation No. 5(2)a

## Document Control

<b>Document title</b>	Outline Decommissioning Plan
<b>Version No.</b>	04
<b>Date Approved</b>	17.04.23
<b>Date 1<sup>st</sup> Issued</b>	30.01.23

## Version History

<b>Version</b>	<b>Date</b>	<b>Author</b>	<b>Description of change</b>
01	30.01.23	-	DCO Submission
02	17.04.23	-	Updated to reflect section 51 advice
03	13.07.23	-	Header and introduction updated
04	22.01.24	-	Added refence to cleaning and sludge removal to paragraph 6.21.2.

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# 1 Introduction

## 1.1 Anglian Water Services Limited

- 1.1.1 Anglian Water Services Limited (the 'Applicant') is the largest regulated water and water recycling company in England and Wales by geographic area, supplying water and water recycling services to almost seven million people in the East of England and Hartlepool.
- 1.1.2 The Applicant is committed to bringing environmental and social prosperity to the region they serve, through their commitment to Love Every Drop. As a purpose-led business, The Applicant seeks to contribute to the environmental and social wellbeing of the communities within which they operate. As one of the largest energy users in the East of England, they are also committed to reaching net zero carbon emissions by 2030.

## 1.2 Introduction to the relocation project

- 1.2.1 Anglian Water's Cambridge Waste Water Treatment Plant Relocation project (CWWTPRP) ("the Proposed Development") is funded by Homes England, the Government's housing accelerator which seeks to improve neighbourhoods and grow communities by releasing land for development.
- 1.2.2 The Proposed Development involves the relocation of the existing Cambridge Waste Water Treatment Plant (WWTP) currently operating at Cowley Road, Cambridge, to a new site between Horningsea, Fen Ditton and Stow cum Quy, adjacent to the A14 in Cambridgeshire.
- 1.2.3 The relocation would make the site of the existing WWTP available to form part of the development of a new low-carbon city district, known as North East Cambridge. The site at Cowley Road, is Cambridge's last major brownfield site, and the wider North East Cambridge district proposals envisage creating around 8,350 homes and 15,000 jobs over the next 20 years.
- 1.2.4 North East Cambridge is a highly sustainable location for housing. In addition to the Homes England funding, the area has benefitted from Transport Infrastructure Fund (TIF) funding for Park & Ride, the completion of Cambridge Guided Bus public transport infrastructure, the delivery of the Cambridge North rail station and the Chisholm Trail.
- 1.2.5 North East Cambridge is one of three key strategic sites which will form "*central building blocks of any future strategy for development*" in the proposed Greater Cambridge Local Plan being jointly prepared by Cambridge City Council and South Cambridgeshire District Council that will be subject to public consultation in Autumn 2023. The North East Cambridge Area Action Plan (AAP), currently in "Proposed Submission" form, will be the planning policy framework which ultimately guides the development of North East Cambridge city district.
- 1.2.6 The importance of the Proposed Development, both regionally and nationally, was recognised by the Secretary of State for Environment, Food and Rural Affairs (DEFRA)

in January 2021, who directed that the Proposed Development is nationally significant and is to be treated as a development for which a Development Consent Order (DCO) is required (see Appendix 1-3 of the Planning Statement, App Doc Ref 7.5).

- 1.2.7 The policy context of the Proposed Development is described in more detail in the Planning Statement (Application Document Reference 7.5)

### 1.3 The relocation site

- 1.3.1 The relocation site was selected following comprehensive study and public consultation. The site selection process and consideration of alternatives is described in more detail in Chapter 3: Alternatives of the Environmental Statement (App Doc Ref 5.2.3).
- 1.3.2 The current environmental conditions at the existing Cambridge WWTP site and at the relocation site are described in Chapter 2: Project Description of the Environmental Statement (App Doc Ref 5.2.2). The site is located to the north-east of Cambridge and 2km to the east of the existing Cambridge WWTP, as shown on the Works Plans (App Doc Ref 4.3.1). It is situated on arable farmland immediately north of the A14 and east of the B1047 Horningsea Road in the green belt between the villages of Horningsea to the north, Stow cum Quy to the east and Fen Ditton to the south west. Two overhead lines of pylons cross the northern and eastern edges of the main development site and come together with a third line at the north eastern corner of the site. The topography is fairly flat with an approximately 4m fall across the site south west to north east.

### 1.4 Purpose of the Proposed Development

- 1.4.1 The Proposed Development for which the DCO is being sought will deliver all the functions of the existing Cambridge WWTP at Cowley Road, treating all waste water from the Cambridge catchment and wet sludge from the wider region.
- 1.4.2 In addition, it will have an increased capacity, being intended to treat the waste water from the Waterbeach catchment and anticipated housing growth in the combined Cambridge and Waterbeach catchment area.
- 1.4.3 The infrastructure provided as part of the main works will have a design life to at least 2090, and the supporting infrastructure (i.e. the transfer tunnel, pipelines and outfall) will have a designed capacity sufficient to meet population growth projections plus an allowance for climate change into the 2080s. Furthermore, there is capability for expansion in space that has been provided within the earth bank and by modification, enhancement and optimisation of the design to accommodate anticipated flows into the early 2100s.

### 1.5 Outline description of the Proposed Development

- 1.5.1 The DCO application is seeking approval for the following main elements of the Proposed Development:

- an integrated waste water and sludge treatment plant.
- a shaft to intercept waste water at the existing Cambridge WWTP on Cowley Road and a tunnel/ pipeline to transfer it to the proposed WWTP and terminal pumping station. Temporary intermediate shafts to launch and recover the micro-tunnel boring machine.
- a gravity pipeline transferring treated waste water from the proposed WWTP to a discharge point on the River Cam and a pipeline for storm water overflows.
- a twin pipeline transferring waste water from Waterbeach to the existing Cambridge WWTP, with the option of a connection direct in to the proposed WWTP when the existing works is decommissioned.
- on-site buildings, including - a Gateway Building with incorporated Discovery Centre, substation building, workshop, vehicle parking including electrical vehicle charging points, fencing and lighting.
- environmental mitigation and enhancements including substantial biodiversity net gain, improved habitats for wildlife, extensive landscaping, a landscaped earth bank enclosing the proposed WWTP, climate resilient drainage system and improved recreational access and connectivity.
- renewable energy generation via anaerobic digestion which is part of the sludge treatment process that produces biogas designed to be able to feed directly into the local gas network to heat homes, or as an alternative potential future option burnt in combined heat and power engines.
- renewable energy generation via solar photovoltaic and associated battery energy storage system.
- other ancillary development such as internal site access, utilities, including gas, electricity and communications and connection to the site drainage system.
- a new vehicle access from Horningsea Road including for Heavy Goods Vehicles (HGV's) bringing sludge onto the site for treatment and other site traffic.
- Temporary construction works including compounds, temporary highway controls, accesses and signage, fencing and gates, security and safety measures, lighting, welfare facilities, communication control and telemetry infrastructure.
- Decommissioning works to the existing Cambridge WWTP to cease its existing operational function and to facilitate the surrender of its operational permits including removal of pumps, isolation of plant, electrical connections and pipework, filling and capping of pipework, cleaning of tanks, pipes, screens and other structures, plant and machinery, works to decommission the potable water supply and works to restrict access to walkways, plant and machinery.

- 1.5.2 Additional elements, together with more information on the above features are provided in Chapter 2: Project Description of the Environmental Statement (App Doc Ref 5.2.2). Principles of Good Design have been used to inform the development of the project, which has been guided by the National Infrastructure Commission's Design Principles, advice from the Design Council and review by the Cambridgeshire Quality Panel, as described in the Design and Access Statement (App Doc Ref 7.6).
- 1.5.3 Construction activities, likely to take 3-4 years, will include the creation of a shaft to intercept waste water at the existing Cambridge WWTP and temporary intermediate shafts between the existing Cambridge WWTP and the proposed WWTP to launch and recover a micro-tunnel boring machine. The sequence and location of construction activities are also detailed in Chapter 2: Project Description of the Environmental Statement (App Doc Ref 5.2.2).
- 1.5.4 Towards the end of the construction period, commissioning of the Proposed Development will commence, lasting for between 6 months and 1 year.
- 1.5.5 The Proposed Development will also involve the decommissioning of the existing Cambridge WWTP at Cowley Road. This is secured by the Development Consent Order and the Outline Decommissioning Plan (Appendix 2.3, App Doc Ref 5.4.2.3) and involves activities necessary to take the existing plant out of operational use and to surrender its current operational permits.
- 1.5.6 Following decommissioning, the site of the existing plant will be made available in accordance with agreements already in place with Homes England and with the master developer appointed to deliver the redevelopment of North East Cambridge
- 1.5.7 Consent is not sought under the Development Consent Order for the subsequent demolition or redevelopment of the Cowley Road site, which, as described in Chapter 2: Project Description of the Environmental Statement (App Doc Ref 5.2.2) will be consented under a separate and future planning permission, by master developers, U+I and TOWN, appointed under the agreements described above.
- 1.5.8 The relationship between the Proposed Development, the scope of the proposed DCO and the future demolition and redevelopment of the site at Cowley Road is set out in figure 1.1, below.



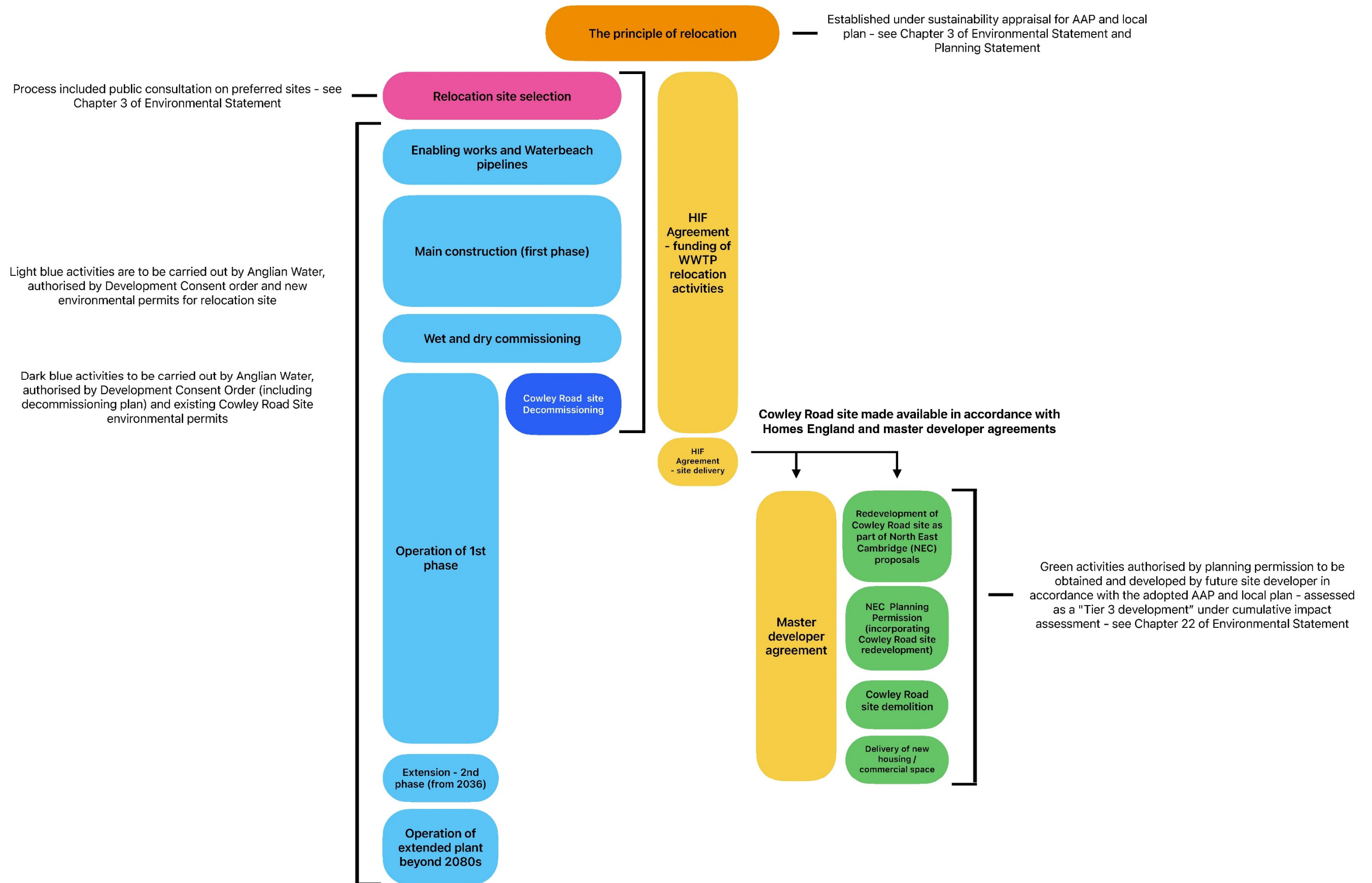


Figure 1.1: Scope of the draft DCO and the future demolition and redevelopment of the site at Cowley Road

## 1.6 Environmental mitigation

- 1.6.1 Through the environmental impact assessment process and community and technical stakeholder engagement the Proposed Development has incorporated comprehensive environmental mitigation, secured through the Development Consent Order.
- 1.6.2 This mitigation includes a Landscape, Ecological and Recreational Management Plan ("LERMP", Appendix 8.14, App Doc Ref 5.4.8.14) has been developed to complement regional and local initiatives, including the Wicken Fen Vision and the Cambridge Nature Network. The 22-hectare footprint of the plant is encircled by a landscaped and planted earth bank situated within the broader LERMP area of around 70-hectares.

## 1.7 Additional project benefits

- 1.7.1 In addition to enabling housing growth and future economic development of the Greater Cambridge area the project will also give rise to a number of additional benefits including:
- significantly reduced carbon emissions compared to the existing Cambridge WWTP, being operationally net zero and energy neutral, contributing to Anglian Water's ambition of being operationally net zero as a business by 2030.
  - greater resilience and improved storm management, meaning storm overflows and Combined Sewer Overflows (CSOs) are far less likely to occur. This means that, as Greater Cambridge continues to grow, the facility will be able to treat a greater volume of storm flows to a higher standard than would be the case at today's facility.
  - The proposed WWTP is being designed to reduce concentration in final treated effluent discharges of phosphorus, ammonia, total suspended solids and biological oxygen demand (BOD), compared to the existing Cambridge WWTP. This means that when the new facility starts to operate, water quality in the River Cam will improve.

## 2 Decommissioning Strategy

- 2.1.1 This Outline Decommissioning Plan supports the suite of management plans prepared to support the DCO application for the Proposed Development. The Plan provides an outline of how plant at the existing Cambridge WWTP will be decommissioned as part of the process to surrender the existing Cambridge WWTP's Environmental Permit. A more detailed plan would be developed as a DCO requirement and to ensure the activities meet the requirements of the Environment Agency to surrender the permit. As biological and other key processes establish at the proposed WWTP, Final Effluent discharge flows will reduce at the existing Cambridge WWTP. The Final Effluent flows from both sites will be quantity, quality and time constrained. Sludge and Cake imports will be accepted and processed at the existing Cambridge WWTP and in a similar manner to the biological treatment imports will transfer across to the proposed WWTP. Associated permits will be enabled or surrendered at appropriate stages during the above process in line with EA Guidance.
- 2.1.2 The Outline Decommissioning Strategy will be developed into a final detailed plan following the submission of the DCO application. This will then form the core for decommissioning of the works followed by a report to the Environment Agency detailing the work carried out was in accordance with the decommissioning plan. Ground, air and water surveys have already been carried out and at this stage of the program it is envisaged and extremely likely that additional ground, air and water sampling will be required during and after decommissioning so far as is reasonably practicable to demonstrate the land is in a similar state to which the Applicant took ownership in approximately 1904.
- 2.1.3 The Outline Decommissioning Strategy secures the commitments made by the environmental impact assessment work. The final plan will set out the standards, management measures, procedures and best practices required.
- 2.1.4 Once decommissioning is completed a report will be provided to the Environment Agency showing compliance with the Decommissioning Plan and Environment Agency requirements.

## 3 Decommissioning Strategy Objectives

3.1.1 The overall objectives of this Outline Decommissioning Strategy are to:

- make safe the existing Cambridge WWTP once the proposed new Cambridge WWTP is complete and to surrender any licenses associated with the works under the Environment Agency's RGN 9: Surrender Guidance;
- where possible, minimise disruption to the continued safe and efficient operation of the new and existing Cambridge WWTP and local ecological environments;
- where possible, reduce inconvenience to local communities and stakeholders; and
- where possible, provide an environmental solution to all material and equipment importation and handling that satisfies the Applicant's social responsibility policies.

## 4 Cambridge WWTP Treatment Process

- 4.1.1 The existing Cambridge WWTP currently provides capacity for a Population Equivalent (PE) of approximately 215,000. The treatment process stages consist of an inlet Pumping Station (PS), fine screens, grit removal, Primary Settlement Tanks (PST's), and then secondary treatment split into two streams C and D. Both stream C and Stream D comprise aeration lanes followed by Final Settlement Tanks (FST's). Post FTS effluent is discharged in the River Cam via a Final Effluent (FE) pipe. The FE outfall is in the east corner of the site adjacent to a rail line and electrical substation.
- 4.1.2 Historically Streams A and B provided secondary treatment, each comprising Trickling Filter Beds (TFs) Humus Settlement Tanks (HSTs) with a tertiary sand filter serving both streams. Process plant associated with Streams A and B is currently redundant.
- 4.1.3 Most of the treatment pipework is buried except for the effluent feed pipe to the Stream D being constructed, commissioned and placed into operation in 2015.
- 4.1.4 Other buried pipework includes the Storm Tank (ST) feed and return, storm overflow, Stream C gravity feed to the aeration lanes, Stream C Surplus Activated Sludge (SAS) line and Stream effluent line from the FST's to the FE outfall.
- 4.1.5 The site also has an FE Washwater ring main fed by the Washwater PS associated with treatment Stream C and D feed from the FST's. The Washwater system consists of a number of hydrant points and Washwater services around the site e.g., screens and Sludge Treatment Centre (STC).
- 4.1.6 A potable main fed by Cambridge Water services a number of facilities including the Innovations centre, STC and D Works Poly make up plant for sludge thickening.

## 5 Scope of the Outline Decommissioning Strategy

- 5.1.1 The existing Cambridge WWTP will require decommissioning as the proposed WWTP becomes operational and effluent flows are transferred there to establish process treatment. An aerial view is shown in Figure 5.1 below.
- 5.1.2 The decommissioning at the existing Cambridge WWTP will occur in planned stages as process treatment capability develops at the proposed WWTP. This is to maintain compliant final effluent discharges at both treatment plants and compliant sludge products at the existing Cambridge WWTP under Hazard Analysis and Critical Control Points (HACCP) until such time process treatment at the existing Cambridge WWTP is no longer required and will be taken offline.
- 5.1.3 There is opportunity to begin decommissioning items of process and mechanical and electrical plant that is currently redundant or superseded by the new 'C-Works' at the existing Cambridge WWTP. A Works and B Works are currently off line and out of service, thus providing the opportunity to commence decommissioning of these areas ahead of the remaining operational Works C and D.
- 5.1.4 Decommissioning will generally involve hydraulic isolation of flows, removal of residual treatment matter including primary/secondary/tertiary effluents, sludges, rags, mixed liquors, boiler fuel, treatment chemicals including polyelectrolytes, iron salts, electrical and mechanical isolation of plant including but not limited to Motor Control Centres, pumps, actuated valves, buildings and building services on site. Activated Sludge will be taken from the 'C-Works' to wet commission the Membrane Aerated Biofilm Reactor plant at the proposed WWTP. Removal and disposal of residual process items, matter, solids, liquids etc will in a responsible manner. Items of plant that may be reused will be considered for redeployment as necessary.
- 5.1.5 An inventory has been compiled listing viable plant items that may be 'harvested' for reuse or redeployment by AW including telemetry outstations, programmable logic controllers and human machine interface panels, pumps, blowers and liquid flowmeters – see Appendix A in Section 7 of this report.
- 5.1.6 Prior to any decommissioning starting, the Environment Agency shall be informed that decommissioning will commence and provided a copy of the Decommissioning Plan.
- 5.1.7 Decommissioning of plant with potentially explosive atmospheres due to the potential presence of biogas (e.g. digesters), so decommissioning work will be carried out by specialist contractors managed under the Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) following appropriately reviewed and approved safety guidelines and methods.
- 5.1.8 At an appropriate stage during the commissioning of the proposed WWTP and decommissioning of the existing Cambridge WWTP, the Sludge Treatment License will be surrendered under the Environment Agency's RGN 9: Surrender Guidance. In line with this License and Legislation, monitoring of the existing plant will be needed for Hazard Analysis and Critical Control Point (HACCP) and under the Environment

Agency's RGN 9: Surrender Guidance for inclusion within the Site Condition Report to be produced in a timely manner upon completion of Decommissioning. Reference shall be made to the Environment Agency's H5 Guidance for Applicants: Site condition report – guidance and templates.

- 5.1.9 Drawings detailing underground pipes and plant are available.
- 5.1.10 Equipment taken out of use is decontaminated by flushing, washing or similar with Final Effluent.
- 5.1.11 Soil testing has been undertaken to understand the degree of any pollution caused by site activities and information on what remediation is needed to return the site to a satisfactory state as defined by the initial site report.
- 5.1.12 Appendix B details the scope of ground contamination investigation for the existing Cambridge WWTP.
- 5.1.13 An asbestos survey has been completed.
- 5.1.14 Decommissioning will be undertaken in accordance with the Code of Construction Practice Parts A and B (Appendix 2.1 & 2.2, App Doc Refs 5.4.2.1 and 5.4.2.2) to manage risks to the environment. Where required, during the detailed design stage specific measures may be developed in the Decommissioning Plan; for example, task specific Risk Assessments or Impact Plans will be put in place for decommissioning activities which may cause risk to pollution.



Source: Anglian Water

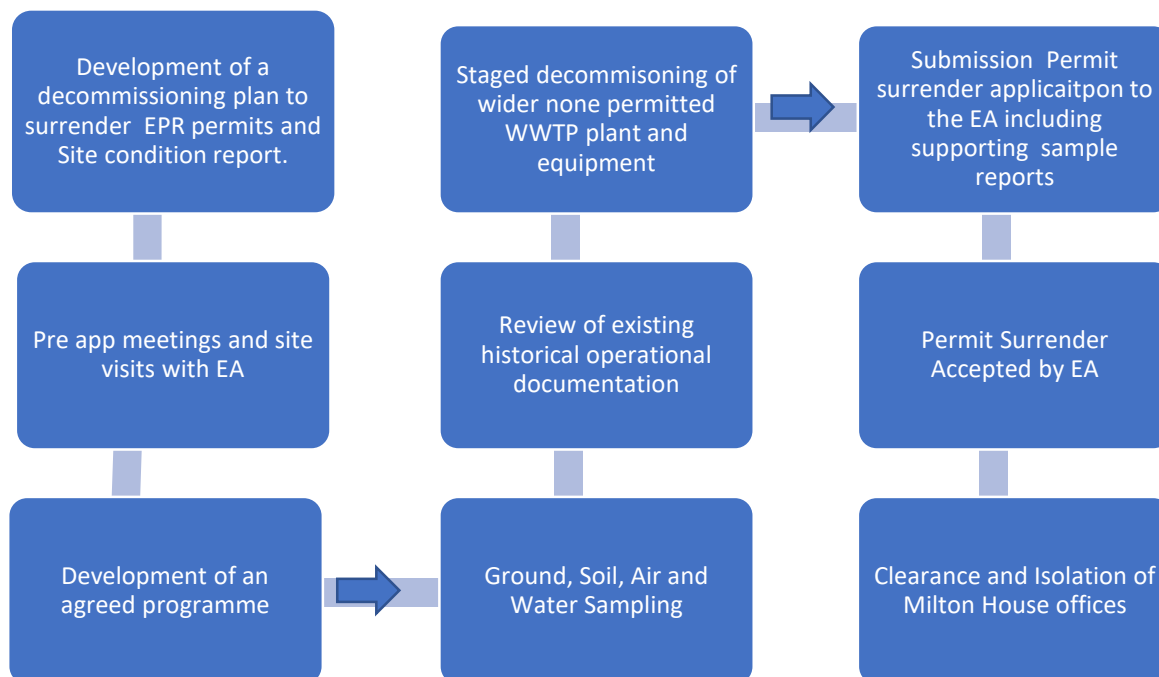
**Figure 5.1 Aerial photograph of the existing Cambridge WWTP**

- 5.1.15 There are several licenses associated with the works which will be surrendered under the Environment Agency's RGN 9: Surrender Guidance:

- Sludge Treatment Centre (STC) Interim Industrial Effluent Discharge;
- The biological treatment works itself or existing Cambridge WWTP - Industrial Effluent Discharge; and

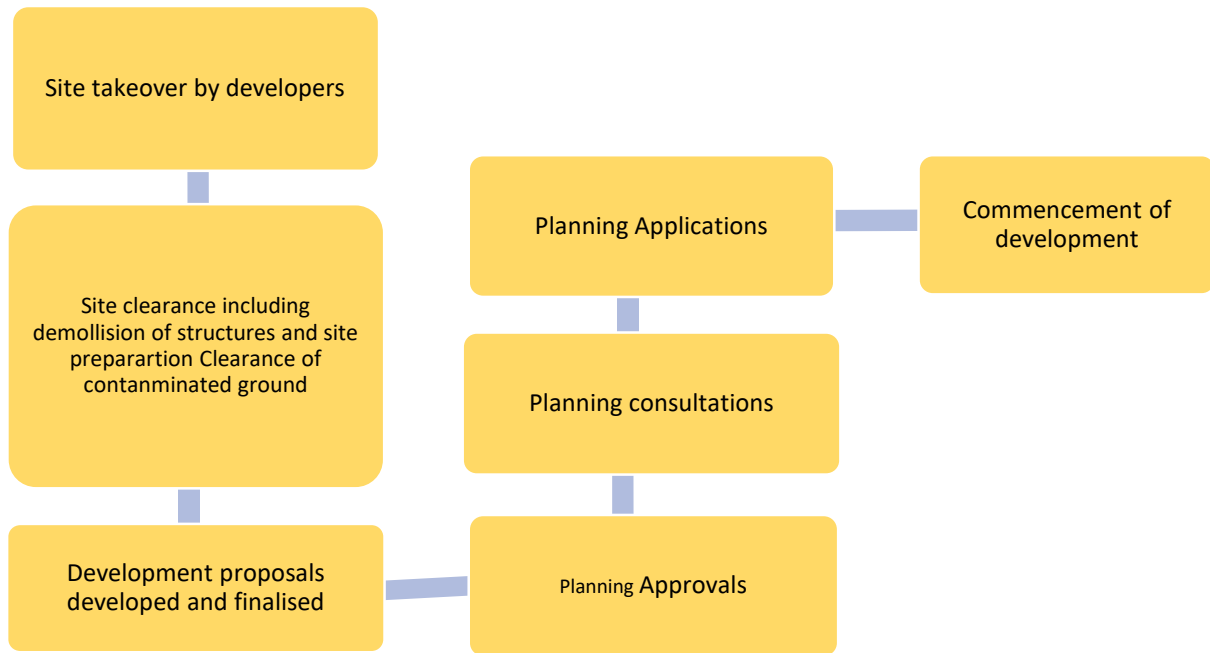
- Monsal/Combined Heat and Power (CHP) Plant Medium Combustion Permit (MCP)

5.1.16 There will be an overlap of decommissioning activities at the existing Cambridge WWTP and both biological and other key process commissioning at the proposed WWTP as the two are linked. As biological and other key processes establish at the proposed WWTP, FE discharge flows will reduce at the existing Cambridge WWTP. The FE flows from both sites will be quantity, quality and time constrained in line with Environment Agency indications. Sludge and Cake imports will be accepted and processed at the existing Cambridge WWTP and, in a similar manner to the biological treatment, sludge imports will transfer across to the Proposed Development Sludge Treatment Centre and Combined Heat and Pasteurisation Plant. Associated permits will be enabled or surrendered at appropriate stages during the above in line with the Environment Agency’s Regulatory Guidance Note (RGN) 9: Surrender Guidance. Set out below in Figure 5.1 a) is an outline of the process that would be followed by the Applicant to surrender the Environmental Permitting Regulations (EPR) permits that currently relate to the Cambridge WWTP. The process would begin on notification from the Applicant to the Environment Agency and would take an estimated 6- 12 months to conclude. The Applicant would not begin the process until the commissioning of the CWWTP was complete. The Key Stakeholders or this process are, Anglian Water Services, The Environment Agency, Specialist Contractors, Cambridge Water and UKPN. Figure 5.1 below sets out the process that will be followed by the developer after this point for future planning approvals for development, including infrastructure demolition and site preparation. Key Stakeholders for this process include, Developers, Cambridge City Council and South Cambridgeshire District Council.



**Figure 5.1 a) outline of the process that would be followed by the Applicant to surrender the Environmental Permitting Regulations (EPR) permits**





**Figure 5.2 b) outline of the process that would be followed by the developer for future planning approvals for development, including infrastructure demolition and site preparation.**

## 6 Plant to be Decommissioned

### 6.1 Introduction

6.1.1 This section outlines the approach to and scope of activities for each key part of the existing Cambridge WWTP.

### 6.2 Existing redundant plant

6.2.1 No action is required for the existing redundant and previously decommissioned Filter Beds.

6.2.2 Though no action required to decommission the existing redundant Humus Tanks, these tanks would need to have rainwater and potentially residue sewage products removed then cleaned. Holes would be punched in to the tanks to avoid future build-up of rainwater.

### 6.3 Terminal Pumping Station (TPS)

6.3.1 Contents – Raw sewage including trade effluents.

6.3.2 Scope - remove pumps, electrically isolate with cables cut and labelled to prevent use and isolate incoming flows (Pipe stopper and concrete infill inlet pipe approx. 16m depth). Washdown wells, chambers, flush pipes all with FE and residual sludge to be removed. Access to walkways and ladders/stairs to be prevented. Hole to be punched into base to prevent rainwater collection. No additional dust, no additional odour or emissions.

6.3.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (2 x tankers); and
- Durations of works estimated 2 weeks.

### 6.4 Inlet Screen Structure (incl Detritor)

6.4.1 Contents – Sewage and sewage products, rags, grit.

6.4.2 Scope - clean screens and structure with FE, clean screens and structure, electrically isolate with cables cut and labelled to prevent use. Existing pipes to be flushed and capped. Washwater to be isolated. Detritor grit to be removed off site and tank cleaned, mechanical and electrical items isolated and electric cables cut and labelled to prevent use. Access to walkways and ladders/stairs to be prevented. No additional dust, no additional odour or emissions.

6.4.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (2 x tankers);
- Durations of works estimated 2 weeks.

## 6.5 Washwater system

6.5.1 Two Washwater systems on the old works.

6.5.2 Scope - two Washwater systems on the old works; pipelines already flushed by nature of the effluent in the mains. Stream C has a storage tank that needs to be drained, washed and desludged and then mechanically and electrically isolated with cables cut and labelled to prevent use. Hole to be punched into base to prevent rainwater collection. No additional dust, no additional odour or emissions.

6.5.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (2 x tankers); and
- Durations of works estimated 2 weeks.

## 6.6 General site utilities

6.6.1 UKPN to decommission all incoming power to the old works. The Applicant to decommission the high voltage (HV) network across site. The HV system onsite will have all cables disconnected, cut and pot ended to ensure no reconnection is possible. No additional dust, no additional odour or emissions.

6.6.2 Labour, Vehicle Movement & Duration:

- 2 x HV Engineers – 2 x medium vans; and
- Durations of works estimated 3 weeks.

6.6.3 Cambridge Water to decommission the potable water supply.

## 6.7 Primary Settlement Tanks

6.7.1 Contents – Settled sewage and sewage products.

6.7.2 Scope – drain down, desludge and clean tanks. Then mechanically and electrically isolated with cables cut and labelled to prevent use. Access to walkways and ladders/stairs to be prevented. Hole to be punched into base to prevent rainwater collection. No additional odour or emissions.

6.7.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (8 x tankers); and
- Durations of works estimated 2 weeks.

## 6.8 Stream D forward feed pumping station including interconnecting pipework

6.8.1 Contents – secondary effluent and sewage products.

6.8.2 Scope – remove pumps, electrically isolated with cables cut and labelled to prevent use. Washdown tank, flush pipes and residual sludge to be removed. Access to walkways and ladders/stairs to be prevented. Hole to be punched into base to prevent rainwater collection. No additional odour or emissions. During commissioning of the new works. The flows from D-Stream, will be over pumped from the existing works to shaft 3, then flow to the new works for testing and commissioning.

6.8.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (2 x tankers); and
- Durations of works estimated 2 weeks.

## 6.9 Stream C Distribution Chamber

6.9.1 Contents – Secondary effluent.

6.9.2 Scope – Tank to be drained, de-sludged and cleaned with pipework flushed. Access to walkways and ladders/stairs to be prevented. Hole to be punched into base to prevent rainwater collection. No additional odour or emissions. The flows from C-Stream, will be over pumped from the existing works to shaft 3, then flow to the new works for testing and commissioning.

6.9.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (2 x tankers); and
- Durations of works estimated 2 weeks.

## 6.10 Stream C Blowers

6.10.1 The rotating plant elements have been identified for potential reuse by the Applicant.

## 6.11 Activated Sludge Process (ASP) Structures (2 Number)

6.11.1 Contents – Secondary Effluent and sewage product.

6.11.2 Scope – Tanks to be drained, desludged and cleaned including flush pipes. Electrically isolated with cables cut and labelled to prevent use. Hole to be punched into base to prevent rainwater collection. Access to walkways and ladders/stairs to be prevented. No additional dust, no additional odour, or emissions.

6.11.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 3 x Operatives for tanker jetting & cleaning (8 x tankers); and
- Durations of works estimated 4 weeks.

## 6.12 Final Settlement Tanks

6.12.1 Contents – Tertiary effluent.

6.12.2 Scope – Drain down, desludge and clean tanks. Then mechanically and electrically isolated with cables cut and labelled to prevent use. Hole to be punched into base to prevent rainwater collection. Access to walkways and ladders/stairs to be prevented. No additional dust, no additional odour or emissions.

6.12.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 3 x Operatives for tanker jetting & cleaning (6 x tankers); and
- Durations of works estimated 2 weeks.

## 6.13 FE Outfall Pipework

6.13.1 Contents – Final effluent.

6.13.2 Scope – Needs to be isolated, drained and sealed off to at both ends (site and river end) to prevent river flows coming back into the redundant old works. There is an existing stop log system which maybe utilised. 2 x Mechanical. No additional odour or emissions.

#### 6.13.3 Labour, Vehicle Movement & Duration:

- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck; and
- Durations of works estimated 1 weeks.

### 6.14 Surplus Activated Sludge (SAS)/Primary Thickening Building/SAS Storage Tank/Liquor returns pumping station

6.14.1 Contents – Various incl but not limited to Liquid and cake sludges, Poly, Centrate, thickened sludges.

6.14.2 Scope – To be drained, desludged and cleaned with pipework flushed. Electrically isolated with cables cut and labelled to prevent use. Access to walkways and ladders/stairs to be prevented. No additional dust, no additional odour or emissions.

#### 6.14.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (1 x tankers); and
- Durations of works estimated 1 weeks.

### 6.15 CHP/Digester/Gas Plant/Centrifuge/Compost Plant/Monsal Plant

6.15.1 The detailed plan for these works will be subject to agreement with the Environment Agency and will incorporate relevant elements of the Applicant's internal Policies for Wastewater Treatment ("POSWASTES") which includes requirements in respect of biosolids.

6.15.2 Scope – DSEAR Regulations must apply to decommissioning all plant. Decommissioning activities to include draining tanks, flushing and purging (removal potentially explosive and odorous gases) pipes. Mechanical and electrical (M&E) items isolated and electric cables cut and labelled to prevent use. Access to walkways and ladders/stairs to be prevented. No additional dust, no additional odour or emissions.

#### 6.15.3 Outline Procedure to Decommission the STC, Monsal, Digestion and CHP area:

- A full survey will be required nearer the time to check viability and confirm interim measures required including but not limited to:

1. Programmable logic control Control Software mods
  2. hardwired or other interlink mods
  3. 'possible out of spec' operation e.g. with failed plant, known anomalies or temporary operational modifications
- To allow and support the STC taken offline followed sequentially by the Monsal Plant effectively finishing with a final batch of compliant sludge products within approx. 2 weeks of cessation of live product feed.
  - Following successful commissioning and operation of the new Sludge/CHP areas at the proposed WWTP will trigger the decommissioning of the existing Cambridge WWTP in line with the above;
  - Purging systems likely to contain explosive/hazardous gases with Nitrogen will be undertaken by specialist contractors;
  - There is a potential need for temporary odour control equipment/scrubbers to mitigate possible odour emissions.

#### 6.15.4 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 3 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (3 x tankers); and
- Durations of works estimated 2 weeks.

## 6.16 Sludge Import Area

### 6.16.1 Contents – sludges.

6.16.2 Scope – Empty and clean chamber, flush pipework clean. No additional dust, no additional odour or emissions.

### 6.16.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 3 x Operatives for tanker jetting & cleaning (6 x tankers); and
- Durations of works estimated 3 weeks.

## 6.17 Sludge Blending Tanks & Drum Thickeners

### 6.17.1 Contents – Thin and Thick sludges.

6.17.2 Scope – Empty and clean tank, flush pipework clean. Mechanical and electrical items isolated, and electric cables cut and labelled to prevent use. Access to walkways and ladders/stairs to be prevented. No additional dust, no additional odour or emissions.

#### 6.17.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (3 x tankers); and
- Durations of works estimated 2 weeks.

### 6.18 Redundant Sand Filter

6.18.1 Contents – Sand, sludge, tertiary effluent and rainwater.

6.18.2 Scope – Remove effluent and solids, clean chamber. Mechanical and electrical items isolated, and electric cables cut and labelled to prevent use. Hole to be punched into base to prevent rainwater collection. Access to walkways and ladders/stairs to be prevented. No additional odour or emissions.

#### 6.18.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (6 x tankers); and
- Durations of works estimated 2 weeks.

### 6.19 Storm Tanks and Storm Lagoon

6.19.1 Contents – storm water if in.

6.19.2 Scope – Use washdown area, remove sludge, flush pipes, cap off pipe at ground level. Hole to be punched into base to prevent rainwater collection. No additional dust, no additional odour or emissions.

#### 6.19.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (2 x tankers); and
- Durations of works estimated 2 weeks.

### 6.20 Iron Salt Dosing

6.20.1 Chemical to be removed by certificated carrier.

6.20.2 Contents – up to 60m<sup>3</sup> Iron Salts depending on usage.



6.20.3 Scope – Iron salts to be removed by certificated carrier and re distributed at appropriate Anglian Water P Removal Water Recycling Centre. Chemical Bund, Pumps and all chemical pipework to be flushed with Chemical Bund, Pumps and all chemical pipework to be flushed and cleaned. Mechanical and electrical items isolated and electric cables cut and labelled to prevent use. Access to walkways and ladders/stairs to be prevented. No additional dust, no additional odour or emissions. The self-contained iron salt dosing units are by Gee and Co and can be reused elsewhere, this option will be explored at the time of availability.

6.20.4 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck;
- 2 x Operatives for tanker jetting & cleaning (1 x tankers); and
- Durations of works estimated 1 weeks.

## 6.21 Innovation centre

6.21.1 Contents – various effluents and sewage products including sludges.

6.21.2 Scope – Mechanical and electrical items isolated and electric cables severed cut and labelled to prevent use. Access to walkways and ladders/stairs to be prevented. Hole to be punched into base to prevent rainwater collection and potentially residue sewage products removed then cleaned. No additional dust, no additional odour or emissions.

6.21.3 Labour, Vehicle Movement & Duration:

- 2 x Electricians – 2 x medium vans;
- 2 x Mechanical Engineers / Fitters – 1 x medium van & 1 x transit truck; and
- Durations of works estimated 2 weeks.

6.21.4 Existing redundant plant items and areas can be decommissioned as a separately ahead of decommissioning currently active process plant. Areas requiring cleaning down as part of the decommissioning process e.g., washdown and removal of process products e.g., sludges, grit etc. can be scheduled to take place concurrently to maximise efficiencies.

## 6.22 Milton House

6.22.1 This section covers Milton House, an existing Anglian Water Operational Office and Building.

This building in line with other aspects of the existing Cambridge WWTP will be isolated hydraulically and electrically. Office spaces cleared of equipment and potentially business and security sensitive information.



## 7 Appendix A: Redundant Plant at Cambridge WWTP for Possible Re-use

- 7.1.1 This section covers Milton House, an existing Anglian Water Operational Office and Building. This building in line with other aspects of the existing Cambridge WWTP will be isolated hydraulically and electrically. When use of the building ends, office spaces would be cleared of equipment and any business and security sensitive information securely destroyed or moved to / archived in another secure facility by the Applicant.

**Table 7-1: Sand Filter Works**

Item No	Plant Item Description	Plant Item Location	Condition	Availability	Possible Reuse/Business Area	Refurb Required y/n
1	34 No Rotork Actuators Type AG 315F10 415V 3Ph	Sand Filter Plant	Cosmetic ok, operation unchecked	Now - plant not in use, not energised	WR1 various, M&E2 to recover	N
2	2 No Aerzen Blowers Ref GM60S Blower 850 mBarG (1989)	Sand Filter Plant	Cosmetic ok, operation unchecked	Now - plant not in use, not energised	WR various, M&E to recover	Y
3	1 No Aerzen Blower Motor Ref 90Kw 415 3ph (1989)	Sand Filter Plant	Cosmetic ok, operation unchecked	Now - plant not in use, not energised	WR various, M&E to recover	N
4	50m Approx. 300mm OD St. St. Pipe	Sand Filter Plant	As New	Now - plant not in use, not energised	WR various, M&E to recover	N
5	2 No Acoustic Enclosures for Aerzen Blowers above	Sand Filter Plant	Cosmetically 'aged' but functional	Now - plant not in use, not energised	WR various, M&E to recover	N
6	2 No Xylem S/F Feed Pumps Ref	Sand Filter Plant	unchecked in wet well - allow for refurb	Now - plant not in use, not energised	WR various, M&E to recover	Y
7	Approx. 10,000m3 of large grade (base) clinker filter media	A Works TF beds	good	Now - plant not in use, not energised	WR various	N
8	Approx. 25,000m3 of 'fine' grade (upper) clinker filter media	A Works TF beds	good	Now - plant not in use, not energised	WR various	N

1 WR = Water Recycling

2 M&E = Mechanical & Electrical

Item No	Plant Item Description	Plant Item Location	Condition	Availability	Possible Reuse/Business Area	Refurb Required y/n
9	Rail - approx. 200m of Bullhead Code 50?	A Works TF beds distribution system	good	Now - plant not in use, not energised	WR various? Scrap?	N

**'A-Works'**

7.1.2 No possible reuse of assets. Plant decommissioned.

**Table 7-2: 'B-Works'**

Item No	Plant Item Description	Plant Item Location	Condition	Availability	Possible Reuse/Business Area	Refurb Required y/n
1	3 No TF'S GRANITE media	TF's B Works	poor	now	TF's	N
2	3 No Scraper Motors - TBC no access	B Works	poor	now	replace similar motor	Y - Likely
3	2 No Gee and Co Iron Salt Dosing plants c/w Chemitrollers 2 x 15m3 tanks housed within a single bunded unit	B Works	Good	1 now, 2nd post 2026	P Site	Y - Pumps and tanks Likely

**Table 7-3: 'C-Works'**

Item No	Plant Item Description	Plant Item Location	Condition	Availability	Possible Reuse/Business Area	Refurb Required y/n
1	5 No Atlas Copco Blowers Ref ZS110 I and Motors 105Kw 415V 3Ph	ASP	Good approx. 6 years old	2026 as CRWRC comes online	Other ASP/NSF	Y
2	2 No Alfa Laval Belt Thickeners Ref tbc	Sludge Thickener Building	Good approx. 4 years old	2026 as CRWRC comes online	Sludge/ Cake	N
3	2 No Poly Make Up Plants Std Design Siemens	Sludge Thickener Building	Good approx. 4 years old	2026 as CRWRC comes online	Sludge/ Cake	Y
4	C Works MCC ABB Panel View Plus 1500	Sludge Thickener Building	Good approx. 4 years old	2026 as CRWRC comes online	Sludge/ Cake	N
5	1 No FIT Siemens (head details TBC)	Sludge Thickener Building	Good approx. 4 years old	2026 as CRWRC comes online	Sludge/ Cake	N
6	5 No Nivvus FIT OCM Pro CF	Sludge Thickener Building	Good approx. 4 years old	2026 as CRWRC comes online	Sludge/ Cake	N
7	3 No ABB Watermaster Head Units	Sludge Thickener Building	Good approx. 4 years old	2026 as CRWRC comes online	Sludge/ Cake	N
8	8 No Rotork ACQ	Sludge Thickener Area	Poor - life expired	2026 as CRWRC comes online	Sludge/ Cake	Y
9	8 No SAS Xylem Pumps Dry Well Subs REF 3202.180 c/w 616 Imp and 22Kw 415V 3Ph Motors	ASP	Good approx. 6 years old	2026 as CRWRC comes online	Other ASP/NSF	N

Item No	Plant Item Description	Plant Item Location	Condition	Availability	Possible Reuse/Business Area	Refurb Required y/n
10	8 No RAS Xylem Pumps Dry Well Subs REF 3202.180 c/w 616 Imp and 22Kw 415V 3Ph Motors	ASP	Good approx. 6 years old	2026 as CRWRC comes online	Other ASP/NSF	N
11	UPS Sentryman 10KVA	Sludge Thickener Building	Good approx. 4 years old	2026 as CRWRC comes online	Replace Existing or new scheme	N
12	4 No FST Scraper Bridges complete approx. 30m Diameter	FST area	Average - age unknown	2026 as CRWRC comes online	Replace Existing or new scheme	Likely
13	2 No Donkin Blowers Ref 1803	Sludge Thickener Building	old almost life expired -	2026 as CRWRC comes online	Replace Existing	Y – likely not cost effective due to age
14	2 No ABB Panel View 700	Sludge Thickener Building	Good approx. 6 years old	2026 as CRWRC comes online	Replace existing or new scheme	N
15	1 No ABB Panel View 1500	Sludge Thickener Building	Good approx. 6 years old	2026 as CRWRC comes online	Replace existing or new scheme	N

**Table 7-4: 'D-Works'**

Item No	Plant Item Description	Plant Item Location	Condition	Availability	Possible Reuse/Business Area	Refurb Required y/n
1	4 out of 6 DWF Xylem DWF Pumps Ref 3306/715 c/w 475mm Imp and Motor 100Kw 415V 3 Ph	Inlet Works Wet Well	Aged	from 2026	Similar Application WR	Pump - Y Motor - Unlikely
2	3 out of 4 Storm Pumps Xylem Ref 3531/916 c/w 720mm Imp and Motor 0916.000 360Kw 415V 3Ph	Inlet Works Wet Well	Aged	from 2026	Similar Application WR	Pump - Y Motor - Unlikely
3	1 No ABB Panel View 550	Inlet Works MCC Room	Aged	from 2026	Similar Application WR	N
4	2 No Huber St. St. Washpactors Ref Duo plus LCP's	Inlet Works Screenings Area	Good	from 2026	Similar Application WR	Y
5	2 No Grit Classifiers/Grit Pump EIMCo Ref 0300	Inlet Works Area	dd. 2007	from 2026	Similar Application WR	Y



Item No	Plant Item Description	Plant Item Location	Condition	Availability	Possible Reuse/Business Area	Refurb Required y/n
6	2 No MAHR Inlet Works Screens, Bar Type 4mm Ref CAM032614.3.3 to suit channel approx. 1.2m wide and approx. 4m Deep	Inlet Works Area	good	from 2026	Similar Application WR	Y
7	1 No ABB Panel View 600	Inlet Works Area	good	from 2026	Similar Application WR	Y

**Table 7-5: Inlet Works Area**

Item No	Plant Item Description	Plant Item Location	Condition	Availability	Possible Reuse/Business Area	Refurb Required y/n
1	3 No CHP Engines - ref tbc no access	CHP Plant Area	Good	from 2026	CHP site	Y
2	2 No Centrifuges ref tbc no access	CHP Plant Area	Good	from 2026	CHP site	Y
3	Various MMIM and MM4 O/S	Throughout site	Good	from 2026	Throughout AW	N
4	Various Pulsar Ultra 3's, 5's and dB 6/10/15 Heads	Throughout site	Good	from 2027	Throughout AW	N
5	Scrap copper cable - miles!?	Throughout site	Good	from 2027	Throughout AW	N
6	Scrap metal, pumps, drives, shafts etc	Throughout site	Good	redundant plant now then operational plant from 2027 onwards	Throughout AW	N

## Appendix B: Existing Cambridge WWTP Ground Contamination Investigation

### 7.2 Introduction

- 7.2.1 The below surveys will be carried out in all areas of the existing Cambridge WWTP. Areas will include Streams A, B, C & D. Another key area will be around the sewage treatment centre.
- 7.2.2 The Applicant will proceed with the ground contamination investigation in a staged process, with Streams A & B being carried out early in the construction phase. The remaining streams and the STC area will be completed at a later stage and would potentially commence in the summer of 2027.
- 7.2.3 All these activities comply with the Applicant's normal operational procedures to decommission the plant without creating any likely significant effects on nearby sensitive receptors.

### 7.3 The existing Cambridge WWTP

- 7.3.1 The existing Cambridge WWTP is a brownfield site which has been used previously for commercial or industrial activities. If contamination is likely to be encountered the Principal Contractor and the Environmental Management Plan should define the methods of dealing with it. These are typically Risk Assessments, Method Statements and Impact Plans.
- 7.3.2 Land contamination may have many impacts on a project including health and safety issues; pollution of land, surface and ground water.
- 7.3.3 Contamination can be caused or spread by various means, for example:
- Windblown contaminated dust such as that from stockpiles and transport movements
  - Stockpiling contaminated material
  - Spillages, for example of oil or chemicals
  - Contaminated dewatering effluent discharged to ground or watercourses

### 7.4 Signs of Ground Contamination

- 7.4.1 Contamination may be uncovered during operations, especially on sites with an industrial history.
- 7.4.2 Site personnel should observe for signs of contamination during boring, excavation etc.

7.4.3 Smells can indicate contamination with the release of noxious fumes, e.g. petrol, oils, solvents and chemical residues.

7.4.4 Observe for:

- Discoloured soil (for example chemical residues) and / or fibrous texture to the soil (for example asbestos)
- Unusual odours
- Presence of foreign objects (for example chemical, oil or unmarked containers)
- Evidence of previous soil workings, underground structures and tanks
- Existence of waste pits
- Made ground (such as artificial ground where level is raised by man's activities)
- Topsoil adjacent to motorways can be contaminated by traffic emissions
- Old pipes potentially containing asbestos

### **Desk Survey**

7.4.5 A desk survey for each area will be completed.

7.4.6 It is the responsibility of the Local Authority to maintain a contaminated land register of all known contaminated sites within their own district.

7.4.7 The Environment Agency also keep records of former landfill sites and locations of historic pollution events.

7.4.8 The enabling study for each area, will identify any known contamination within the site which will be used to help identify an appropriate sampling strategy.

7.4.9 In addition to the enabling risk assessment, looking at old maps, aerial photography and in the case of Anglian Water Operational sites, speaking to the site manager may bring to light useful information to help identify suitable locations to undertake sampling.

7.4.10 GIS data is available with previous Ground Investigations (GI).

### **Receptors**

1. Humans
2. Controlled Waters (Surface waters and groundwater).
3. Existing and potential ecosystems (Plant and wildlife living in the site or close by).
4. Property (Building structures and services)

### **Source (Contaminant)**

1. Source (Oil, concrete washout and solvents).

2. Pathway (Groundwater, sewers and permeable land).
3. Receptor (Aquifer, animals and humans).

### **Establishment of Risks Associated**

1. History of the site
2. Previous processes, including their location, raw materials, products, waste residues, and methods of disposal.
3. Layout of the site, above and below ground
4. Presence of waste disposal tips, made ground, abandoned pits and quarries with or without standing water
5. Information on geology and hydrology
6. Potential uses of sites, past or present, in the area adjacent to the site

### **Sample and Test Plan**

- 7.4.11 After completion of the desk survey and visual survey, the requirement for sampling and complete a sampling and test plan will be confirmed.
- 7.4.12 We will liaise with Environment Agency with regards to the sampling and test plan and ensure it is available for audit on site at the request of the Agency.
- 7.4.13 Results of the laboratory analysis results will be provided in a PDF and Excel format and will show the results of the testing undertaken. We will ensure that any interpretation from the laboratory will be clear and concise enough to stand up to audit from the Environment Agency.
- 7.4.14 During sample collection additional 'suspicions' layers identified will also be sampled. Records showing locations will be kept.

### **Testing of Sample**

- 7.4.15 As a minimum, all soil samples will be tested for:
- Heavy metals (As, Ba, Cd, Cu, Mo, Pb, Hg, Ni, Sb, Se, Zn)
  - Chromium III & VI
  - pH
  - Phenol index
  - Asbestos screen (+ identification and quantification if found)
  - TPH CWG & Chromatographs
  - Confirm: has TPH arisen from diesel or petrol?
  - BTEX

- Speciated 16 PAHs (US EPA)
- All results corrected to dry weight terms
- Moisture content correction type (i.e. wet or dry correction) and value specified

## References

Environment Agency (2013) *Regulatory Guidance Note (RGN) 9: Surrender Guidance*

Environment Agency (2013) H5 Guidance for Applicants: Site condition report – guidance and templates.

## Get in touch

You can contact us by:



Emailing at [info@cwwtpr.com](mailto:info@cwwtpr.com)



Calling our Freephone information line on **0808 196 1661**



Writing to us at **Freepost: CWWTPR**

You can view all our DCO application documents and updates on the application on The Planning Inspectorate website:

<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/cambridge-waste-water-treatment-plant-relocation/>