SRN17 Direct Procurement for Customers and Alternative Delivery Model

Technical Annex

2nd October 2023
Version 1

from Southern Water

Contents

Table of Figures

Table of Tables

1. Glossary

Term	Explanation
AAD	Advanced Anaerobic Digestion
ADBA	Anaerobic Digestion & Bioresources Association
ALM	Andover Link Main
AMI	Advanced metering infrastructure
AMP	Asset Management Period
AMR	Automated Meter Readings
ARD	Allowed Revenue Direction
BAS	Biosolids Assurance Scheme
CAP	Competitively Appointed Provider
CAPA	Competitively Appointed Provider Agreement
Capex	Capital Expenditure
CHP	Combined Heat and Power
Comms	Communications network
CSL	Customer-Side Leakage
CSO	Combined Sewer Overflow
DB	Design-Build
DBF	Design-Build-Finance
DBFOM	Design-Build-Finance-Operate-Maintain
DPC	Direct Procurement for Customers
DWI	Drinking Water Inspectorate
DWMP	Drainage and Wastewater Management Plan
EA	Environmental Agency
EIA	Environmental Impact Assessment
EPA	Environmental Performance Assessment
FOM	Finance-Operate-Maintain
FRfW	Farming Rules for Water
HA	Hampshire Andover
HSE	Hampshire Southampton East
HSW	Hampshire Southampton West
HW	Hampshire Winchester
HWTWRP	Hampshire Water Transfer and Water Recycling Project
IT	Information Technology
ITT	Invitation to Tender
LA	Local Authority
Ml/d	Mega Litre per Day
N/A	Not Applicable or not available
O&M	Operations and Maintenance
ODI	Outcome Delivery Incentives
OFTO	Offshore Transmission Owners
Opex	Operational Expenditure
PC	Performance Commitments
PCC	Per Capita Consumption

Term	Explanation
PCD	Price Control Deliverable
PE	Population Equivalent
PFI	Private Finance Initiative
PIN	Prior Information Notice
PPP	Public Private Partnership
PR	Price Review
PWLB	Public Works Loan Board
RFI	Request For Information
RISD	Regulatory / Required In-Service Date
SESRO	South East Strategic Reservoir Option
SIPR	Specified Infrastructure Projects Regulations
SLM	Southampton Link Main
SPV	Special Purpose Vehicle
SuDs	Sustainable Drainage Systems
SW	Southern Water
T2ST	Thames Water to Southern Water Transfer
TDS	Tonnes Dried Solids
Totex	Total Expenditure
TRS	Tender Revenue Stream
UK	United Kingdom
UKIB	United Kingdom Infrastructure Bank
VfM	Value for Money
WFD	Water Framework Directive
WfLH	Water for Life Hampshire
WINEP	Water Industry National Environment Programme
WRMP	Water Resources Management Plan
WRP	Water Recycling Plant
WRSE	Water Resources South East
WSR	Water Service Reservoir
WSW	Water Supply Works
WwTW	Wastewater Treatment Works

2. Technical Annex: Alternative Delivery

2.1. Introduction

Our capital programme for PR24 is significantly larger than it was in previous AMPs. The size of the programme is the result of a range of drivers, including growth, resilience and asset health, climate change, increasing stakeholder expectations of the sector and other evolving regulatory requirements.

Despite the substantially increased size of our programme, we remain committed to deliver for our customers including as per our Water Resources Management Plan (WRMP), our Drainage and Wastewater Management Plan (DWMP) and the environmental improvements set out in the Water Industry National Environment Programme (WINEP). These programmes are sizeable and present significant deliverability challenges were we to deliver them inhouse.

We have identified a number of necessary enhancement projects which could be better delivered by third parties. Using Ofwat's guidelines, we have identified four DPC projects in our current programme, in addition to our projects HWTWRP as well as T2ST and SESRO. Of the four projects, we are considering that two may be bundled into a single DPC project.

Additionally, and due to the size of our plan, we have identified a further six projects which cannot be classed as DPC projects. Given the size and separability from the current operation, these projects could feasibly be delivered via a third-party provider, benefitting from cost efficiencies and innovation in our delivery programme. For these projects we want to propose a new form of alternative delivery model – which we are calling 'DPC-lite'.

As described by Ofwat, delivery via a third party provider procured through a competitive tender process has the potential to provide value for money for customers. The potential benefits include:

- Supporting us in the delivery of key projects and commitments;
- Alleviating pressure on our internal resources which are faced with an unprecedented delivery challenge in AMP8;
- Managing and transfer risk effectively through commercial mechanisms where it offers Value for Money;
- Incentivising timely delivery of major projects and programmes;
- Accelerating innovation in project delivery;
- Unlocking of economies of scale across the sector; and
- Providing value for money for customers.

The sections that follow provide:

- An explanation of DPC and our proposed DPC-lite voluntary alternative delivery model, and the methodology used to assess the suitability of projects within the capital programme for progression under an alternative route;
- A summary of the projects identified and considered, the delivery routes proposed, and a summary rationale; and
- An explanation of how we plan to make the organisational changes and adapt to a different type of delivery route.

Most of the projects identified are at an early stage of development. The recommendations set out in this document are based on early assumptions about the projects' scope and technical characteristics of the

schemes which remain subject to further development. We will continue monitoring and revisiting the suitability of the proposed delivery routes as the projects progress and engage with Ofwat in a timely manner.

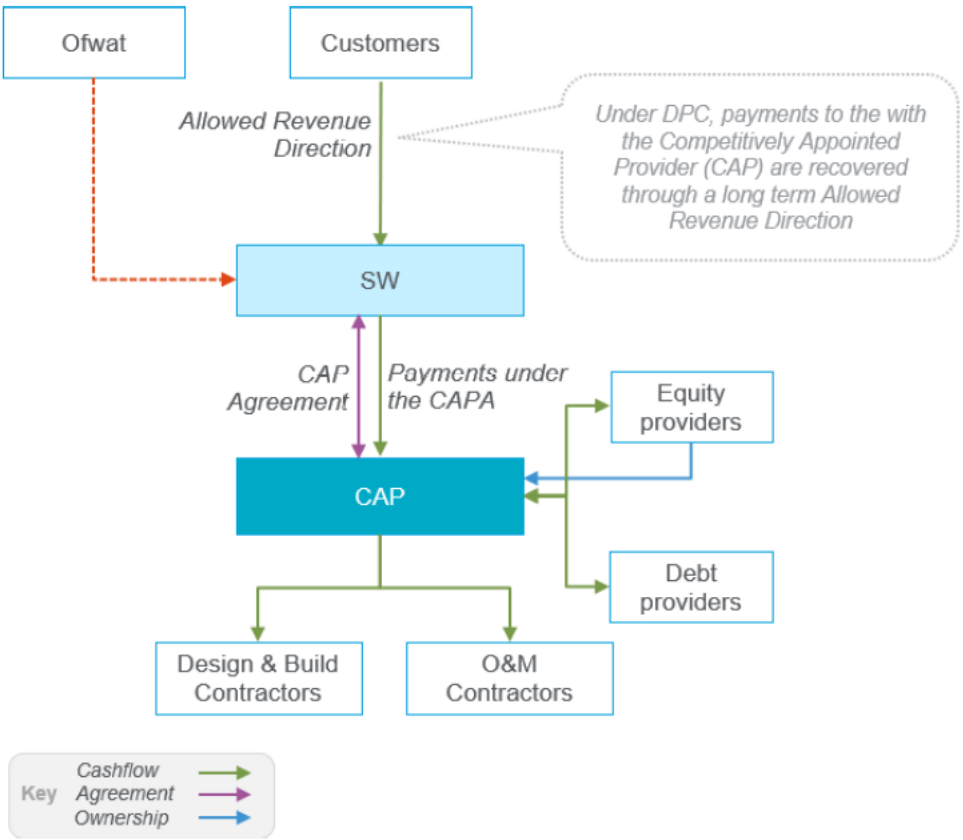
In section 0 we include summaries of all of our identified projects, their proposed delivery routes and key financial information. A further table contains a guide to the relevant projects, including identifying botex and enhancement costs contained in the data tables, with references to where the information can be found.

2.2. Alternative Delivery routes – Direct Procurement for Customers

Ofwat's DPC model sets out how water or wastewater companies competitively tender for services in relation to the delivery of certain large infrastructure projects, resulting in a third-party competitively appointed provider (CAP) being appointed. Ofwat expects this route to achieve significant benefits for customers, both through innovation and lower whole life costs of the project.

Figure 1 illustrates the basic structure and the key roles and relationships are explained below.

Figure 1 – DPC structure

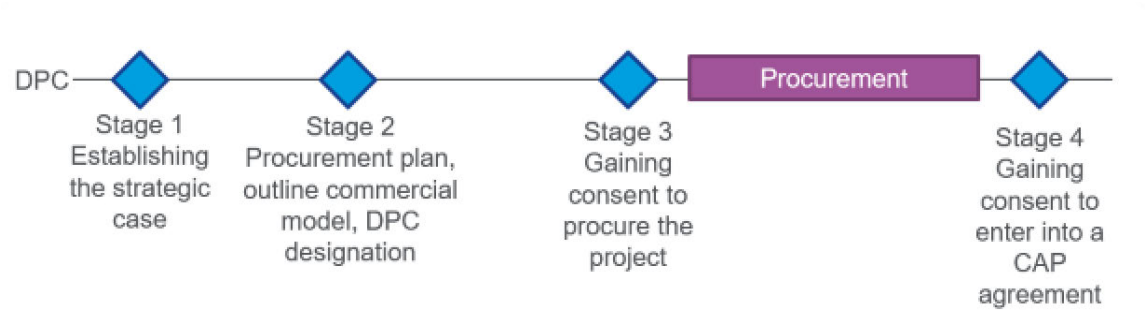


- Under the DPC model, we would run a competitive procurement process to identify a Competitively Appointed Provider (CAP) to act as the delivery entity;
- The CAP could be appointed at any stage in the project's development process identified as the best solution;
- We along with the CAP would enter into a CAP Agreement (CAPA) setting out the CAP's obligations and payment terms. Payments to the CAP would typically only start once the service is being delivered, deferring the cost to customers compared to the inhouse delivery model;
- We would recover the payments to the CAP under an Allowed Revenue Direction (ARD) for the duration of the CAPA and sitting alongside the existing price control;
- Based on the revenue stream provided by the CAPA, the CAP would raise long-term debt and equity to finance the works. Debt providers could place obligations on the CAP that make modifications to the CAPA once signed potentially difficult; and
- As the CAP is not separately licenced, we would remain responsible for the CAP's performance under our licence.

Regulatory engagement with Ofwat for DPC projects

For projects identified to be delivered via DPC, we intend to discuss each project with Ofwat. With Ofwat's agreement we plan to progress these under the framework set out in Ofwat's DPC guidance1. This will involve progressing through each of the four stages identified below, maintaining regular updates throughout the project development and procurement stages and providing appropriate assurance throughout.

Figure 2 – DPC stages



2.3. Alternative Delivery routes – 'DPC-lite' delivery route

We propose our new DPC-lite model for projects that cannot be delivered via DPC. DPC-lite is similar to DPC – suitable projects are competitively tendered and delivered under long-term contracts by a third-party delivery partner, which can be appointed at any stage in the projects' development process.
We acknowledge Ofwat's additional technical discreteness guidance and its implications for the DPC eligibility of projects which excludes several small assets and those whose asset lives are less than the typical length of a DPC contract (circa 25 years).

[1] Ofwat (March 2023) Guidance for Appointees delivering DPC projects.

However, DPC-lite would still benefit us and our customers, by enabling us to better manage our in-house delivery capacity. We also believe that delivering needed assets, not eligible for DPC, via DPC-lite would enable the timeliest delivery. The table below lists other benefits:

Table 1 – Benefits of DPC-lite

Benefit	Explanation
Managing delivery capability	By transferring responsibility for key projects and activities to third-party providers, this can free up our internal resources to focus on delivering other parts of the capital programme
Efficiency in delivery	As per Ofwat's DPC efficiency assumptions, DPC-lite may enable capital and operational efficiencies in the delivery of major infrastructure projects
Innovation in design	External parties may be able to offer innovation in the design of new assets or unlocking economies of scale from other sectors
Access to external financing	The voluntary DPC-lite delivery route allows funding of large projects by a third party provider
Enhancement of relationships and reputation	Delivery routes which enable partnership and localisation could provide an opportunity to engage directly with local stakeholders and businesses, not only improving project delivery, but also enhancing our relationships with key stakeholders
Flexibility in the timing of customer bill impacts	It may allow some flexibility in the timing of impact to customer bills, depending upon the payment and revenue commencement structures adopted

DPC-lite is a variant of DPC. However, we believe that the process burden placed on the regulator in the DPC model could be reduced within the DPC-lite model, reflecting the materiality of the projects – discussed in the next section below. Nevertheless, some features of DPC would need to be replicated in the DPC-lite model – chief among these are the guarantees to third party providers from the ARD (or ARD-lite, as we are calling the equivalent for DPC-lite), which we also discuss below.

Regulatory engagement with Ofwat for DPC-lite projects

We propose a lighter touch approval regime than for DPC projects, reducing Ofwat's burden. We would assume the responsibility to ensure that contract terms delivered value for money for customers. Criteria would be agreed with Ofwat, and these would need to be met, both before a contract is tendered and before the contract is awarded – ensuring the project would be delivered while protecting customers and offering value for money. This approval process is shown in the figure below:

Figure 3 – Proposed route for DPC-lite projects

- **Project identification:** Projects will be agreed to be delivered via a pre-agreed delivery route;
- **Pre-procurement update:** Prior to procurement, we will provide Ofwat with the terms in the draft contract, including key commercial terms and a summary of the procurement process to be conducted, giving Ofwat the opportunity to raise any questions or concerns; and
- **Pre-contract award review:** Before contract award, we will provide Ofwat with a review of the procurement outcome and value for money. We would then seek an ARD-lite. Any amount not covered by this mechanism would be for us to cover from base allowances or efficiencies elsewhere.

We would then seek an ARD-lite mechanism from Ofwat for the procured project. The ARD in the DPC model provides a revenue guarantee to third party providers, across multiple AMPs, in order to reduce revenue risk and enable equity and debt funding. The DPC-lite model would require a similar guarantee to third party providers. While we note that there are many precedent forms of regulator guarantee, we suggest that an ARD (or ARD-lite) process is replicated for the DPC-lite projects.

For us, the award of an ARD-lite would enable us to ensure the right financial treatment in our regulatory accounts, an ability to finance these projects and ensure a positive treatment of this delivery route by credit rating agencies.

Ofwat would make a determination as to whether all or some of the cost to be included in an ARD-lite. Any amount not covered by this mechanism would be for us to cover from base allowances or efficiencies elsewhere in our plan.

Approval of an ARD-lite by Ofwat would ensure the recovery of the exact project costs from customers across multiple future regulatory periods for some or all of the costs. It would also give security over the treatment of residual asset values at the end of the contract term. Our proposal is that Ofwat, like in DPC, determines at the end of a successful procurement process and after the final bids have been submitted that an ARD-lite is granted to us.

The DPC process contains licence conditions which enable the revenue to move to provide for an ARD and provisions to revert to inhouse delivery. DPC-lite projects could follow a similar model. Due to the nature of the projects and the length of the planned contracts spanning multiple AMPs, we anticipate a similar mechanism to the DPC licence conditions to be needed for DPC-lite.

We expect a long-term payment mechanism allowed by Ofwat for DPC-lite to require the same licence changes as for DPC projects and will need further discussions with Ofwat. We expect this would be agreed as part of PR24.

In the event that Ofwat is not satisfied and believes that the payments are too high and not value for money, the project could revert to inhouse delivery. Alternatively, Ofwat could allow an ARD-lite for some of the payments and for the remaining to be paid by us. The question of efficient cost could be a pre-agreed measurable criteria (e.g. WACC and other financial measures). This would ensure a significant incentive for us to deliver the project successfully. This could offer protection and benefits to customers.

2.4. Alternative Delivery routes – Comparison of DPC and ‘DPC-lite’

In the table below we provide a comparison of DPC and DPC-lite models.

Table 2 – High level view of DPC and our proposal for DPC-lite

	DPC	DPC-lite
Allowed Revenue Direction	An ARD is granted following a successful bidding process for a DPC project. This is given following significant oversight of the project's progress within the staged and controlled regulatory submission process.	A lighter touch DPC-like model would offer reduced oversight. However, agreeing the required criteria to assure Ofwat of a successful VfM outcome, Ofwat could approve a long-term payment mechanism or uncertainty mechanism similar to an ARD.
Designation	A project would receive DPC designation between Stages 2 and 3 in the process.	Designation of DPC-lite could be provided earlier following agreement with Ofwat. Ofwat would need to agree to the approach and criteria to evaluate the outcome of the procurement process.
Revert to inhouse delivery if required (in whole or part)	With Ofwat's agreement projects can be de-scoped and brought back inhouse, entirely or in part where required. License condition U provides the necessary provision to enable Ofwat to do this.	We would be looking for Ofwat's agreement for a similar process as for DPC projects for the proposed projects in PR24.
Staged submissions	Staged submissions, Ofwat's guidance and informal meetings are all to ensure a successful outcome.	Without a staged submissions process, we will need to successfully deliver an outcome agreed to offer VfM.
Development costs	Development costs are given in AMP for delivery.	We propose the same treatment of development costs as for DPC projects.
Impact on SW's accounts	Project not recognised in RCV in regulatory accounts. The framework gives comfort to lenders and rating agencies in respect to our position as counterparty, mainly through the application of the ARD.	Project potentially not recognised in RCV in regulatory accounts if Ofwat grants the use of an ARD-lite. This would allow similar treatment of DPC-lite projects as to DPC projects by rating agencies.
Residual value	Residual asset values will be included in the price control at the time they become payable (subject to deductions by Ofwat).	As with DPC the residual value will be included in the price control at the time the contract is terminated. The project could be retendered.
Construction Act	DPC is excluded from the Construction Act, meaning payments do not need to commence prior to commissioning.	Only DPC is excluded from the Construction Act. DPC-lite project would not be excluded and hence payments are likely to commence prior to commissioning. Therefore, considerations will need to be made as to the third party expectation of payment during construction.
Length of contract	DPC contracts are estimated to be generally 25 years or more.	The same is proposed for DPC-lite projects with the exception where assets lives (such as for smart metering) may require a shorter contract length.

2.5. Organisational changes

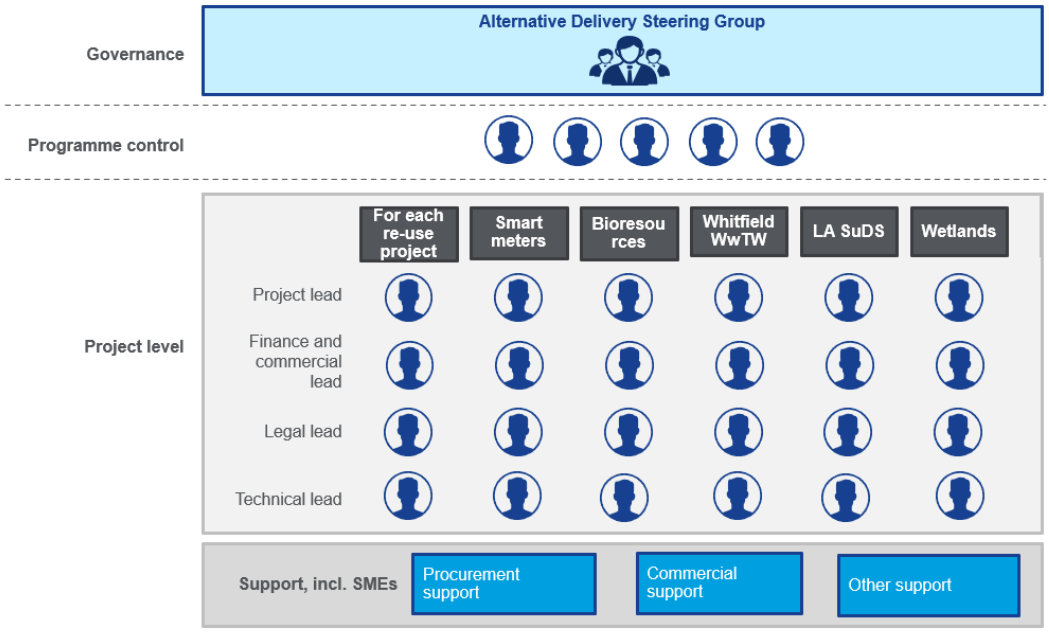
We recognise that the approach necessary to deliver these projects will differ from those delivered inhouse. Delivering any project under an alternative route will require us to make decisions which have a lasting, significant impact across our business. For long-term contracts it is essential that we look ahead and consider the implications across the life of a contract which could span across multiple AMPs at c.25 years. The selling and marketing of an investment opportunity and financial deal will require different skill sets and expertise. We will need legal teams to develop contracts which need to be informed by experts with relevant expertise. This includes clear and workable terms designed to allow projects to be delivered and operated effectively on a long-term basis. We will also need financial and commercial expertise to develop an approach to ensure value for money for our customers. We further need to communicate and engage with potential investors to generate interest in each project.

We plan to make changes to our organisation and governance to ensure that this new method of delivery results in successful outcomes creating benefit for our customers. Using a team structured separately to support our DPC and proposed DPC-lite projects, we aim to bring projects to market in a timely fashion through a series of well-structured workstreams and processes.

Dedicated governance and support for Alternative Delivery projects

Each project represents a significant undertaking that will require substantial input and activity from across our business as well as external expertise. It is therefore essential that our organisational structure adapts and develops. We currently to establish a dedicated strategic Alternative Delivery team along with new governance for projects delivered via DPC or DPC-lite. Additional costs of £93m have been added to our plan to allow for these additional costs that we expect. We have used the Ofwat PR19 calculation approach. Figure 4 illustrates our current thinking.

Figure 4 – Proposed organisational chart for projects progressing under Alternative Delivery



Alternative Delivery Steering Group

The Alternative Delivery Steering Group is planned to include senior leaders from across our business and responsible for monitoring progress, making strategic decisions and to ensure full considerations are given to the impact of contracts on the overall group and our customers. Decisions that may require approval by the steering group include:

- Managing resource constraints and co-ordinating and/or timing conflicts between the teams;
- Approving key terms of the CAPA or DPC-lite contract agreement, including financial and commercial, legal and regulatory considerations;
- Approving the launch of the procurement process and the award of a contract to the successful bidder; and
- Following contract award, making key contract management decisions during the delivery and operational phase.

We expect that the role of this governance forum to naturally develop over time as projects are progressed and developed.

Programme Control Group

Separate from the steering group, the Programme Control Group is planned to offer project teams the necessary dedicated senior resources.

The group and its individuals will be essential in assisting the development of all projects, ensuring that the individual teams understand the requirements and workstream needed to deliver their project. It is likely to also be responsible for disseminating and sharing completed workstreams with other projects, aiming to reduce the duplication of work.

This group would consider decisions made by the project teams in regards to contracts, including for example:

- The scope, ensuring both VfM as well as market interest is retained;
- Risk allocations are considered and their impact on risk premium and possible bid prices;
- Terms of the payment mechanism;
- Market engagement and investor engagement strategy; and
- Co-ordinating the provision of information to and engagement with Ofwat.

For DPC-lite projects where the informal meetings with Ofwat may be less frequent, the group could assume the role to allow valuable discussions on all aspects of a project. Where we may set up proposed internal control points for DPC-lite projects, the control group could ensure similar structured work processes and development of each project to successful contract award.

Overall, the group is to enable projects to manage and progress, ensuring the right approach and managing delivery effectively and to schedule. It is currently thought to become the interface between the Alternative Delivery Steering Group and the project teams at a working level.

Project level leads

At the working level each project has a lead. Additionally, each project will have a financial and commercial, legal and technical lead. These provide the key expertise required.

The leads should bring together the experience required in key areas to ensure that each project is developed, procured and delivered successfully. These leads are planned to be sufficiently empowered to leverage the necessary skills of the business and its advisers to drive the progression of each project.

The core skills required will be:

- Legal expertise will allow the drafting of the contract;
- Financial and commercial expertise will allow the development of all financial terms that will feature in the contract, ensuring VfM. It will also be able to engage with the market and assist in developing the tender materials; and
- Technical expertise will bring together activities under the necessary initial design, consenting, surveys and studies. This is to include operational expertise.

In addition to the leads, some SME skill sets are likely to be required, including commercial and procurement support. There may be synergies where expertise could be employed across multiple projects.

By defining clear governance for Alternative Delivery routes in addition to the appointment of an Alternative Delivery Steering group, a programme control group and project-level leads, a clear chain of seniority and accountability is to be established. This should enable us to adapt and deliver the identified projects efficiently.

This is our current thinking that we want to discuss during PR24 as part of our Alternative Delivery approach with Ofwat.

2.6. Identifying and assessing projects for Alternative Delivery

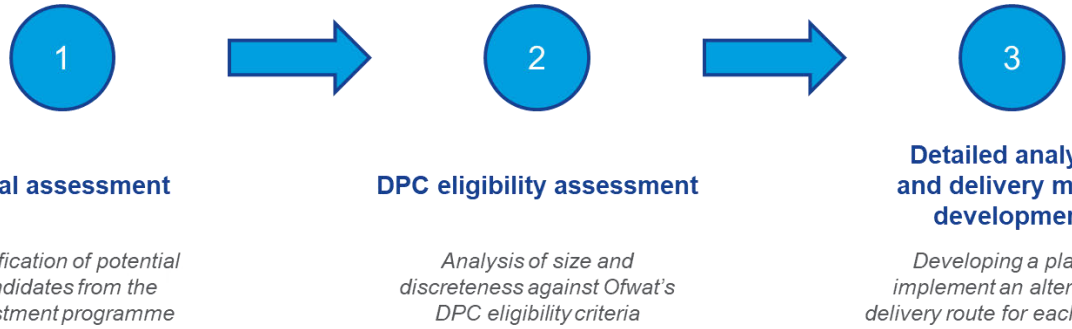
Our process

We applied Ofwat's methodology to identify all projects that could be DPC-by-default. We then adapted the methodology to projects that would fail Ofwat's DPC guidance, such as smart metering and bioresources, and assessed these in order to identify projects that could be suitable to DPC-lite.

Candidate projects were initially presented to the board in April 2023. The Board has been kept up to date with developments in further board meetings and workshops. The board approved the approach and the broad content of alternative delivery in September 2023.

The methodology used is illustrated in Figure 5.

Figure 5 – Methodology for Alternative Delivery route assessments



Identifying projects

We conducted a systematic review of our entire capital programme for PR24. The scope of this assessment included a review of all aspects of the business plan, including works driven by the WRMP, DWMP, WINEP, bioresources and other requirements.

As described as Step 1 'Initial Assessment' we reviewed our full list of planned investments in AMP8, identifying potential projects that were:

- Large, single projects with a whole life totex greater than £200m;
- Large programmes of assets with a whole life totex greater than £200m; and
- Other projects which may be suitable for delivery by a third-party provider based on their size and characteristics.

DPC eligibility assessment

Once potential candidates had been identified, individual workshops were held with our project leads to discuss each candidate in more detail and understand the key characteristics of the works and the assets, both in terms of construction and for operations and maintenance.

For each project, using the information on costs and characteristics, a DPC eligibility assessment was undertaken. It included each project's size and discreteness including, identifying opportunities to package projects together. Whilst some projects are either excluded from DPC or considered ineligible under Ofwat's guidance, we nonetheless progressed potential projects that were for individual reasons excluded. All projects progressed are of what we believe to be a sufficiently high value scope size with a level of separability and current no known construction or operational risks which would reduce their attractiveness as an investment opportunity.

Tender models

For both DPC and proposed DPC-lite projects, their characteristics and timescales will impact the appropriate tender point. It will determine the procurement process start, defined below as Early, Late or Very late tender models.

Early tender model

The early tender model identifies the third party delivery provider prior to the completion of project development activities such as initial design, surveys and studies and consenting. This model can be chosen on the basis of specific requirements or choice of solutions available.

The provider would continue through the development phase into detailed design, construction, operation and maintenance, also providing the financing necessary to deliver the project. This is illustrated in Figure 6 – Early tender model

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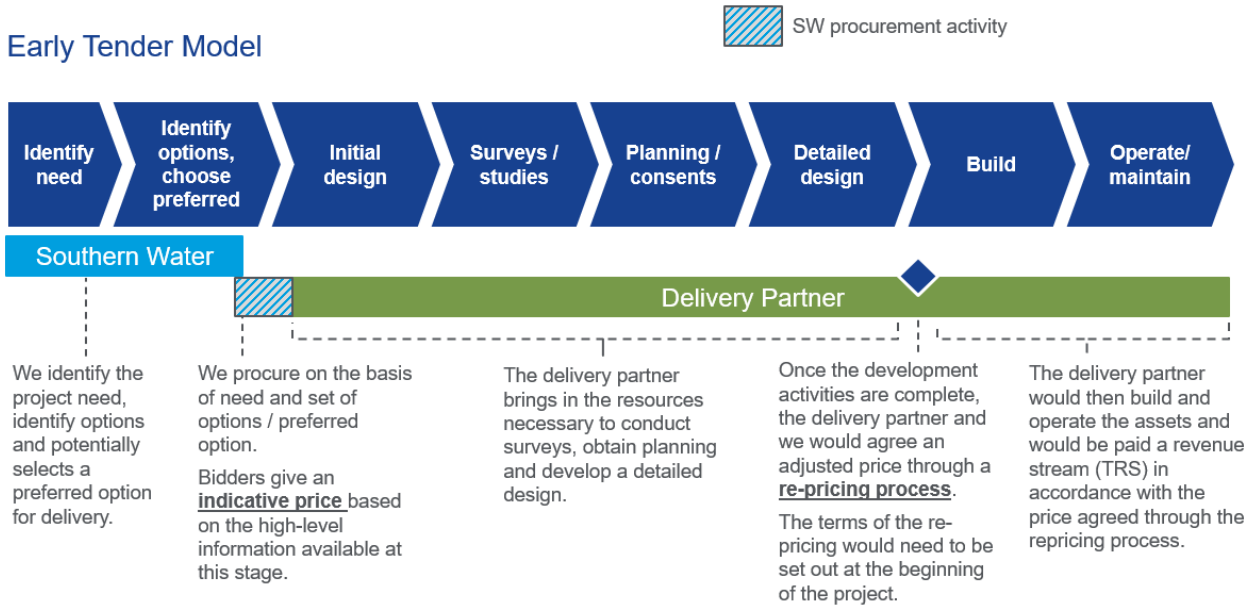
Figure 6 – Early tender model

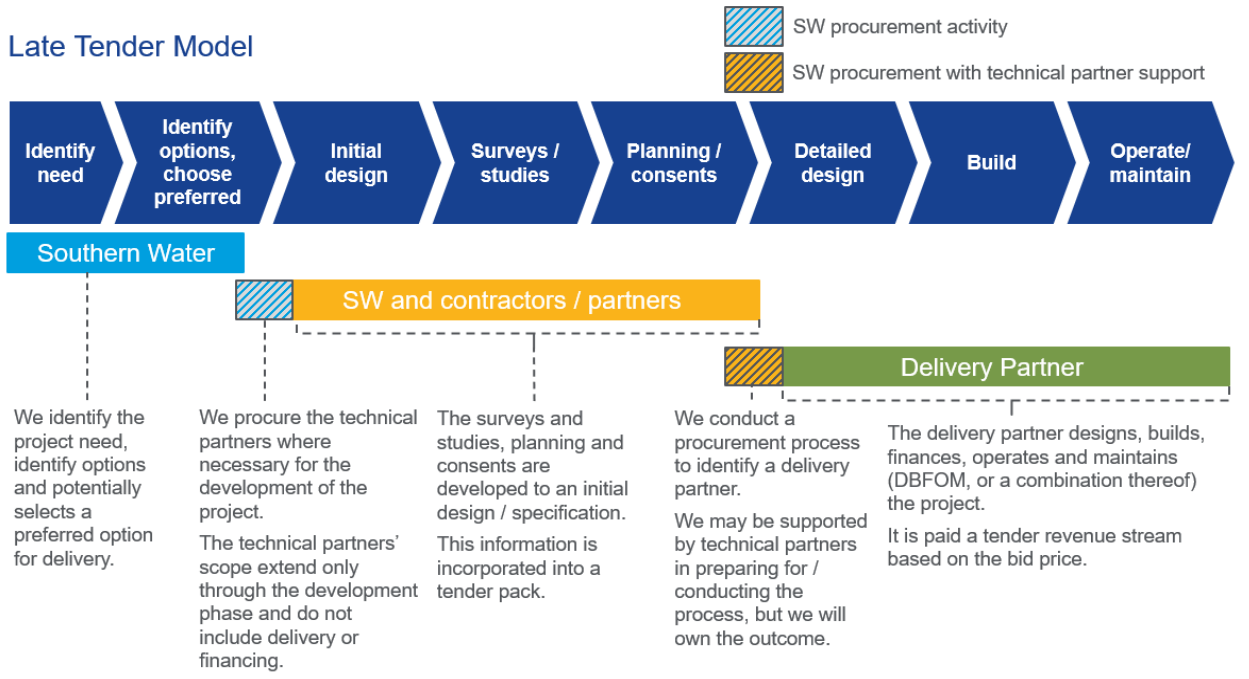


There is currently no precedent of the early model in the UK water sector. However, the Electricity System Operator (ESO) is developing a model for the use in the delivery of onshore transmission infrastructure.

Late tender model

Under the Late tender model we would complete the majority of the pre-construction development activities inhouse, before procuring a provider to complete the detailed design, construction, operation and maintenance, also providing the financing necessary to deliver the project. This is illustrated in Figure 7.

Figure 7 – Late tender model

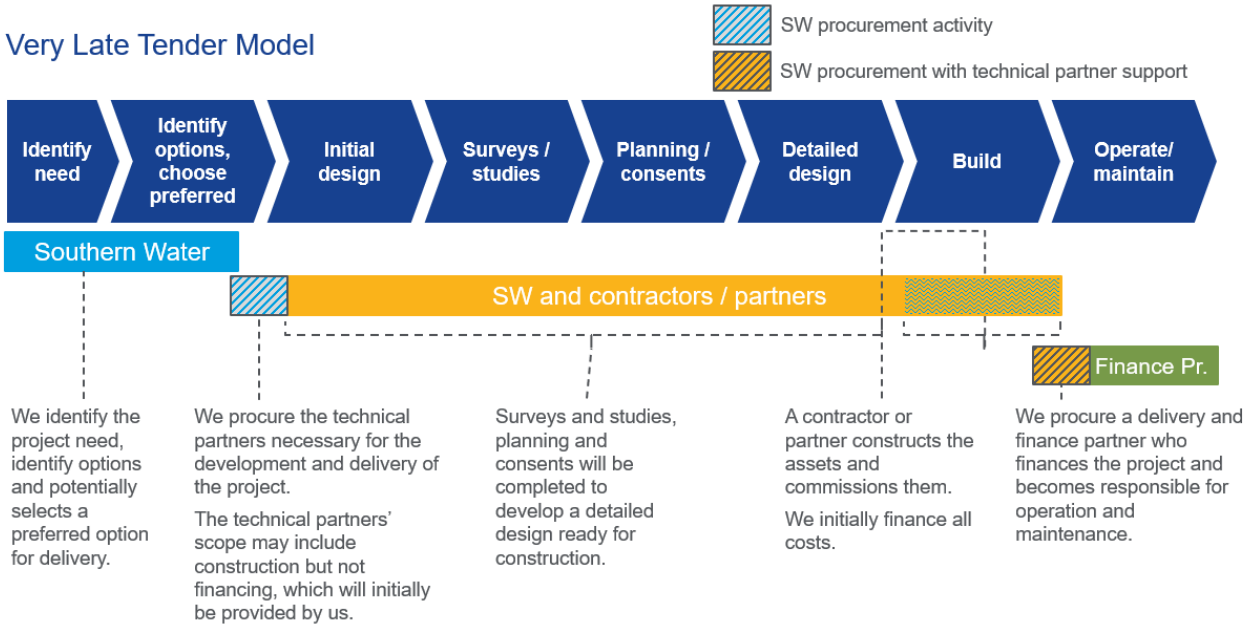


The Late tender model is the typical approach taken for the delivery of infrastructure projects. There is a wealth of precedent for its use. Key examples from the water sector include the DPC procurement processes for HARP and Cwm Taf managed by United Utilities and Dŵr Cymru.

Very late tender model

Under the Very Late tender model we would undertake all project development activities, prepare the detailed design and construct the assets potentially using contractors and partners. Post-construction a third-party provider would be appointed to refinance the project and assume responsibility for operations and maintenance. This is illustrated in Figure 8.

Figure 8 – Very Late tender model



Precedent for this model can be found in the Offshore Transmission Owners (OFTO) model in the energy sector, whereby OFTOs are appointed after the construction of offshore wind farms to finance, operate and maintain them for a defined term.

Comparison of tender models

There are pros and cons associated with each of the tender models outlined above. In practice, the selection of a tender model will be made based on a project's characteristics, timescales and the needs of our customers. Table 3 illustrates the key considerations applicable to each.

Table 3 – Comparison of tender models

Tender model	Early	Late	Very late
Summary	Third-party provider is procured early on the basis of a defined need. Provider undertakes project development activities (surveys, consenting etc.) in addition to design, construction, operations, maintenance and financing.	We complete project development activities (surveys, consenting etc.) and then tender a contract to deliver detailed design, construction, finance, operation and maintenance.	We undertake all project development, design and construction. We also initially finance the project. Once commissioned, a provider is procured to refinance, operate and maintain the assets.
Precedent	An early competition model is currently under development by the UK Electricity System Operator.	This is the standard project finance model, which has also been adopted for HARP.	The OFTO model in offshore electricity transmission.
Pros	+ Greatest opportunity for market driven innovation and efficiency as providers engaged earlier. + Providers can complete project development activities, alleviating internal pressures on our project development resources.	+ Bidders have sufficient information to produce a competitive bid price with reduced risk pricing. + Allows us to make sure of a competitively appointed third party's expertise to fulfil delivery.	+ Potentially enables us to meet our timetable obligations. + Enables us to recoup the costs of new built assets refinancing and offer an O&M contract. + Evidence from the OFTO regime has shown that sale after construction can effectively drive down financing costs.
Cons	– Bid prices in an early model will be indicative only (as the project is at an early stage). A re-pricing would be required pre-construction which can be complex and time-consuming to administer. The terms of the process may need to be tested with Ofwat and the market in advance.	– The procurement process can be lengthy. – We assume the risks for development phase activities.	– Minimal opportunity for innovation and efficiency in design and delivery.

Incentives for DPC and DPC-lite projects

Ofwat's PR24 final methodology for DPC states its intention to incentivise companies to deliver DPC well, anticipating the application of Price Control Deliverables and other potential incentives including:

- Financial rewards for the successful award of a CAP agreement;
- Financial penalties for delays to the submission of DPC business cases; and

- Allowing Appointees to keep a share of the incremental value for money created for customers by its approach to procurement[2].

We agree that incentives have an important role to play to support the effective development, procurement, management, and delivery of DPC and proposed DPC-lite projects. It is important for customers to be protected as we work to develop, procure and deliver the cohort of DPC and proposed DPC-lite projects.

This may include the use of mechanisms such as PCDs (and other incentives) to protect customers throughout this process. It may also include the use of positive incentives to encourage efficient awarding of CAP agreements and in the overall delivery of projects. In practice, the specification of such incentives will require granular information such as determining requirements that specific milestones are achieved by set dates. Some of the projects we have currently identified are at a relatively early stage of maturity, with delivery timescales still developing. We will look to engage with Ofwat once business plans are submitted to agree a reasonable set of incentives which reflect more detailed delivery timelines for each of the projects identified. This pragmatic approach will ensure incentives are aligned to underlying projects and encourage the right outcomes.

We also consider that incentives for each project should be considered in the context of and support the overall Alternative Delivery programme. An effective procurement programme will be one which manages the process and timing within which projects are brought to market, taking into consideration the effort required from bidders and seeking to maximise the attractiveness of each project to its potential investors.
We believe that with additional timeline development and engagement with Ofwat, an effective programme of incentives can be designed which supports the overall Alternative Delivery programme and will ensure customers are protected.

2.7. Our identified projects for DPC and proposed DPC-lite delivery

Summary of identified projects

Our assessment process has identified 9 projects to be delivered via Alternative Delivery in addition to our existing HWTWRP DPC project and T2ST and SESRO[3]. It is expected that T2ST and SESRO will be delivered by DPC or SIPR. Our plan includes the development costs for T2ST and SESRO, but it is expected that procurement does not begin until AMP9.

The three projects (HWTWRP, T2ST and SESRO) are not included in this technical annex as they are already part of Ofwat's formal DPC process and its VfM will be confirmed via this process.

[2] Ofwat (December 2022) PR24 final methodology appendix 5 DPC, page 11.
[3] We had indicated to Ofwat in early discussions of the possibility of including the Andover Link Main and Southampton Link Main projects. Due to the very tight timelines they are now both to be delivered inhouse

Table 4 – Pprojects to be progressed under Alternative Delivery routes (source table SUP12)

Project	Proposed delivery route	Proposed contract model	Proposed tender model	Whole life costs[4]	Construction capex in AMP8
Sandown re-use	DPC	FOM	Very late	£213.8m	£98.3m
Aylesford re-use	DPC	DBFOM	Late	£215.0m	£99.3m
Ford re-use	DPC	DBFOM	Late	£205.4m	£63.4m
Sittingbourne industrial re-use	DPC	DBFOM	Late	£288.0m	£108.6m
Whitfield WwTW	DPC-lite	DBFOM	Late	£49.8m[5]	£49.8m
Smart metering	DPC-lite	DBFOM	Late	£333.0m[6]	£165.4m
Bioresources: Ham Hill and Ashford	DPC-lite	DBFOM	Late	£113.3m[7]	£170.0m
Wetlands	DPC-lite	DBFOM	Late	£102.2m[8]	£80.0m
Local Authority Highways SuDS	DPC-lite	DBFOM	Late	£228.2m[9]	£197.2m

Table 5 – Summary of key financials and their location of references (source table SUP12)

Project	Construction capex AMP8	Botex	Enhancement	Development costs
Sandown re-use	£98.3m	-	£98.3m	£9.2m
Aylesford re-use	£99.3m	-	£99.3m	£9.2m
Ford re-use	£63.4m	-	£63.4m	£6.6m
Sittingbourne industrial re-use	£108.6m	-	£108.6m	£9.8m
Whitfield WwTW	£49.8m	-	£49.8m	£5.4m
Smart metering	£165.4m	£22.8m	£142.6m	£14.2m
Bioresources: Ham Hill and Ashford	£170.0m	£133.6m	£36.4m	£15.4m
Wetlands	£80.0m	-	£80.0m	£7.4m
Local Authority Highways SuDS	£197.2m	-	£197.2m	£15.8m

[4] Whole life costs have been calculated to the end of AMP13 in the majority of cases. Work carried out to extend the life the calculation increase the estimate but it does not make any difference on whether the project is eligible for DPC.
[5] Only construction capex with renewal capex and opex to be determined as the project is developed. The delivery model is specified and route is more developed it is not meaningful to produce operating costs.
[6] Asset life of 15 years estimated with renewal capex to be determined as the project is developed.
[7] Renewal capex to be determined as the project is developed. Due to significant revenue generation estimated, annual opex net of revenue generated is negative. There are technology choices still to be made which will influence operating costs.
[8] Renewal capex to be determined as the project is developed.
[9] Renewal capex to be determined as the project is developed.

Detailed analysis and delivery model development

We have assessed each of the 9 DPC and proposed DPC-lite projects in greater detail. These included:

- A view of the likely timescale implications of adopting an Alternative Delivery route;
- A tender model for each project, giving consideration to critical dates and milestones on the project's timelines;
- An early view of the commercial model which could be used for the project;
- A high level estimate of risk allocation for each project;
- An early assessment of the potential level of market appetite based on asset type, experience within the sector and precedent from other similar projects; and
- A high level overview of cost.

This analysis culminated in the development of a delivery model specific to each of the identified project.[10] The data table SUP12 has been completed to include not only DPC schemes, but DPC-lite schemes. Capital costs have been removed from tables CW3 and CWW3 and are contained in this annex and table SUP12. Relevant lines of data table RR9 have been populated with our current estimates of what we might need to pay CAPs or SPVs.

Table 6 – The project business cases reference location and summary rationale

Project	References in PR24 submissions	Summary rationale
Sandown re-use	**Section 3** of this SRN17 **Technical Annex** **SRN05**: Wholesale Water Costs and Outcomes **SRN26:** Water Resources – Supply Enhancement Business Case	The project is of a size and nature which could be eligible for DPC. However, the required delivery timescales do not leave sufficient time to procure a DPC contractor pre-construction. Therefore, we plan to procure a CAP to Finance, Operate and Maintain the assets post-construction.
Aylesford re-use	**Section 4** of this **SRN17 Technical Annex** **SRN05:** Wholesale Water Costs and Outcomes **SRN26:** Water Resources – Supply Enhancement Business Case	These projects are of a size and nature which could be eligible for DPC. Changes to the delivery timescales under the WRMP24 we believe allow sufficient time to procure a DPC contractor pre-construction. As set out under DPC guidance, the project is considered to be procured on a DBFOM basis.
Ford re-use	**Section 5** of this **SRN17 Technical Annex**	

[10] The assessments and conclusions reached are based on early-stage understanding and information relating to each project, many of which are currently only at the solution identification stage. As projects are developed, changes are I kely to arise in case, and some of these changes may impact on the suitability of an alternative route. We intend to review and update our assessment of the projects identified as they are developed further.

	SRN05: Wholesale Water Costs and Outcomes **SRN26:** Water Resources – Supply Enhancement Business Case	
Sittingbourne industrial re-use	**Section 6** of this **SRN17 Technical Annex** **SRN05:** Wholesale Water Costs and Outcomes **SRN26:** Water Resources – Supply Enhancement Business Case	The project is of a size and nature which could be eligible for DPC. As set out under DPC guidance, the project is considered to be procured on a DBFOM basis.
Whitfield WwTW	**Section 7** of this **SRN17 Technical Annex** **SRN06:** Wholesale Wastewater Costs and Outcomes **SRN44:** Wastewater Growth Enhancement Business Case **SRN22:** Network and WTW Growth Cost Adjustment Claim	The project is of a nature suitable for DPC and could be considered discrete. However, current estimates see it fall below the size threshold. We therefore plan to procure on a DBFOM basis under a voluntary DPC-lite delivery route.
Smart metering	**Section 8** of this SRN17 Technical Annex **SRN05:** Wholesale Water costs and Outcomes **SRN28:** Smart metering Enhancement Business Case **SRN24:** Meter Replacement Cost Adjustment Claim	Although ineligible for DPC under Ofwat's guidance, our analysis and engagement to date indicates that the project could be delivered under a voluntary alternative DPC-lite delivery route.
Bioresources: Ham Hill	**Section 9** of this SRN17 Technical Annex **SRN06:** Wholesale Wastewater Costs and outcomes **SRN43:** WINEP Bioresources Cake Storage Enhancement Business case **SRN37:** Industrial Emissions Directive (IED) Enhancement Business Case **SRN21** Advanced digestion Cost Adjustment Claim	Bioresources is excluded from DPC. We propose to package the two projects, Ham Hill and Ashford, into a single project and plan to deliver via a voluntary DPC-lite delivery route.
Ashford	**Section 9:** of this SRN17 Technical Annex **SRN06:** Wholesale Wastewater Costs and outcomes **SRN43:** WINEP Bioresources Cake Storage Enhancement Business case	

	SRN37: Industrial Emissions Directive (IED) Enhancement Business Case **SRN21:** Advanced digestion Cost Adjustment Claim	
Wetlands	**Section 10** of this SRN17 Technical Annex **SR06:** Wholesale Wastewater Costs and Outcomes **SRN40:** WINEP – Storm Overflows Enhancement Business Case	Although ineligible for DPC under Ofwat's guidance, we consider that a programme of Wetlands interventions across our network could form a package suitable for delivery under a voluntary DPC-lite delivery route.
Local Authority highways SuDS	**Section 11** of this SRN17 Technical Annex **SRN06** Wholesale Wastewater Costs and Outcomes **SRN40** WINEP – Storm Overflows Enhancement Business Case	Although ineligible for DPC under Ofwat's guidance, we consider that a programme of SuDS interventions along local authority highways could form a package suitable for delivery under a voluntary DPC-lite delivery route.
Hampshire Water Transfer and Water Recycling Project	**SRN29** Water resources – Strategic Resource Options Enhancement Business Case **SRN05** Wholesale Water Costs and Outcomes	This project is not covered in this technical annex. It is already part of Ofwat's formal DPC process and its VfM will be confirmed via that process. We therefore do not provide a business case for going down this route. It is also described in more detail in the SRO enhancement case. At the time of writing our SRO is progressing with plans to submit Gate 3 in H1 2024. Our DPC project plans to submit Stage 2 late this year/ early 2024.
Thames Water to Southern Water Transfer	**SRN29** Water resources – Strategic Resource Options Enhancement Business Case **SRN05** Wholesale Water Costs and Outcomes	The SRO enhancement case contains these two projects. There are no business cases attached in this TA. The enhancement cases cover the costs to develop these projects. At this stage it is presumed T2ST to be delivered via DPC and the preferred delivery route for SESRO is SIPR. In both cases the contract awards are assumed to be in AMP9 and not AMP8.
South East Strategic Reservoir Option	**SRN29** Water resources – Strategic Resource Options Enhancement Business Case **SRN0 5** Wholesale Water Costs and Outcomes	

3. Sandown Re-use – Project Business Case for DPC

3.1. Introduction

The purpose of this business case is to propose a DPC delivery route for the Sandown re-use project. It is expected to be read in conjunction with the enhancement case for the project, which can be found in SRN05 Wholesale Water Costs and Outcomes and SRN26 Water Resources – Supply Enhancement Business Case.

3.2. Project overview

The project is located on Isle of Wight, as shown in Figure 9 below. It involves the construction of a new water recycling plant at Sandown's wastewater treatment works and a new pipeline and pumping station to transfer the recycled water to a discharge point at the Eastern River Yar to enable additional abstraction volumes downstream at the Sandown water supply works.

Figure 9 – Location of Sandown WRP

The Sandown re-use project is part of the wide-ranging WfLH programme to reduce the reliance on Hampshire's chalk rivers, including at the rivers Test and Itchen as part of our Section 20 agreement with the EA. The solution is to increase resilience on the Isle of Wight and reduce the need to pump water supply from the mainland.

The project includes several assets:

- A new WRP with a capacity of 10.5Ml/d and a transfer pumping station to the River Yar.
- A c.1.9km transfer pipeline through the Isle of Wight Area of Outstanding Natural Beauty (AONB) to the River Yar.
- Additional treatment at the existing Sandown WwTW to reduce nitrates and ensure consistent quality for the new WRP.

The proposed scope of the project involves the treatment of screened effluent from and return of waste flows to the existing Sandown WwTW. The WRP is planned to be sited adjacent to the WwTW as integrated and would avoid the need for and costs of multiple transfers between the sites (see Figure 10 below).[11]

Figure 10 – Siting of the Sandown WRP[12]

The recycled water from the WRP will be transferred via a new c.1.9km transfer pipeline for discharge into the River Yar. It will augment the river flow by adding recycled water and enabling abstraction from the river downstream at Sandown WSW, for treatment into potable water.

3.3. Eligibility for DPC

We have applied Ofwat's assessment methodology to determine whether the project is eligible for DPC.

[11] The new and existing assets at the Sandown site are l kely to be heavily interconnected in terms of proximity and operation. This is a key issue for this project, and will need to be explored further to understand its impact on the appropriate delivery route.

[12] Sandown Water Recycling Project (southernwater.co.uk)

Table 7 summarises the outcome of the DPC eligibility assessment.

Table 7 – Summary of DPC eligibility assessment outcome – Sandown re-use

DPC Eligibility Test	
Construction capex in AMP8	£98.3m
Annual opex	£1.7m
Renewal Capex[13]	£67.2m
Assumed asset life	60 years
Whole life totex	£213.8m
Size Test	***Pass***
Programme scalability test	The project satisfies the size test on an individual basis. Due to its delivery timeline it is not considered appropriate to package the project with other projects.
Construction risk test	The new WRP has interfaces with the existing Sandown WwTW. It is currently considered that the risks associated with the construction of the WRP itself could be transferred to a CAP.
Operations and maintenance risk test	The new WRP has complex interfaces with the existing WwTW. To mitigate this interface risk during operational period may be difficult and will require further assessments as the project develops[14].
Discreteness Test	***Pass***
DPC Eligible	***Yes***

At an estimated value of £214m whole life totex, the project successfully meets the size and discreteness test criteria and is considered eligible for DPC.

3.4. Delivery timeline

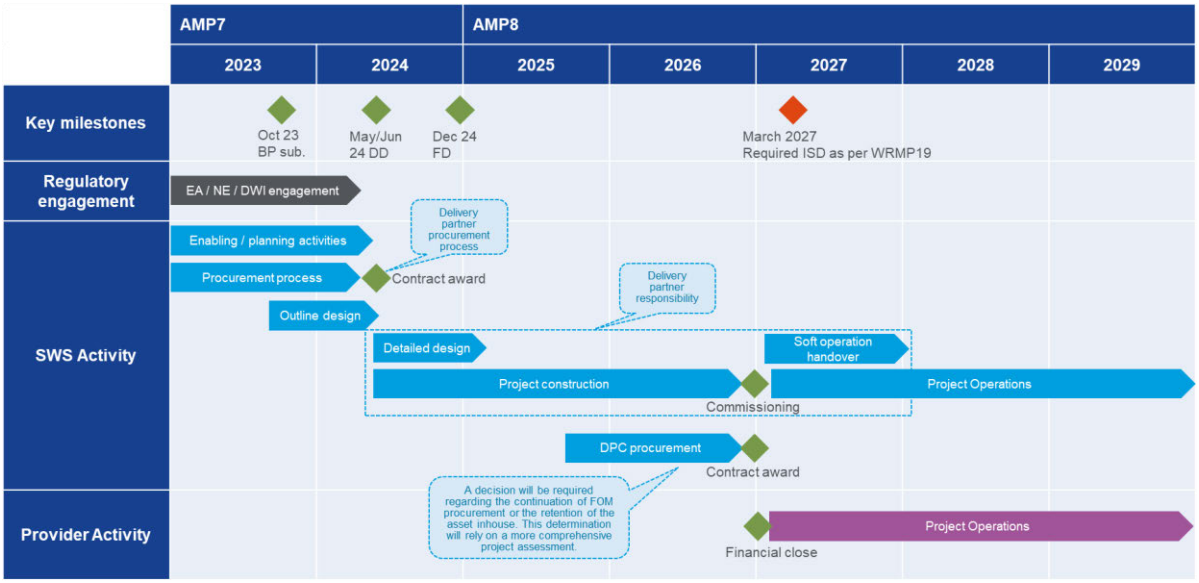
We have commenced work to progress the delivery of the Sandown WRP project. Early design works have begun and planning works are due to commence in 2023 with a target submission to the Town and Country Planning Association in February 2024, subject to EIA screening. A programme of regular water quality

[13] To maintain consistency with our investment planning processes and with figures presented elsewhere in the business plan, renewal capex has been calculated using forecast data to the end of AMP13.
[14] The interfaces between the proposed WRP and the existing WwTW are understood to be particularly complex (more so than for the other WRP projects we are progressing).

sampling and analysis is underway, with the initial phase expected to be completed in Q4 2023, to support the required changes in discharge licences.

Should planning, environmental and discharge consents be obtained in a timely manner, we expect construction to start in 2025 for a commissioning date in early 2027. These timescales are reflected in Figure 11.

Figure 11 – Sandown delivery timeline



The delivery of the Sandown WRP project falls within our Section 20 agreement with the EA. The project is required to contribute 8.5Ml/d as part of the long-term supply-demand scheme, to be delivered by 31 March 2027.

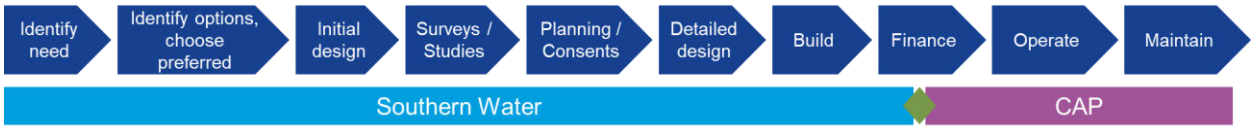
Due to the stringent nature of the required in service date (ISD) and potential other challenges to meeting the required construction and commissioning timelines, we propose that the project should be designed and constructed inhouse. By adopting this approach, we do not delay the delivery of the project, which offers environmental benefits and resilience, including abstraction reduction at the rivers Test and Itchen. A lengthy DPC procurement process prior to construction is likely to impact the project's delivery timescales. Nevertheless, as the project is considered eligible for DPC, we propose a possible Very Late DPC FOM delivery model. This may be possible as an option to best meet the project's required timescales.

3.5. Tender model

Under our current delivery schedule a Very Late tender model is the best suited for the Sandown project. The Very Late model involves tendering the project after construction is complete and the assets are commissioned, as illustrated in
Figure 12 – Allocation of responsibility under the Very Late tender model below.

We would need to design and construct the assets, also funding the complete project initially. However, once the FOM contract is awarded, it is assumed that a CAP would be able to refinance the debt at a lower rate, as it will not need to price in construction risks.
A Very Late model is recognised in Ofwat's DPC guidance, although it is yet untested. Evidence from the OFTO regime has shown that a sale after construction can effectively drive down financing costs.

Figure 12 – Allocation of responsibility under the Very Late tender model



In agreement with Ofwat we propose to conduct a procurement process tendering a FOM contract in parallel with the construction phase. We would aim to appoint a CAP as soon as possible after the asset have been successfully commissioned. The CAP would then effectively refinance the project, in addition to delivering operations and maintenance over a typical DPC term (c.25 years15).

There may be complexities which will need to be resolved in order to ensure it is deliverable. While the project progresses through inhouse delivery we plan to consider the operational interfaces between the existing WwTW and new WRP. The complexities may be too great to separate the assets operationally due to the physical location of the assets and the interfaces between the process streams.

We plan to engage with Ofwat and continue to assess the project for its suitability for a FOM contract as it progresses.

3.6. Commercial model

DPC Delivery Model

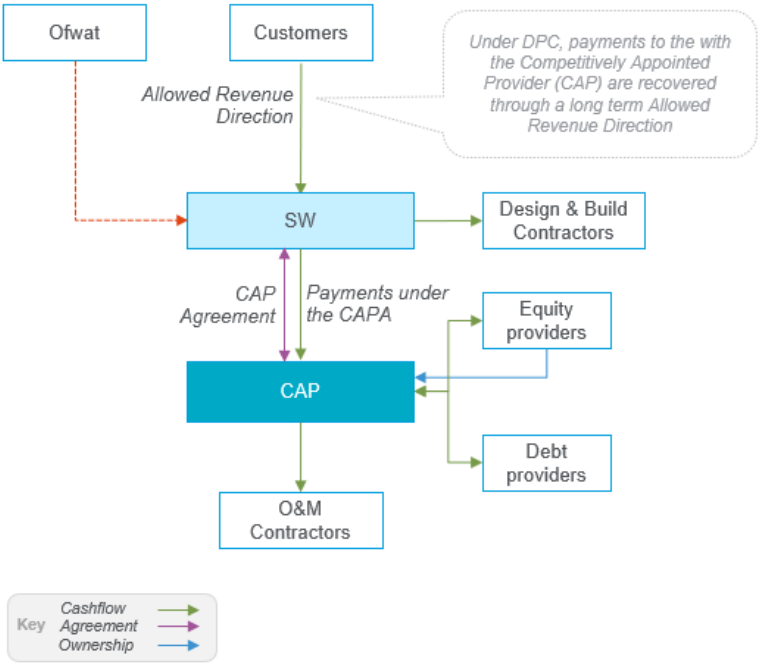
We propose to conduct a DPC procurement process to appoint a CAP who will assume responsibility for the finance, operation and maintenance of the project once commissioned. Whilst the project would be designed, built, and initially financed inhouse, we consider the implementation of a DPC FOM contract could result in the optimal outcome allowing fast delivery and maximising value for money for customers. In particular, the principal benefits expected from the appointment of a CAP under DPC are:

- An efficient cost of financing; and
- Long-term efficiency in the delivery of operations and maintenance.

At the time of contract award we along with the CAP would enter into a CAPA that outlines the CAP's obligations and payment terms. Once the contract is awarded, the CAP would raise long-term debt and equity based on the revenue stream provided by the CAPA and the ARD. The contractual arrangements are illustrated in Figure 13 – Contractual model structure for a DPC FOM contract Figure 13 below.

[15] The duration of contract term would need to be tested.

Figure 13 – Contractual model structure for a DPC FOM contract



We along with the CAP would enter into a CAPA with the following key features:

- The contract would outline the CAP's obligations and payment terms. An availability-based payment mechanism is assumed to best suit Sandown WRP (see 3.6.4 below).
- An availability-based payment mechanism is assumed to best suit the Sandown project (see 3.6.4 below).
- Payments to the CAP would typically commence only when the assets have been commissioned.
- The contract would be for a defined period of time, likely 25+ years based on Ofwat's DPC guidance.
- At the end of contract term the assets are expected to have a remaining useful life. We may retender the assets or bring them back inhouse[16].

In parallel to the CAPA we would enter into an Allowed Revenue Direction with Ofwat, which would determine the recovery payments to the CAP from customers. This would be in effect for the duration of the CAPA and would operate alongside the existing price control mechanism.

[16] For assets not fully depreciated by end of the contract term, the CAPA should outline the residual value approach upon expiration. This mechanism defines the condition the assets should be in, reflecting CAP's repair and maintenance responsibilities throughout the project's lifespan. This is to be tested and confirmed as the commercial model is being developed.

Risk Allocation

The table below outlines a high-level estimated risk distribution for the project if progressed under the Very Late tender model. The risks identified align to those set out in Ofwat's DPC guidance. However the allocation has been updated as necessary to reflect the specific characteristics of the project and its delivery under a Very Late tender model.

In particular the Very Late model means that the construction and asset delivery risks would be retained principally by us (and subject to totex sharing where allowed under the regulatory regime). In the operations and maintenance phase, the allocation aligns more closely to Ofwat's expectations for a typical DPC project.

Table 8 – Construction and asset delivery risk assessment – Sandown re-use

Construction and asset delivery risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Planning	✓	✓		Under a Very Late model we would secure planning, land (current plan is to use land we own) and any other necessary consents.	N/A
Land	✓	✓			
Other Consents	✓	✓			
On time delivery		✓		Under a Very Late model we would be responsible for ensuring timely construction of the assets.	Possible compensation events for delay and/or damages.
Cost overruns	✓	✓		We would manage cost overruns, likely through cost sharing arrangements with our delivery partners.	Contractual pain/gain sharing (where applicable)
Site conditions		✓		We would manage under a Very Late model.	N/A
Works information		✓		We would manage under a Very Late model.	N/A
Detailed design		✓		We would manage under a Very Late model.	N/A
Third Parties		✓		We would bear this risk during construction.	Performance incentive could be applied.
Changes in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations if required.

Construction and asset delivery risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Interfaces with our existing assets		✓		We are best placed to manage.	N/A
Commissioning		✓		We would manage under a Very Late model.	N/A
Financing costs	✓	✓	✓	We would initially bear the risk of financing the project. The CAP would bear the risk of financing post-contract award.	Under DPC, the ARD would facilitate payments to the CAP.
Refinancing gains	✓		✓	As per Ofwat's risk allocation. In the event of refinancing by an SPV we would seek to benefit with savings passed on to customers.	N/A

Table 9 – Operations and maintenance risk assessment – Sandown re-use

Operations and maintenance risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Cost (operations and maintenance)			✓	The CAP will be responsible for and bear the risks related to operating the assets efficiently.	Benchmarking and/or market testing provisions will enable the comparison of long-term opex against comparable projects.
Operational performance		✓	✓	The CAP is best placed to manage. We may bear some risk as the assets form part of our wider network.	Asset availability and flow volumes incentives as part of the payment mechanism as appropriate.
Compliance with statutory and regulatory obligations which impact the scope		✓	✓	Water quality requirements may apply. We will retain some obligations and responsibilities. CAP performance requirements will reflect our obligations to mitigate risk of breach.	CAP likely to be incentivised / penalised in the contract for any failures resulting in a breach of statutory / regulatory duty.

Operations and maintenance risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Defects during operations		✓	✓	We would be predominantly responsible for latent defects. The CAP would be responsible for defects in anything it installed (e.g. new equipment)	Possible compensation events for delay and cost.
Demand risk	✓	✓		We are best placed to manage through water resource planning and scope to match expected demand and levels of utilisation.	N/A
Over-utilisation	✓	✓			
Change in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations if required.
Value testing	✓		✓	As per Ofwat's risk allocation.	N/A
Condition of asset/hand back risk			✓	CAP best placed to manage.	Deductions from Residual Value Payment or similar reconciliation to account for condition at the end of the contract term.

Market Engagement

We have not engaged directly with the market in respect of this project. However, based on our knowledge of the sector and previous experience of engagement with water recycling contractors and potential investors (especially through our engagement in relation to HWTWRP, we assume there to be market interest in this investment opportunity.

Once a potential scope assessment has been completed and agreed with Ofwat, we would need to conduct market engagement to develop a market of potential bidders and foster interest in the project. This is to help to ensure a competitive tender processes.

Key issues which are likely to be tested and are likely to be of interest to the market include:

- The project's scope, including which assets to be operated and maintained by the CAP.
- The proposed commercial arrangements.

These issues and others will need to be tested with the market as the project is developed further.

Payment Mechanism

As currently structured, the Sandown WRP project involves the construction of new built asset alongside the existing WwTW. As the WRP will be an operational asset providing a constant source of supply, the best suited payment mechanism to use is an availability payment mechanism.

The availability payment mechanism for WRP plants delivered via DPC refers to a payment structure where the CAP receives compensation based on the availability and performance of the WRP. Under this mechanism the payment is linked to the WRP's ability to operate and provide the agreed-upon level of service, rather than being tied directly to volumes generated. The payment amount is predetermined and based on the WRP's availability and compliance with specified performance criteria, such as meeting water quality standards, maintaining operational efficiency and fulfilling contractual obligations.

The availability payment mechanism provides an incentive for the CAP to ensure that the plant remains operational and performs optimally throughout the contract period, encouraging it to manage and maintain the plant efficiently to receive the full payment. This payment mechanism promotes accountability, ensuring reliable and consistent water supply and provides a predictable revenue stream for the CAP, facilitating financing arrangements.

3.7. Costs

Capex costs

Due to the need for early in service date as described above, we plan to develop and build the assets inhouse. If following market engagement, further assessment of the separability of operations of the WwTW and the new WRP and discussions with Ofwat, the project's assets are tendered under an FOM model, we may recoup some or all of the construction costs.

Development costs

Sandown WRP will require a typical set of project development activities, including design, planning, consenting, surveys and studies, and procurement and contractual design. At this stage, a top-down

approach has been used to estimate development costs using the approach used by Ofwat at PR1917: Including design costs, pre-tender and tender costs and management costs, we currently assume development costs of £9.2m.

Payments to CAP

Assuming separability between the existing WwTW and the new assets, we would expect to tender a FOM contract to include all assets within the project. Assuming operations of the new assets begin in early 2027, we have estimated for payments to the CAP to start in 2028 through an ARD granted by Ofwat.
Due to the uncertainty of the bid prices received during the eventual tender process, we have produced estimates to enable us to show the potential costs for these payments in AMP8. The estimates will be refined as we gain more knowledge. See Data Table RR9.

[17] Calculation of project development cost is based on Ofwat's guidance as per supply demand balance enhancement feeder model https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM_E_WW_SDB_FD.xlsx - Sheet Deep dive_ANH

4. Aylesford Re-use – Project Business Case for DPC

4.1. Introduction

The purpose of this business case is to propose a DPC delivery route for the Aylesford re-use project. It is expected to be read in conjunction with the enhancement case for the project, which can be found in SRN05 Wholesale Water Costs and Outcomes and SRN26 Water Resources – Supply Enhancement Business Case.

4.2. Project overview

The Aylesford re-use project is a named scheme in the WRMP. It involves a new WRP near to our existing Aylesford WwTW, with a subsequent transfer via a new pipeline to discharge the recycled water into the River Medway and a waste stream to Ham Hill WwTW. The project is located in Kent, as shown in Figure 14 below.

The Aylesford recycling plant is to meet the 1 in 200-year drought resilience measure in the Kent West water resource zone and is part of PR19 outcomes performance commitments the project is required to be in service by 31 March 2027[18].

Figure 14 – Location of Aylesford in our service area

[18] The envisaged date is not deemed feasible by the project team, we are striving to renegotiate the ISD to July 2031 with the EA.

The WRMP 19 option solution was for recycled water from the new Aylesford WRP to Eccles Lakes or to the River Medway upstream of the Springfield abstraction to put 18 Ml/d into supply. Following solution development the scheme shall produce a combination of:

- A new WRP near Aylesford WwTW with a 18Ml/d capacity with a minimum deployable output into supply of 14Ml/d.
- An 8-kilometer transfer pipeline to the River Medway, to either upstream or downstream of Burham's Springfield abstraction point as shown in the below Figures 15 and 16.
- A reject stream pipeline from the WRP to Aylesford WwTW or a 3km pipeline to Ham Hill WwTW.
- New crude side stream treatment at the existing Aylesford WwTW site to improve the quality of the effluent[19].

Figure 15 – Map illustrating pipeline routing to possible discharge locations

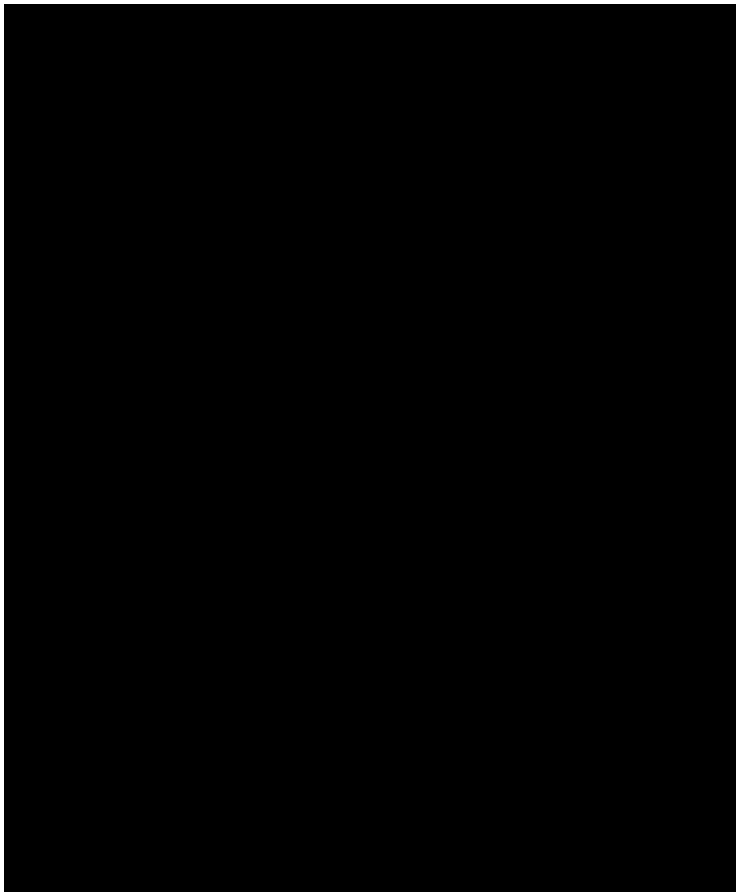
Upgrades to the existing Aylesford wastewater treatment works are expected to be required and currently a crude side stream treatment20 is preferred. The process would intercept the flow after the primary treatment area. This means we would have to build part of the new process to take load off the existing plant, enabling some of the existing units to be replaced and allow space for the rest of the new process to be constructed in

[19] Upgrades to the existing site are considered very complex to be delivered by a third party, and as such are anticipated to be delivered and operated by us and may be excluded from the DPC scope.
[20] A crude side stream treatment will effectively implement a treatment stream alongside the existing site, allowing the diversion of flows necessary to implement the upgrades required at the existing WwTW.

a phased approach to maintain compliance to the existing consents. The construction of the new WRP will therefore need to be aligned to the implementation of the side stream and upgrade works at Aylesford WwTW.

Currently two discharge locations are under consideration at East Barming (new discharge) at Springfield (new discharge), shown in Figure 15. The WRMP19 option also considered a discharge at Wateringbury WwTW which has been discounted following liaison with the EA, shown in Figure 16. The discharge location selected will be decided through additional detailed project development and design works, and through engagement with the EA.

Figure 16 – Early illustration of Aylesford WRP and transfer



Risks and issues

The project is currently in its development phase and early design works have begun. However, there are existing challenges in determining the ideal location, acquiring the necessary land, ensure access and undertaking all necessary surveys. We are assessing the suitability of building the recycling plant on the existing Aylesford WwTW site, which has its own significant challenges.

Significant environmental work is required, including aquatic surveys, screening and scoping EIA to inform planning permission. River and treatment works sampling will also be required to inform the applications for discharge permits. These are currently considered for both potential discharge points for both the recycled water (at East Barming and at Springfield) and for the reject stream (at Aylesford WwTW and at Ham Hill WwTW).

4.3. Eligibility for DPC

We have applied Ofwat's assessment methodology to determine whether the project is eligible for DPC. Table 10 summarises the outcome of the DPC eligibility assessment.

Table 10 – Summary of DPC eligibility assessment outcome – Aylesford re-use

DPC Eligibility Test	
Construction capex in AMP8	£99.3m
Annual opex	£2.1m
Renewal Capex[21]	£59.7m
Assumed asset life	60 years
Whole life totex	£215.0m
Size Test	***Pass***
Programme scalability test	The project satisfies the size test on an individual basis. There may be an opportunity to bundle this project with the Ford WRP project, which has a similar scope and timescales. The potential to package these projects together will be monitored as they are progressed and as timescales evolve.
Construction risk test	No significant reasons have so far been identified why most construction risks cannot be transferred or mitigated, although we note that there is a concern around building the WRP on our existing wastewater operational land.
Operations and maintenance risk test	No significant reasons have so far been identified why most operations and maintenance risks cannot be transferred or mitigated.
Discreteness Test	***Pass***
DPC Eligible	***Yes***

[21] To maintain consistency with our investment planning processes and with figures presented elsewhere in the business plan, renewal capex has been calculated using forecast data to the end of AMP13.

The project successfully meets the size and discreteness test criteria and is eligible for delivery via DPC. We therefore intend to procure the Design-Build-Finance-Operate-Maintain (DBFOM) of the project through DPC under a Late tender model[22].

4.4. Delivery timeline

We are progressing the delivery of the Aylesford WRP project. Early design works have begun and planning works are due to commence in the near future. Water quality sampling is also underway.

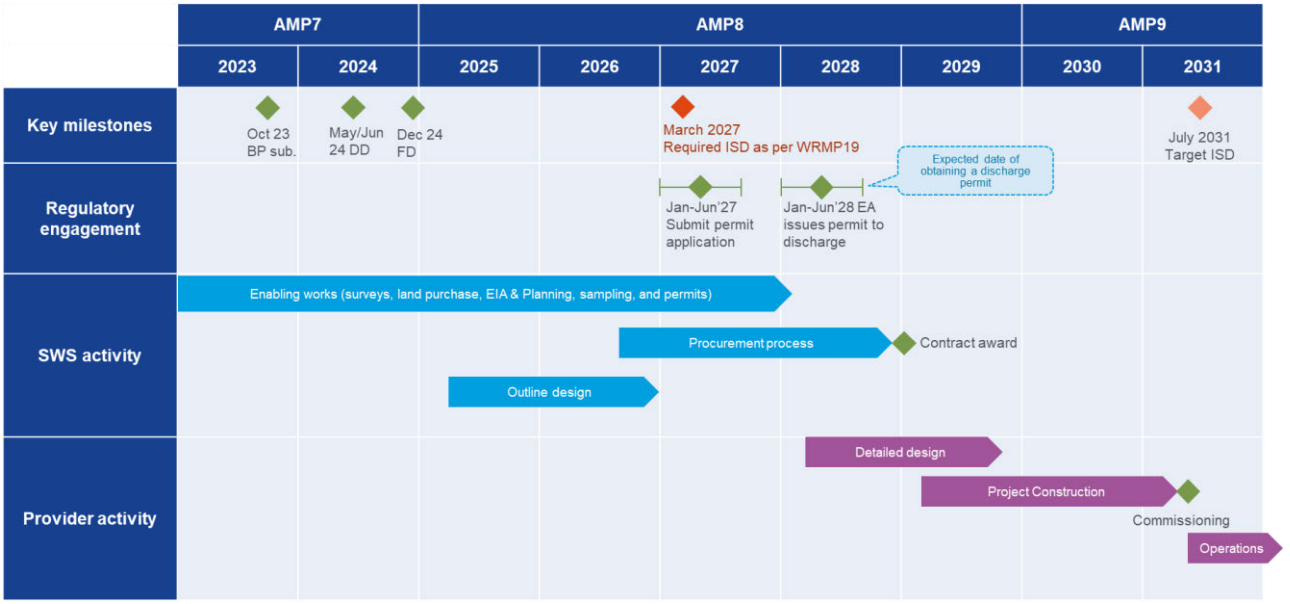
Our proposed delivery timeline has been developed to ensure that the capacity is to be available when needed, based on our WRMP. The project was first identified in our WRMP19 with a required in-service date of 31 March 2027[23]. In our WRMP24 the required in-service date for the project has now changed to 2031[24]. The delivery timeline we have proposed for this project reflects this updated timeline.

A key planning dependency is the need to obtain the EA discharge permits required for the operation of the WRP. At present these are not expected to be obtained until early 2028[25]. The discharge permit is critical as it will determine the quality of discharge allowed from the WRP and will heavily influence the required technical specifications. We plan to work alongside the EA to ensure that the design decisions are aligned as closely as possible to the developing view of discharge requirements.

This current timetable is illustrated in the Figure 17 below.

[22] This recommendation is based on early assumptions about the project's scope and technical characteristics, which remain subject to further development. We will continue monitoring and revisiting the suitability of the proposed delivery model as the project progresses and will engage with Ofwat in a timely manner regarding any change necessary.
[23] At PR19, a performance commitment was attached to the delivery of capacity through our long-term supply and demand schemes. Aylesford represents 18Ml/d of the 182.5Ml/d total capacity covered by the performance commitment.
[24] Our plan is based on our dWRMP24 which has not been signed off by the Secretary of State and hence is subject to change.
[25] We plan to submit its permit application to the EA c.1 year prior, in early 2027.

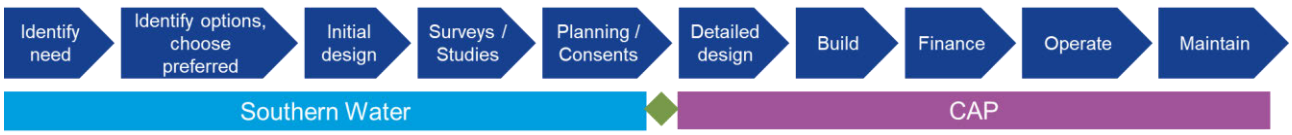
Figure 17 – Aylesford delivery timeline



4.5. Tender model

On the basis of these key milestones Aylesford is considered suitable for a Late DPC delivery model. We expect to be responsible for conducting the project development activities, before tendering the contract. We would expect the CAP to be responsible for detailed design, construction, financing, operations, and maintenance of the assets over a typical DPC term (c.25 years[26]). The Figure 18 below illustrates responsibilities under Late tender model.

Figure 18 – Allocation of responsibility under the Late tender model



The Late model has the potential to offer several benefits to the delivery of the project through the procurement of a CAP.

- We are familiar with the project's requirements and are best positioned to site the new assets, undertake essential surveys, obtain consents and initiate the outline design. We are also well-positioned to engage with bidders during these development activities to ensure flexibility is maintained in the planning envelope and within project specifications. Completion of key activities prior to contract award also de-risks the project from bidders' perspective, allowing them to offer more competitive bid prices.

[26] The duration of contract term would need to be tested.

- The detailed design for the project will be undertaken by those with the skills and experiences in delivering similar assets, allowing both us and our customers to benefit from efficiency and innovation in the construction and operation of the assets. Water recycling plants are new to the UK market, meaning the market is likely best placed to offer innovation in design, construction and operation.
- Competitive pressure in the procurement process will drive down the cost of delivering the works. This will also help to ensure that project risks are priced efficiently, as bidders who include significant provision for risk are unlikely to be successful.
- The CAP may be able to achieve a preferable cost of capital that better reflects the risks involved in the delivery of the project.

4.6. Commercial model

DPC Delivery Model

We propose to conduct a DPC procurement process tendering a DBFOM contract to appoint a CAP who will assume responsibility for the delivery of the project. Upon contract award, we along with the CAP would enter into a CAP Agreement (CAPA) with the following key features:

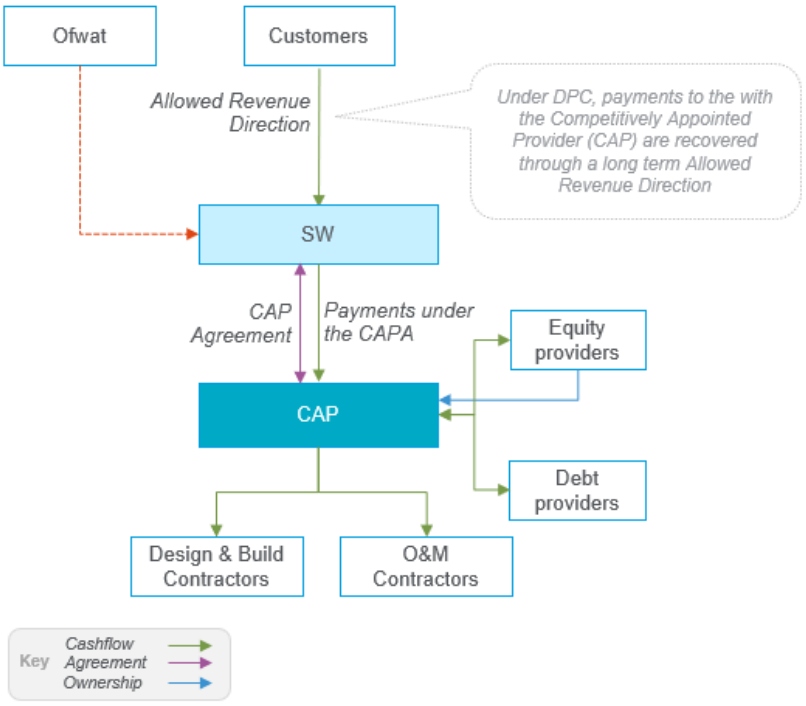
- The contract would outline the CAP's obligations and payment terms. An availability-based payment mechanism is assumed to best suit the Aylesford product (see subsection 4.6.4 below).
- Payments to the CAP would typically commence only when the services are being delivered, thus deferring the cost to customers compared to the traditional inhouse delivery model.
- The contract would include the operation and maintenance of the assets over a defined period of time, likely 25+ years based on Ofwat's DPC guidance.
- At the end of contract term the assets are expected to have a remaining useful life and we may retender the assets or bring them inhouse.

In parallel to the CAPA we would enter into an Allowed Revenue Direction with Ofwat, which would determine the recovery of payments to the CAP from customers. This would be for the duration of the CAPA and would operate alongside the existing price control mechanism.

The CAP would not hold a separate license and we would retain responsibility for ensuring the performance of the CAP under our own license. Critically we would look to ensure that the specification of the CAPA contained all relevant performance obligations such that the CAP's operations align to our regulatory and statutory obligations.

The contractual arrangements are illustrated in Figure 19 below.

Figure 19 – Contractual model structure for a DPC DBFOM contract



Risk Allocation

The tables below outline a high-level risk distribution for the project with considerations given to the Late tender model, in accordance with DPC guidance and their specific application to Aylesford. The risk allocation tables provide a comprehensive overview of how risks are assigned and managed throughout the project's lifecycle, ensuring transparency and clarity in terms of responsibility and accountability.

Table 11 – Construction and asset delivery risk assessment – Aylesford re-use

Construction and asset delivery risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Planning	✓	✓		Under a Late model we would secure planning, land and any other necessary consents.	N/A
Land	✓	✓			
Other Consents	✓	✓			
On time delivery			✓	Under a Late model the CAP would be responsible for ensuring timely construction of the assets.	Possible compensation events for delay and/or damages.
Cost overruns	✓	✓	✓	Following Ofwat's guidance we assume a target cost contract where cost overruns are shared.	Contractual pain/gain sharing (where applicable.
Site conditions			✓	CAP best placed to manage.	N/A
Works information		✓		We would manage under a Late model.	N/A
Detailed design			✓	CAP best placed to manage.	N/A
Third Parties		✓	✓	Shared risk of stakeholder and customer management during delivery of works.	Performance incentive could be applied.
Changes in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations if required.
Interfaces with our existing assets		✓		We are best placed to manage.	N/A
Commissioning			✓	CAP best placed to manage.	N/A

Construction and asset delivery risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Financing costs	✓		✓	As per Ofwat's risk allocation.	N/A
Refinancing gains	✓		✓	In the event of refinancing by an SPV we would seek to benefit with savings passed on to customers.	N/A

Table 12 – Operations and maintenance risk assessment – Aylesford re-use

Operation and maintenance risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Cost (operations and maintenance)			✓	The CAP will be responsible for and bear risk related to operating the assets efficiently.	Benchmarking and/or market testing provisions will enable the comparison of long-term opex against comparable projects.
Operational performance		✓	✓	CAP best placed to manage. We may bear some risk as the assets form part of our network.	Asset availability and flow volumes incentives as part of the payment mechanism as appropriate.
Compliance with statutory and regulatory obligations which impact the scope		✓	✓	Water quality requirements may apply. We will retain some obligations and responsibilities. CAP performance requirements will reflect our obligations to mitigate risk of breach.	CAP likely to be incentivised / penalised under contract for any failures resulting in a breach of statutory / regulatory duty.
Defects during operations		✓	✓	The CAP would be responsible for defects in anything it builds and constructs.	N/A
Demand risk	✓	✓		We are best placed to manage through water resource planning and scope to match expected demand and levels of utilisation.	N/A
Over-utilisation	✓	✓			
Change in scope	✓	✓		As per Ofwat's risk allocation.	N/A

Operation and maintenance risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Value testing	✓		✓	As per Ofwat's risk allocation.	N/A
Condition of asset/hand back risk			✓	CAP best placed to manage.	Deductions from Residual Value Payment or similar reconciliation to account for condition at the end of the contract term.

Market Engagement

A high-level assessment has been made of the likely level of market appetite, taking into account existing known interest in the sector, relevant precedent from other sectors and the nature of the project.

In May 2023 we submitted a request for information to the open market and conducted a presentation to apprise interested parties of the Aylesford project. The presentation focused on the design and construction of assets at the WwTW and the building of a new WRP.

We received a lot of interest and 12 full responses. There were third-party providers that would be able to deliver all assets. The response to the RFI is not a definitive assessment for a DBFOM contract, but a high-level view of overall market interest. Market engagement to date indicates strong interest in re-use opportunities.

We will need to conduct extensive market engagement to develop a market and foster interest in the project before tender launch. This will help to ensure a competitive procurement process.
Key issues which are likely to be tested and are likely to be of interest to the market include:

- The project's scope, including which assets will be designed, constructed, operated and maintained by the CAP.
- The proposed commercial arrangements.

These issues and others will need to be tested with the market as the project is developed further.

Payment Mechanism

Aylesford is a new construction project and we currently consider the best suited payment mechanism to use is an availability payment mechanism.

The availability payment mechanism for WRP plants refers to a payment structure where the CAP receives compensation based on the availability and performance of the WRP. Under this mechanism the payment is linked to the plant's ability to operate and provide the agreed-upon level of service, rather than being tied directly to volumes generated. The payment amount is predetermined and based on the WRP's availability and compliance with specified performance criteria, such as meeting water quality standards, maintaining operational efficiency and fulfilling contractual obligations.

The availability payment mechanism provides an incentive for the CAP to ensure that the plant remains operational and performs optimally throughout the contract period, encouraging it to manage and maintain the plant efficiently to receive the full payment. This payment mechanism promotes accountability, ensuring reliable and consistent water supply and provides a predictable revenue stream for the CAP, facilitating financing arrangements.

4.7. Costs

Capex costs

We currently assume the scope to be fully delivered via DPC, although as the project is developed this may need to be reassessed, especially as current construction cost assumptions include additional treatments that may be required at our existing WwTW site.

Development costs

Aylesford will require a typical set of project development activities, including design, planning, consenting, surveys and studies and procurement and contractual design. Currently, the development cost associated with sampling has amounted to £1 million, and it is anticipated that this figure will continue to increase as the project advances. This figure is not included in the table below. It is possible that the project will incur significant land purchase costs, but these are not known at this time.

At this stage, a top-down approach has been used to estimate development costs using the approach used by Ofwat at PR19[27]: Including design costs, pre-tender and tender costs and management costs, we currently assume development costs of £9.2m.

Payments to a CAP

As the assets are only planned to be in commission in 2031 and delivery via DPC allows for payments to a CAP to only be made after the assets have been commissioned, we do not currently expect to make any payments in AMP8.

[27] Calculation of project development cost is based on Ofwat's guidance as per supply demand balance enhancement feeder model https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM_E_WW_SDB_FD.xlsx - Sheet Deep dive_ANH

5. Ford Water Re-use – Project Business Case for DPC

5.1. Introduction

The purpose of this business case is to propose a DPC delivery route for the Ford WRP project. It is expected to be read in conjunction with the enhancement case for the project, which can be found in SRN05 Wholesale Water Costs and Outcomes and SRN26 Water Resources – Supply Enhancement Business Case.

5.2. Project overview

The Ford project involves a new WRP near to our existing Ford WwTW, with a subsequent transfer to release the recycled water into the River Rother and a waste stream to the existing long sea outfall at Littlehampton. It is located in West Sussex, as shown in the Figure 20 below.

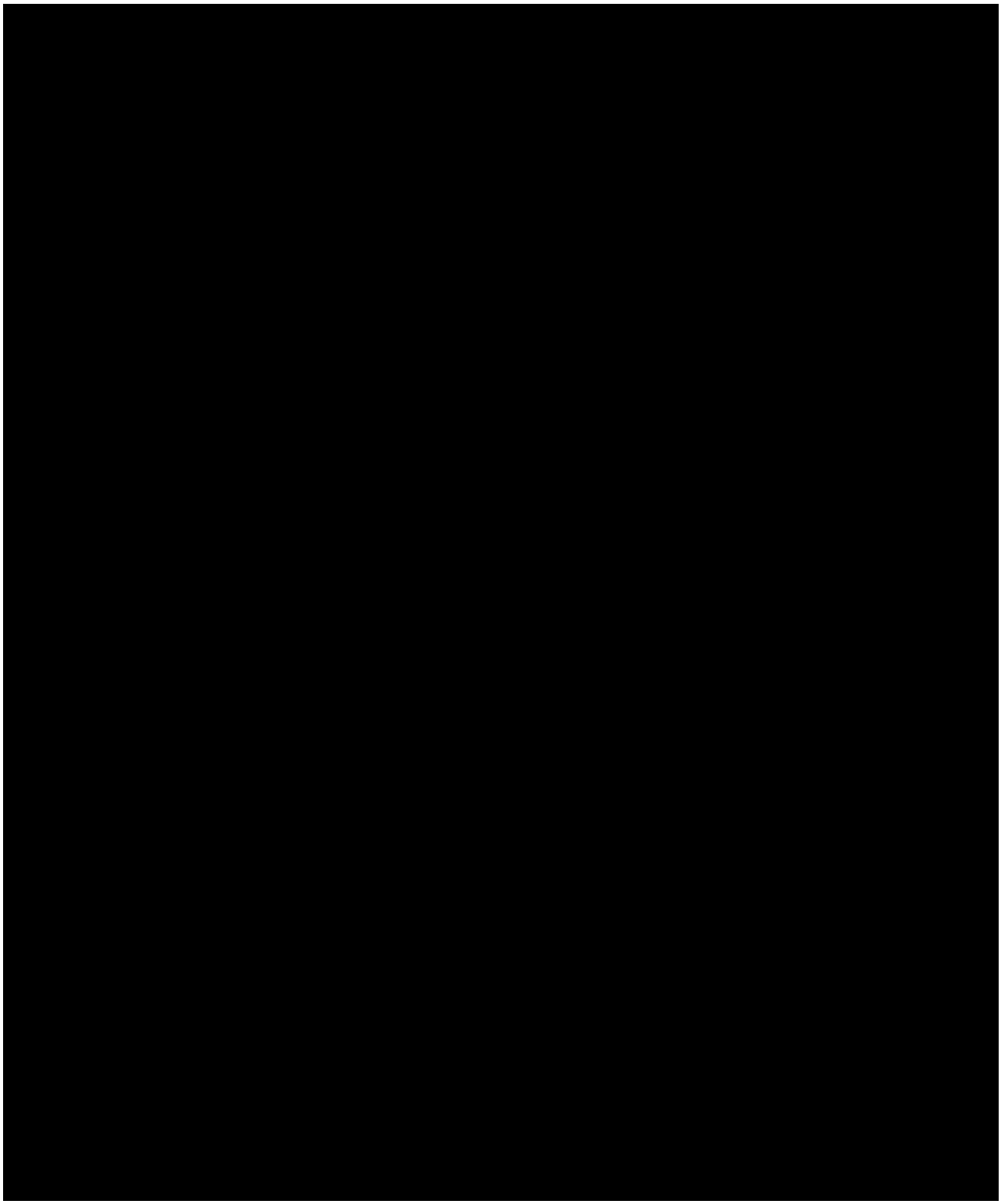
The Ford project is to meet the 1 in 200-year drought resilience measure in the Sussex North water resource zone and is part of our PR19 outcomes performance commitments with the project required to be in service by 31 March 2027.

Figure 20 – Location of Ford in our service area

As can be seen in

Figure 21, the Ford WRP was planned to be located in Ford, with a transfer pipeline running north up to the proposed discharge point at the river Rother downstream of Hardham WSW.

Figure 21 – Early illustration of Ford WRP and transfer



The project involves the following assets:

- A new WRP is planned to have a 20Ml/d capacity with a deployable output from Hardam to increase by up to 12.8 Ml/d.
- New tertiary treatment at the existing Ford WwTW to improve the quality of the effluent.[28]
- A 18-kilometer transfer pipeline through the South Downs National Park to the River Rother along with associated pumping stations and break pressure tanks.

Figure 22 – Map illustrating possible route from Ford WRP

The preferred location has been chosen based on the availability of wastewater for reuse at Ford WRP. The preferred discharge point on the River Rother would be downstream of Hardham WSW's abstraction.

Risks and issues

The project is currently in its development phase. There are challenges in determining the ideal location, acquiring the necessary land and access and doing all necessary surveys.

[28] Upgrades to the existing site are considered proh bitively complex to be delivered by a third party. Following further assessment they may be considered part of our scope within the project.

We will need to gain licences and permits, including:

- permits to discharge recycled water into the River Rother; and
- permits to discharge the reject stream to the long sea outfall. (There is a risk that there may be inadequate dispersion of the reject stream with remedial or a new outfall potentially needed)

To gain the necessary permits and licenses we will require significant works to be completed, including:

- Environmental and aquatic surveys to inform EIA;
- Planning permission through the South Downs National Park; and
- River and treatment works sampling to inform the discharge permit applications.

5.3. Eligibility for DPC

We have applied Ofwat's assessment methodology to determine whether the project is eligible for DPC. Table 13 summarises the outcome of the DPC eligibility assessment.

Table 13 – Summary of DPC eligibility assessment outcome – Ford re-use

DPC Eligibility Test	
Construction capex in AMP8	£63.4m
Annual opex	£2.6m
Renewal Capex[29]	£68.4m
Assumed asset life	60 years
Whole life totex	£205.4m
Size Test	***Pass***
Programme scalability test	The project satisfies the size test on an individual basis. There may be an opportunity to bundle this project with the Aylesford WRP project, which has a similar scope and currently similar timescales. The potential to package these projects will be monitored as they are progressed and as timescales evolve.
Construction risk test	No significant reasons have so far been identified as to why most construction risks cannot be transferred or mitigated.

[29] To maintain consistency with our investment planning processes and with figures presented elsewhere in the business plan, renewal capex has been calculated using forecast data to the end of AMP13.

Operations and maintenance risk test	No significant reasons have so far been identified as to why most operations and maintenance risks cannot be transferred or mitigated.
Discreteness Test	***Pass***
DPC Eligible	***Yes***

The project successfully meets the size and discreteness test criteria and is eligible for delivery via DPC. We therefore intend to progress the project, to procure a DBFOM contract[30].

5.4. Delivery timeline

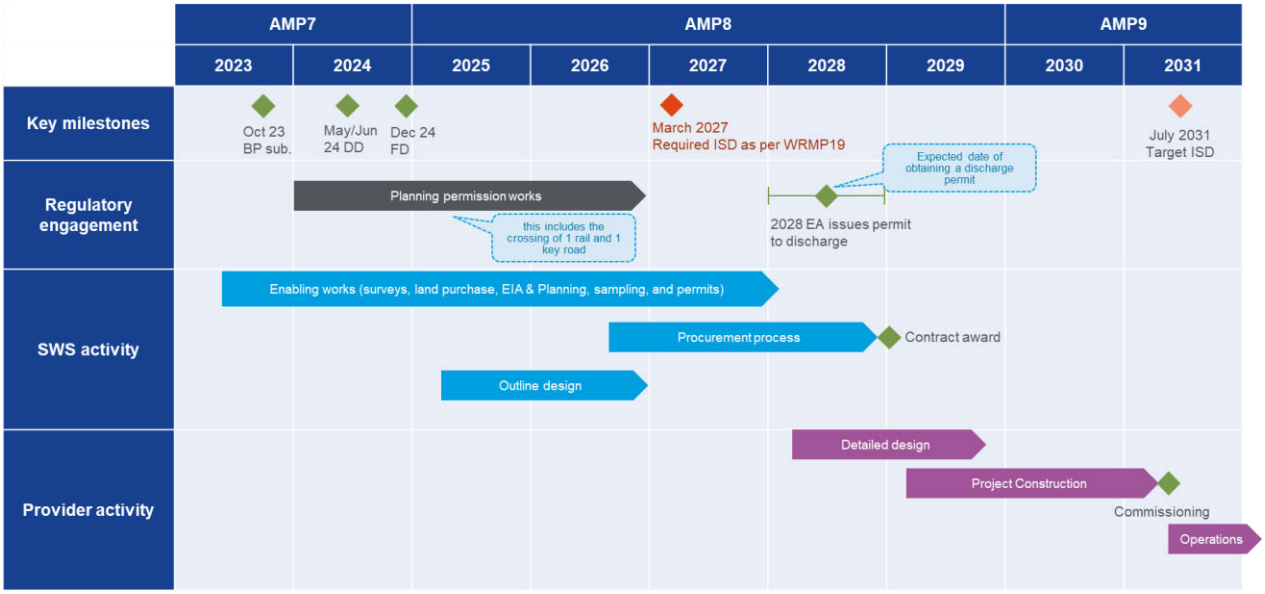
We are progressing the delivery of the Ford WRP project. Early design works have begun and planning works are due to commence in the near future. Water quality sampling is also underway.

Our proposed delivery timeline has been developed to ensure that the capacity is to be available when needed, based on our WRMP. The project was first identified in WRMP19 with a required in-service date of 31 March 2027. In our WRMP24, the required in-service date has now changed to 2031[31]. The delivery timeline we have proposed for this project reflects this updated timeline.

There are uncertainties in the current schedule. We need to obtain the EA discharge permits required for the operation of the WRP. At present these are not expected to be obtained until early 2028[32]. The discharge permit is critical as it will determine the quality of discharge allowed from the WRP, and therefore will heavily influence the required technical specification. We plan to work alongside the EA to ensure that the design decisions are aligned as closely as possible to the developing view of discharge requirements.

[30] This recommendation is based on early assumptions about the project's scope and technical characteristics, which remain subject to further development. We will continue monitoring and revisiting the suitability of the proposed delivery model as the project progresses and will engage with Ofwat in a timely manner regarding any change necessary.
[31] Our plan is based on our dWRMP24 which has not been signed off by the Secretary of State and hence is subject to change.
[32] We plan to submit its permit application to the EA c.1 year prior, in early 2027.

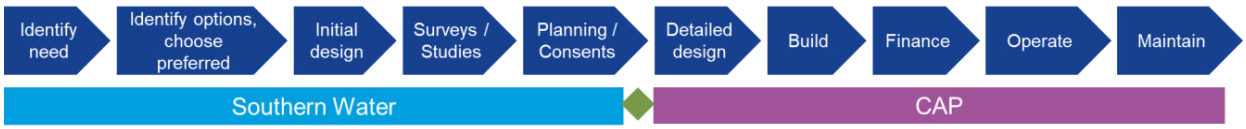
Figure 23 – Ford delivery timeline



5.5. Tender model

Under the baseline delivery schedule, a Late tender model is the best suited for Ford. Under the Late model, we would complete the initial design, surveys, planning and consents required for the project. The CAP would be responsible for the detailed design, financing, construction, operations and maintenance of the assets over a typical DPC term (c.25 years33). The diagram below illustrates the responsibilities under Late tender model.

Figure 24 – Allocation of responsibility under the Late tender model



The Late model has the potential to offer several benefits to the delivery of the project through the procurement of a CAP.

- We are familiar with the project's requirements and are best positioned to site the new assets, undertake essential surveys, obtain consents and initiate the outline design. We are also well-positioned to engage with bidders during these development activities to ensure flexibility is maintained in the planning envelope and within project specifications. Completion of key activities prior to contract award also de-risks the project from bidders' perspective, allowing them to offer more competitive bid prices.

[33] The duration of contract term would need to be tested.

- The detailed design for the project will be undertaken by those with the skills and experiences in delivering similar assets, allowing both us and our customers to benefit from efficiency and innovation in the construction and operation of the assets. Water recycling plants are new to the UK market, meaning the market is likely best placed to offer innovation in design, construction, operations and maintenance.
- Competitive pressure in the procurement process will drive down the cost of delivering the works. This will also help to ensure that project risks are priced efficiently, as bidders who include significant provision for risk are unlikely to be successful.
- The CAP may be able to achieve a preferable cost of capital that better reflects the risks involved in the delivery of the project.

5.6. Commercial model

DPC Delivery Model

We propose to conduct a DPC procurement process tendering a DBFOM contract to appoint a CAP who will assume responsibility for delivering the project. Upon contract award, we and the CAP would enter into a CAP Agreement (CAPA) with the following key features:

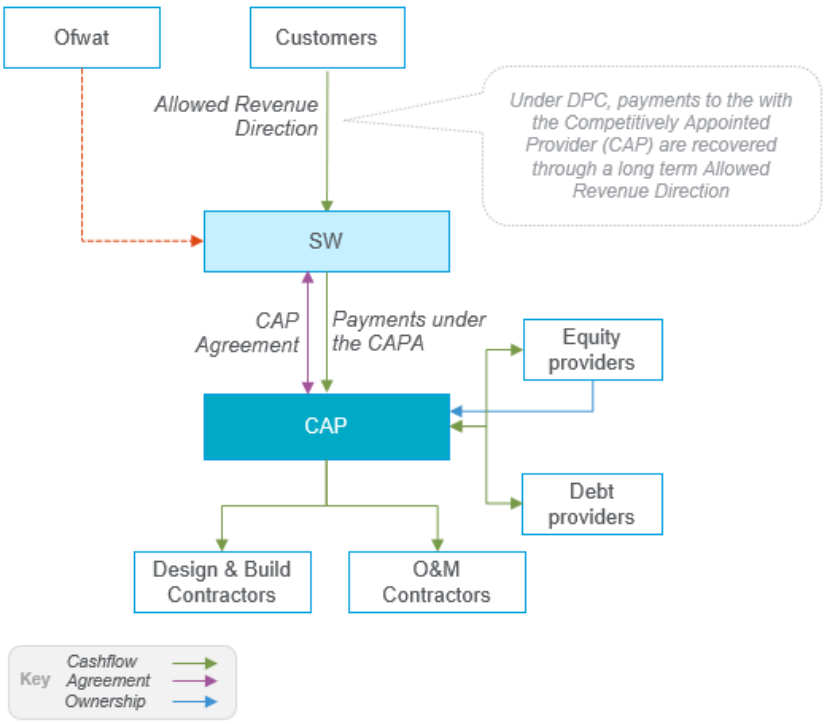
- The contract would outline the CAP's obligations and payment terms. An availability-based payment mechanism is assumed to best suit the Ford project (see subsection 5.6.4 below).
- Payments to the CAP would typically commence only when the services are being delivered, thus deferring the cost to customers compared to the traditional inhouse delivery model.
- The contract could include the operation and maintenance of the assets over a defined period of time, likely 25+ years based on Ofwat's DPC guidance.
- At the end of contract term the assets are expected to have a remaining useful life, in which case we may retender a contract or bring the assets inhouse.

In parallel to the CAPA, we would enter into an Allowed Revenue Direction with Ofwat, which would determine the recovery of payments to the CAP from customers. This would be for the duration of the CAPA and would operate alongside the existing price control mechanism.

The CAP would not hold a separate license and we would retain responsibility for ensuring the performance of the CAP under our own license. Critically we would look to ensure that the specification of the CAPA contained all relevant performance obligations such that the CAP's operations align to our regulatory and statutory obligations. These would include (inter alia) DWI requirements and the terms of the discharge permit obtained from the EA.

The contractual arrangements are illustrated in Figure 25.

Figure 25 – Contractual model structure for a DPC DBFOM contract



Risk Allocation

The tables below outline a high-level risk distribution for the project with considerations given to the Late tender model, in accordance with DPC guidance and their specific application to Ford. The risk allocation tables provide a comprehensive overview of how risks are assigned and managed throughout the project's lifecycle, ensuring transparency and clarity in terms of responsibility and accountability.

Table 14 – Construction and asset delivery risk assessment – Ford re-use

Construction and asset delivery risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Planning	✓	✓		Under a Late model we would secure planning, land and any other necessary consents.	N/A
Land	✓	✓			
Other Consents	✓	✓			
On time delivery			✓	Under a Late model the CAP would be responsible for ensuring timely construction of the assets.	Compensation events for delay and/or damages.
Cost overruns	✓	✓	✓	Following Ofwat's guidance we assume a target cost contract and cost overruns are shared.	Contractual pain/gain sharing (where applicable).
Site conditions			✓	CAP best placed to manage.	N/A
Works information		✓		We would manage under a Late model.	N/A
Detailed design			✓	CAP best placed to manage	N/A
Third Parties		✓	✓	Shared risk of stakeholder and customer management during delivery of works	Performance incentive could be applied.
Changes in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations if required.
Interfaces with our existing assets		✓		We are best placed to manage.	N/A
Commissioning			✓	CAP best placed to manage.	N/A

Construction and asset delivery risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Financing costs	✓		✓	As per Ofwat's risk allocation.	N/A
Refinancing gains	✓		✓	In the event of refinancing by an SPV we would seek to benefit with savings passed on to customers.	N/A

Table 15 – Operations and maintenance risk assessment – Ford re-use

Operation and maintenance risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Cost (operations and maintenance)			✓	The CAP will be responsible for and bear risk related to operating the assets efficiently.	Benchmarking and/or market testing provisions will enable the comparison of long-term opex against comparable projects.
Operational performance		✓	✓	CAP best placed to manage. We may bear some risk as the assets form part of our wider network.	Asset availability and flow volumes incentives as part of the payment mechanism as appropriate.
Compliance with statutory and regulatory obligations which impact the scope of the DPC project		✓	✓	Water quality requirements may apply. We will retain some obligations and responsibilities. CAP performance requirements will reflect our obligations to mitigate risk of breach.	CAP likely to be incentivised / penalised under contract for any failures resulting in a breach of statutory / regulatory duty.
Defects during operations		✓	✓	The CAP would be responsible for defects in anything it constructs and builds.	N/A
Demand risk	✓	✓		We are best placed to manage through water resource planning and scope to match expected demand and levels of utilisation.	N/A
Over-utilisation	✓	✓			

Operation and maintenance risks	Application to the project				
	Cust.	SW	CAP	Assessment	Mitigations
Change in scope	✓	✓		As per Ofwat's risk allocation.	N/A
Value testing	✓		✓	As per Ofwat's risk allocation.	N/A
Condition of asset/hand back risk			✓	CAP best placed to manage.	Deductions from Residual Value Payment or similar reconciliation to account for condition at the end of the contract term.

Market Engagement

A high-level assessment has been made of the likely level of market appetite, taking into account existing known interest in the sector, relevant precedent from other sectors and the nature of the project.

In May 2023 we submitted a request for information to the open market and conducted a presentation to apprise interested parties of the Ford project. The presentation focused on the design and construction of the assets at the WwTW and the building of a new WRP.

We received a lot of interest and 12 full responses. There were third-party providers that would be able to deliver all assets. The response to the RFI is not a definitive assessment for a DBFOM contract, but a high-level view of overall market interest. Market engagement to date indicates strong interest in re-use opportunities.

We will need to conduct extensive market engagement to develop a market and foster interest in the project before tender launch. This will help to ensure a competitive procurement process.
Key issues which are likely to be tested and are likely to be of interest to the market include:

- The project's scope, including which assets will be designed, constructed, operated and maintained by the CAP.
- The proposed commercial arrangements.

These issues and others will need to be tested with the market as the project is developed further.

Payment Mechanism

Ford is a new construction project and we currently consider the best suited payment mechanism to use is an availability payment mechanism.

The availability payment mechanism for WRP plants refers to a payment structure where the CAP receives compensation based on the availability and performance of the WRP. Under this mechanism the payment is linked to the plant's ability to operate and provide the agreed-upon level of service, rather than being tied directly to volumes generated. The payment amount is predetermined and based on the WRP's availability and compliance with specified performance criteria, such as meeting water quality standards, maintaining operational efficiency and fulfilling contractual obligations.

The availability payment mechanism provides an incentive for the CAP to ensure that the plant remains operational and performs optimally throughout the contract period, encouraging it to manage and maintain the plant efficiently to receive the full payment. This payment mechanism promotes accountability, ensuring reliable and consistent water supply and provides a predictable revenue stream for the CAP, facilitating financing arrangements.

5.7. Costs

Capex costs

We currently assume the scope to be fully delivered via DPC. Although as the project is developed this may need to be reassessed, especially as current construction cost assumptions include additional treatments that may be required at our existing WwTW site.

Development costs

Ford will require a typical set of project development activities, including design, planning, consenting, surveys and studies, and procurement and contractual design.
At this stage, a top-down approach has been used to estimate development costs using the approach used by Ofwat at PR19[34]: Including design costs, pre-tender and tender costs and management costs, we currently assume development costs of £6.6m.

Payments to a CAP

As the assets are only planned to be in commission in 2031 and delivery via DPC allows for payments to a CAP to only be made after the assets have been commissioned, we do not currently expect to make any payments in AMP8.

[34] Calculation of project development cost is based on Ofwat's guidance as per supply demand balance enhancement feeder model https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM_E_WW_SDB_FD.xlsx - Sheet Deep dive_ANH

6. Sittingbourne Industrial Re-use – Project Business Case for DPC

6.1. Introduction

The purpose of this business case is to propose a DPC delivery route for the Sittingbourne industrial re-use project. It is expected to be read in conjunction with the enhancement case for the project, which can be found in SRN05 Wholesale Water Costs and Outcomes and SRN26 Water Resources – Supply Enhancement Business Case.

6.2. Project overview

The Sittingbourne industrial re-use project involves the construction of a new 7.5Ml/d water recycling plant at Sittingbourne to supply a paper mill with recycled water and free up its existing borehole abstraction to supply water to our customers. Figure 26 below illustrates the location of Sittingbourne.

Figure 26 – Location of Sittingbourne

An abstraction licence supplying water from boreholes to a paper mill is owned by DS Smith, a provider of packaging, paper products and recycling services. DS Smith owns and operates Kemsley paper mill, the UK's largest mill for recycled paper, at its site in Sittingbourne where it utilises the groundwater in its paper/board making processes.

We propose to construct a new WRP adjacent to the existing Sittingbourne WwTW to supply recycled water to DS Smith's Kelmsley paper mill. This would free up DS Smith's boreholes to be used to supply drinking water to our customers.

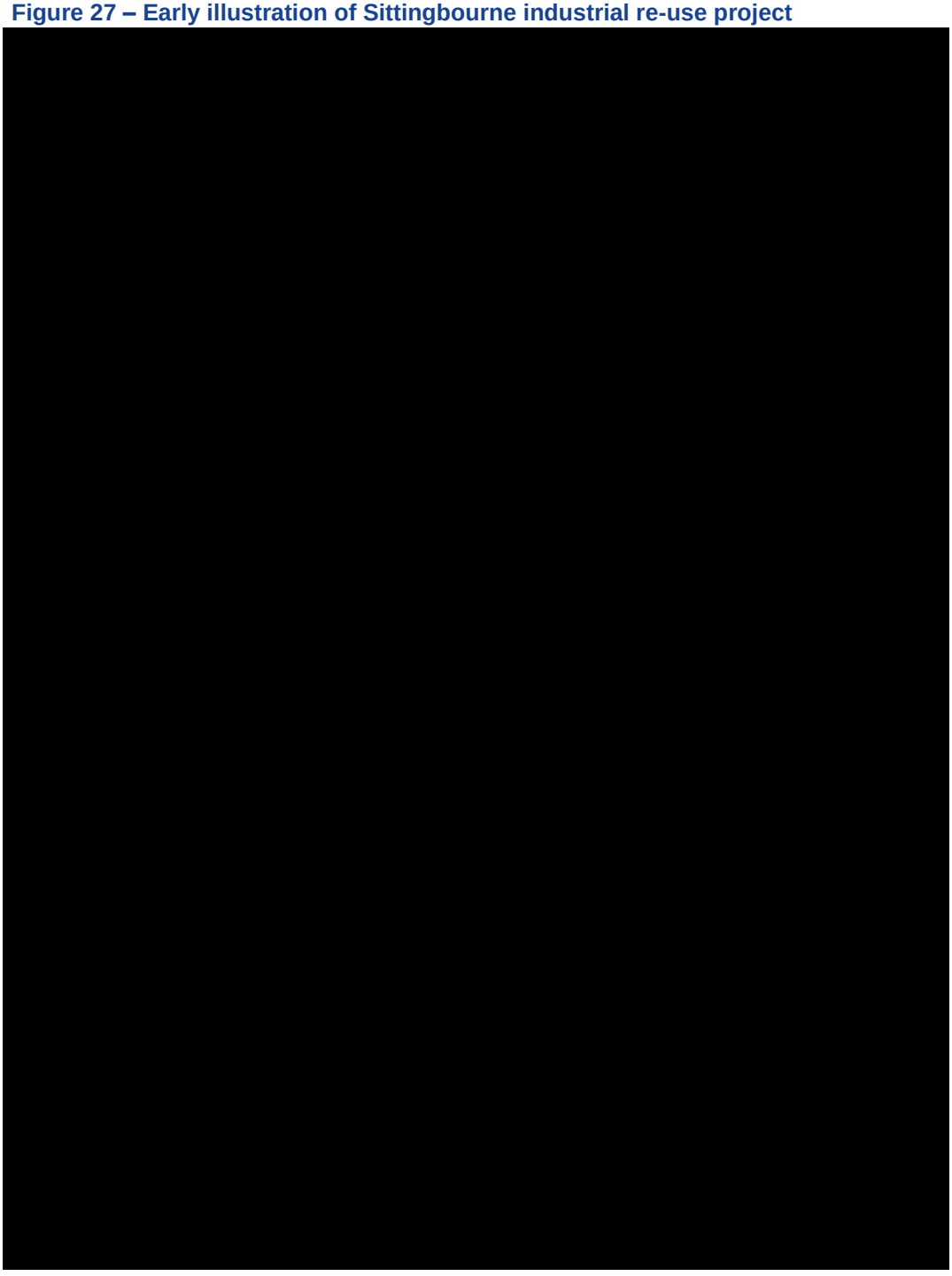
The solution would require the following assets:

- A new WRP with a 7.5Ml/d capacity.
- A new pipelines from the existing Sittingbourne WwTW to the new WRP.
- A transfer pipeline from the WRP to the paper mill.

- A pipeline from the WRP to the existing outfall at Sittingbourne WwTW to discharge the new WRP's reject stream.
- A new groundwater treatment works to treat the groundwater from the boreholes.
- A transfer from DS Smith's boreholes to the new groundwater treatment works.
- A pipeline transferring the treated water from the groundwater treatment works into our network.

Figure 27 illustrates the schematic of the project.

Figure 27 – Early illustration of Sittingbourne industrial re-use project



Risk and issues

There are significant risks and issues that will need to be addressed as the project is developed.

- We will require a commercial agreement where DS Smith accepts the relinquishment of its groundwater license with the demand being met with recycled water.
- We will also need to consider VfM. This should be based on DS Smith's need of certainty of supply. We would build and operate a WRP for a single commercial entity.
- The supply of expensive recycled water would be required continuously for the paper mill to conduct their operations. The relinquished boreholes would then be used by us as base supply and used in a drought at full capacity to support our customers.
- We currently do not have a site at which to locate the WRP or the groundwater treatment works and there are significant challenges around the pipeline routes, designations and residential development due to the congested nature of the area.
- We along with DS Smith will need to engage with the Environmental agency (EA) to agree a way to transfer the borehole licenses from DS Smith to us. Additionally, we will need to have some assurance that the abstraction license and flow/ volume from the boreholes will be available for a considerable period of time.
- Additionally, we assume that the WRP's reject stream can be discharged through the existing outfall at Sittingbourne WwTW existing outfall with a discharge license granted by the EA[35].
- Other options as potential sources of water supply would need to be further considered, including an option to use alternative boreholes located at Cockleshell Walk (under the same DS Smith abstraction licence). However, these have not been used for years and are understood to be capped.

6.3. Eligibility for DPC

We have applied Ofwat's assessment methodology to determine whether the project is eligible for DPC. Table 16 summarises the outcome of the DPC eligibility assessment.

Table 16 – Summary of DPC eligibility assessment outcome – Sittingbourne industrial re-use

DPC Eligibility Test	
Construction capex in AMP8	£108.6m
Annual opex	£3.9m
Renewal Capex[36]	£71.6m
Assumed asset life	60 years
Whole life totex	£288.0m

[35] The discharge of more concentrated waste streams to the Swale would also appear to be contentious as the areas have zones that are designated as environmentally sensitive or important.
[36] To maintain consistency with our investment planning processes and with figures presented elsewhere in the business plan, renewal capex has been calculated using forecast data to the end of AMP13.

Size Test	***Pass***
Programme scalability test	The project satisfies the size test on an individual basis. As the only proposed DPC project with a currently planned contract award in 2030, we believe bundling with any of the other proposed DPC projects with much earlier timescales is not possible at this time. We will monitor the option as the project is progressed and timescales evolve.
Construction risk test	No significant reasons have so far been identified as to why most construction risks cannot be transferred or mitigated.
Operations and maintenance risk	No significant reasons have so far been identified as to why most operations and maintenance risks cannot be transferred or mitigated.
Discreteness Test	***Pass***
DPC Eligible	***Yes***

As shown above, the project successfully meets the size and discreteness test criteria and is eligible for DPC. We therefore intend to tender a DBFOM contract under a Late tender model.[37]

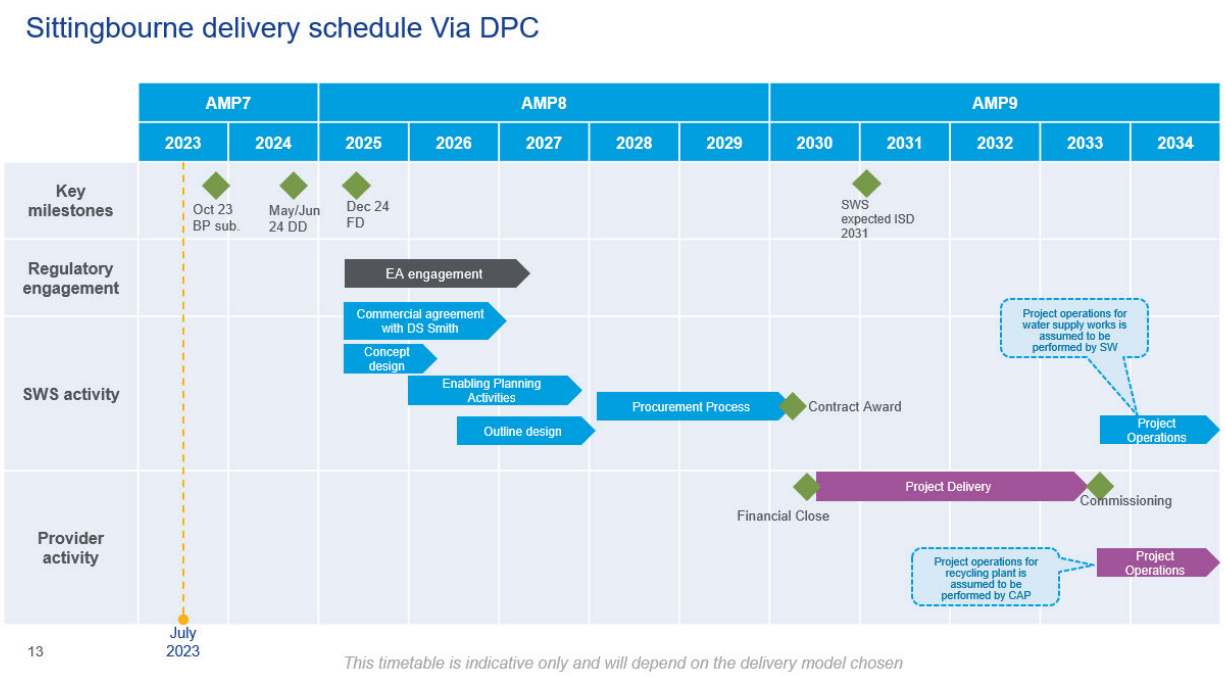
6.4. Delivery timeline

Commencing in AMP8 we could engage with the EA and DS Smith to reach a successful agreement regarding the use of boreholes and the building of a new WRP for DS Smith. With enabling works and outline design progressing, the procurement process may begin in 2028 with contract award in 2030. This could ensure that the new assets could be in operation in late 2033. Figure 28 illustrates the possible timetable.

If we were to bring the work forward into AMP7, we could attain an ISD date of 2031 as is in our current plans in our WRMP.

[37] This recommendation is based on early assumptions about the project's scope and technical characteristics, which remain subject to further development. We will continue monitoring and revisiting the suitability of the proposed delivery model as the project progresses and will engage with Ofwat in a timely manner regarding any change necessary.

Figure 28 – Delivery schedule for the Sittingbourne industrial re-use project



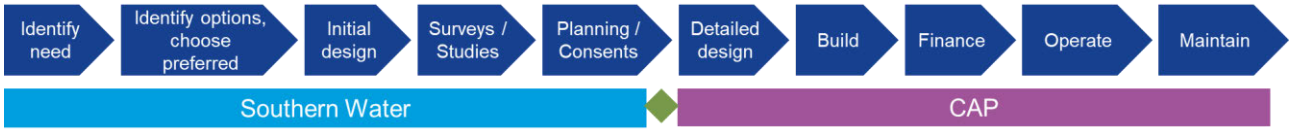
With the risks and issues described above, delay of the project's in-service date is possible. The project will require a commercial agreement between us and DS Smith, granting of licences, along with land selection and acquisition and planning permission being granted prior to commencement of the procurement process. Any delay may significantly impact the project timeline, potentially compromising our ability to meet the anticipated ISD.

6.5. Tender model

A Late tender model is the best suited for Sittingbourne. We propose that we would complete the initial design, surveys, planning, and consents required for the project. The CAP would then be responsible for the detailed design, financing, construction, operations and maintenance of the assets.

Figure 29 illustrates the allocation of responsibility between us and the CAP under late tender model.

Figure 29 – Allocation of responsibility under the late tender model



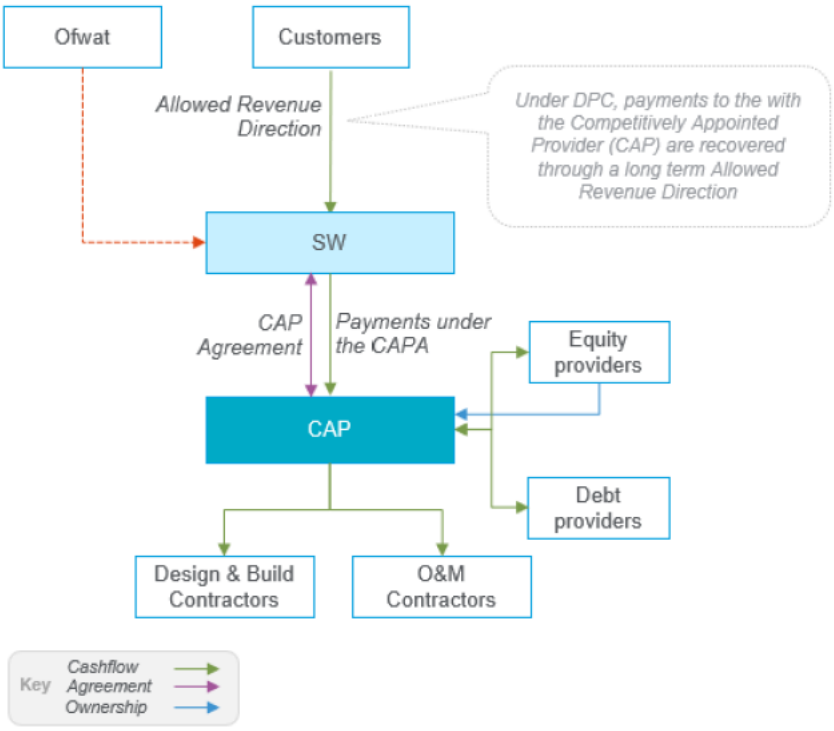
The Late model has the potential to offer several benefits to the delivery of the project.

- We are familiar with the project's requirements and is best positioned to site the new assets, undertake essential surveys, obtain consents and initiate the outline design. We are also well-positioned to engage with bidders during these development activities to ensure flexibility is maintained in the planning envelope and within project specifications. Completion of key activities prior to contract award also de-risks the project from bidders' perspective, allowing them to offer more competitive bid prices.
- The detailed design for the project will be undertaken by those with the skills and experiences in delivering similar assets, allowing both us and our customers to benefit from efficiency and innovation in the construction and operation of the assets. Water recycling plants are new to the UK market, meaning the market is likely best placed to offer innovation in design, construction and operation.
- Competitive pressure in the procurement process will drive down the cost of delivering the works. This will also help to ensure that project risks are priced efficiently, as bidders who include significant provision for risk are unlikely to be successful.
- The CAP may be able to achieve a preferable cost of capital that better reflects the risks involved in the delivery of the project.

6.6. Commercial model

We propose to procure the project via DPC tendering a DBFOM contract. We would initiate a competitive procurement process prior to detailed design and construction to select a CAP who would be responsible for project delivery. The contractual structure is shown in Figure 30.

Figure 30 – Contractual model structure



Upon contract award we and the CAP would enter into a CAPA with the following key features:

- The contract would outline the CAP's obligations and payment terms. An availability-based payment mechanism is assumed to best suit the Sittingbourne project (see subsection 6.6.3 below).
- Payments to the CAP would typically commence only when the services are being delivered, thus deferring the cost to customers compared to the traditional inhouse delivery model.
- The contract would include the operation and maintenance of the assets over a defined period of time, likely 25+ years based on Ofwat's DPC guidance.
- At the end of contract term the assets are expected to have a remaining useful life and could be retendered or brought inhouse[38].

In parallel to the CAPA we would enter into an Allowed Revenue Direction with Ofwat, which would allow the recovery of payments to the CAP from customers. This would be for the duration of the CAPA and would operate alongside the existing price control mechanism.

[38] For assets not fully depreciated by the end of the DPC contract, the CAPA should outline the residual value approach upon expiration. This project-specific mechanism defines the condition the DPC assets should be in, reflecting CAP's operations and maintenance responsibilities throughout the project's lifespan. This is to be tested and confirmed as the commercial model is being developed.

The CAP would not hold a separate license and we would retain responsibility for ensuring the performance of the CAP under our own license. Critically we would look to ensure that the specification of the CAPA contained all relevant performance obligations such that the CAP's operations align to our regulatory and statutory obligations. These would include the discharge permits obtained from the EA.

Risk Allocation

The tables below outline the high-level risk distribution for the project with consideration given to the Late tender model, in accordance with DPC guidance and their specific application to the Sittingbourne project. The risk allocation tables provide an overview of how risks may be assigned and managed throughout the project's lifecycle.

Table 17 – Construction and asset delivery risk assessment – Sittingbourne industrial re-use

Construction and asset delivery risks	Application to the project				
	Cust	SW	CAP	Assessment	Mitigations
Planning	✓	✓		Under a Late model we would secure planning, land, and any other necessary consents.	N/A
Land	✓	✓			
Other Consents	✓	✓			
On time delivery			✓	Under a Late model CAP would be responsible for ensuring timely construction of the assets.	Possible compensation events for delay and/or damages.
Cost overruns	✓	✓	✓	Following Ofwat's guidance we assume target cost contract where cost overruns are shared.	Contractual pain/gain sharing (where applicable).
Site conditions			✓	CAP best placed to manage.	N/A
Works information		✓		We would manage under a Late model.	N/A
Detailed design			✓	CAP best placed to manage	N/A
Third Parties		✓	✓	Shared risk of stakeholder and customer management during delivery of works	Performance incentive could be applied.
Changes in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations if required.
Interfaces with our existing assets		✓		We are best placed to manage.	N/A

Construction and asset delivery risks	Application to the project				
	Cust	SW	CAP	Assessment	Mitigations
Commissioning			✓	CAP best placed to manage.	N/A
Financing costs	✓		✓	As per Ofwat's risk allocation.	N/A
Refinancing gains	✓		✓	In the event of refinancing by an SPV we would seek to benefit with savings passed on to customers.	N/A

Table 18 – Operations and maintenance risk assessment – Sittingbourne industrial re-use

Operation and maintenance risks	Application to the project				
	Cust	SW	CAP	Assessment	Mitigations
Cost (operations and maintenance)			✓	The CAP will be responsible for and bear risk related to operating the assets efficiently.	Benchmarking and/or market testing provisions will enable the comparison of long-term opex against comparable projects.
Operational performance		✓	✓	CAP best placed to manage. We may bear some risk as the assets form part of our network.	Asset availability and flow volumes incentives as part of the payment mechanism as appropriate.
Compliance with statutory and regulatory obligations which impact the scope		✓	✓	Water quality requirements may apply. We will retain some obligations and responsibilities. CAP performance requirements will reflect our obligations to mitigate risk of breach.	CAP likely to be incentivised / penalised under contract for any failures resulting in a breach of statutory / regulatory duty.
Defects during operations		✓	✓	The CAP would be responsible for defects in anything it built and constructed.	N/A
Demand risk	✓	✓			N/A

Operation and maintenance risks	Application to the project				
	Cust	SW	CAP	Assessment	Mitigations
Over-utilisation	✓	✓		We are best placed to manage through water resource planning and scope to match expected demand and levels of utilisation.	
Change in scope	✓	✓		As per Ofwat's risk allocation.	N/A
Value testing	✓		✓	As per Ofwat's risk allocation.	N/A
Condition of asset/hand back risk			✓	CAP best placed to manage.	Deductions from Residual Value Payment or similar reconciliation to account for condition at the end of the contract term.

Market Engagement and Appetite

At this early stage of the project's development, we have not engaged with the market. However, based on our knowledge of the sector and previous experience of engagement with water recycling contractors and potential investors (for example through our engagement in relation to the HWTWRP), we believe that there is likely to be interest for our project.

We will need to conduct market engagement to develop a market of potential bidders and foster interest in the project before tender launch. Key issues which are likely to be tested and are likely to be of interest to the market include:

- The project's scope, including which assets will be included in a contract.
- The proposed commercial arrangements, including the commercial relationship between us and DS Smith.

These issues and others will need to be tested with the market as the project is developed further.

Payment Mechanism

As a new construction project Sittingbourne may be best suited to use an availability payment mechanism. The availability payment mechanism for re-use plants delivered via DPC refers to a payment structure where the CAP receives compensation based on the availability and performance of the assets. Under this mechanism the payment is linked to the WRP's ability to operate and provide the agreed-upon level of service, rather than being tied directly to volumes generated. The payment amount is predetermined and based on the WRP's availability and compliance with specified performance criteria, such as meeting water quality standards, maintaining operational efficiency and fulfilling contractual obligations.

The availability payment mechanism provides an incentive for the CAP to ensure that the plant remains operational and performs optimally throughout the contract period, encouraging it to manage and maintain the plant efficiently to receive the full payment. This payment mechanism promotes accountability, ensuring reliable and consistent water supply and overall provides a predictable revenue stream for the CAP, facilitating financing arrangements. This will require further considerations following negotiations with DS Smith.

6.7. Costs

Capex costs

We currently assume the scope to be fully delivered via DPC. However, further assessment of the project will be needed as the project progresses. The groundwater treatment works required for the treatment of the water from the boreholes would be part of our overall network. Separation may be more complex. However, we currently do not see any concerns regarding the operations and maintenance of the new WRP to supply the paper mill.

Development costs

Sittingbourne will require a typical set of project development activities performed by us, including outline design, planning, consenting, surveys and studies, procurement, and contractual design. At this stage, a top-

down approach has been used to estimate development costs using the approach used by Ofwat at PR19.[39] Including design costs, pre-tender and tender costs and management costs, we currently assume development costs of £9.8m.

Payments to a CAP

As the assets are only assumed to be in commission in 2031 and delivery via DPC allows for payments to a CAP to only be made after the assets have been commissioned, we do not currently expect to make any payments to a CAP in AMP8.

[39] Calculation of project development cost is based on Ofwat's guidance as per supply demand balance enhancement feeder model https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM_E_WW_SDB_FD.xlsx - Sheet Deep dive_ANH

7. Whitfield WwTW – Project Business Case for DPC

7.1. Introduction

The purpose of this business case is to propose a DPC-lite delivery route for our Whitfield Wastewater Treatment Works project. It is anticipated that it will be read in conjunction with the cost adjustment claim for the project, which can be found in SRN06 Chapter 6 Wholesale Wastewater Costs and Outcomes and SRN44 Wastewater Growth Enhancement Business Case.

7.2. Project overview

A WwTW in the Whitfield area is now required with the development of a new town with an estimated population of 15-20,000 located north of Dover.

Figure 31 – Location of Whitfield

Whitfield was identified in Dover District Council's core strategy as a location for major urban expansion with land allocated for development. By the beginning of this year, more than 170 homes have been built in the first phase and outline planning applications for more than 1,400 units, a 66-bed care home, health and social care centre and retail space have been granted permission. This expansion is illustrated in Figure 32.

Figure 32 – Whitfield urban expansion plan

The population growth in Whitfield will require additional treatment facilities which we are required to meet as part of our statutory duty. The growth in demand is expected to require the building of the following assets:

- WwTW with a capacity for up to 20,000 people.
- A c.16km transfer pipeline for treated effluent from the WwTW to our existing Broomfield Bank long sea outfall.

A new wastewater treatment works, rather than an increase in capacity at our existing Broomfield Bank, is currently considered the best solution because Broomfield Bank does not have enough hydraulic or process capacity for the additional flow and load, and its expansion is extremely difficult as it is entirely constructed below ground in an area with strict planning requirements. These considerations mean that the incremental approach to develop our existing assets at Broomfield WwTW are not suitable.

Risks and issues

While developing the project there are several risks we need to continue to assess, including:

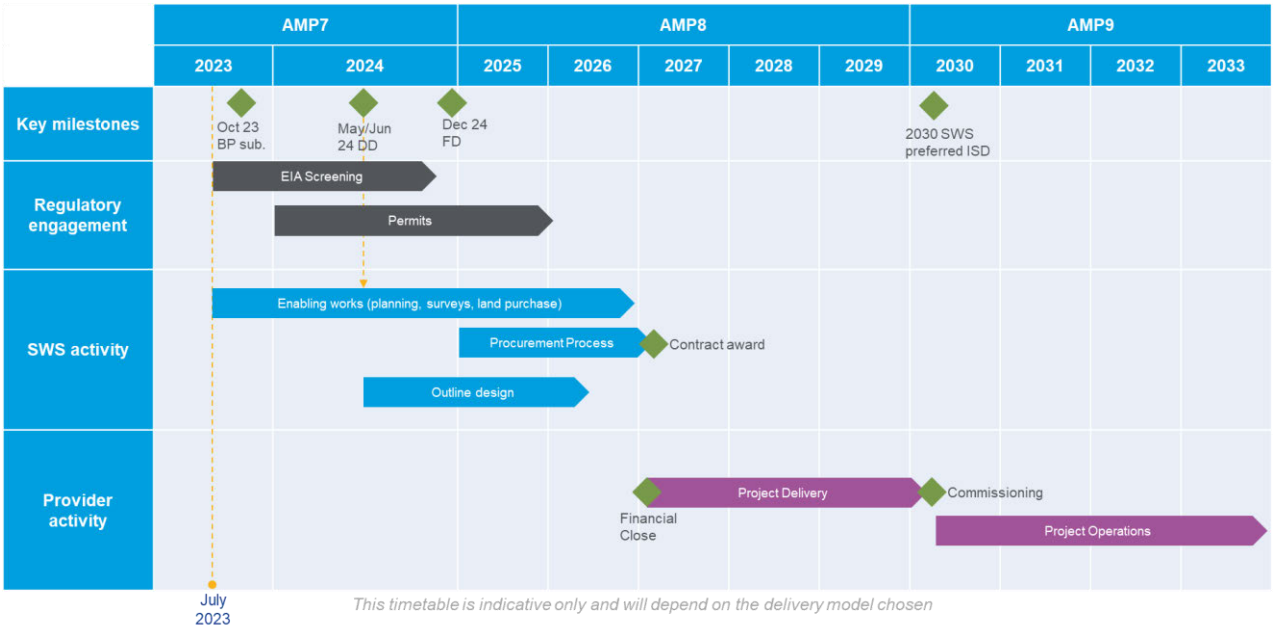
- The project requires new operating and discharge permits from the EA.

- As part of a major scheme, there is a risk of delays due to the need for full planning permission.
- There are likely to be significant complexities and possible delays due to the need to cross underneath a major road (A256) and a railway.
- We may be required to construct a new long sea outfall if we are unable to connect the flows to the existing Broomfield Bank LSO.
- An EIA is likely to be required for both the treatment site and the transfer pipeline. Ecological surveys would also be required for work across fields.

7.3. Delivery timeline

We plan to begin work to deliver the project this year. Our development activities are planned to continue until the end of 2026, although some may take longer. A procurement process could allow us to appoint a provider in early 2027.

Figure 33 – Whitfield baseline delivery schedule



As the project commences and more detail is developed, it will likely be necessary to update the schedule to reflect our greater understanding of delivery timescales.

7.4. Eligibility for DPC

We have applied Ofwat's assessment methodology to determine whether the project is eligible for DPC.

Table 19 summarises the outcome of the DPC eligibility assessment.

Table 19 – Summary of DPC eligibility assessment outcome – Whitfield WwTW

DPC Eligibility Test	
Construction capex in AMP8	£49.8m
Annual opex	Not yet known
Renewal Capex[40]	Not yet known
Assumed asset life	60 years
Whole life totex[41]	£49.8m
Size Test	***Probable fail***
Programme scalability test	No opportunities identified.
Separability test	We currently have identified the project as being sufficiently separable from our operations.
Construction risk test	No significant reasons have so far been identified as to why most construction risks cannot be transferred or mitigated.
Operations and maintenance risk	No significant reasons have so far been identified as to why most operations and maintenance risks cannot be transferred or mitigated.
DPC Eligible	***No***

The project is currently in the early stages of development, and only preliminary capex figures have been estimated thus far.[42] The capex costs are well below the whole life cost DPC threshold. As the project is being developed this may change. However, while opex costs for water recycling plants may be significant, costs for WwTW are relatively low and stable. We therefore assume that the project to stay below the £200m threshold and remain not eligible for DPC. However, as the project can be considered discrete, we have identified this project to be delivered via DPC-lite.

[40] To maintain consistency with our investment planning processes and with figures presented elsewhere in the business plan, renewal capex has been calculated using forecast data to the end of AMP13.
[41] This is construction capex only as renewal and operating capex will depend on design choices that have not yet been made.
[42] The provided estimation is made at a very early stage of development. Each of these activities may reveal factors that could change the projects' estimated costs.

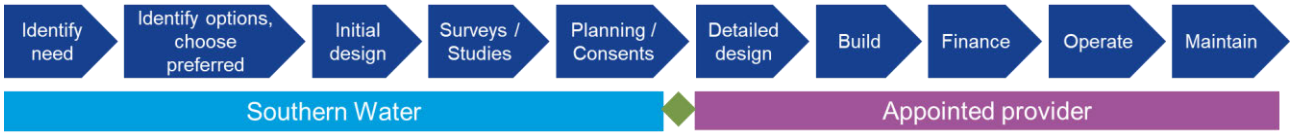
7.5. Tender model

We propose Whitfield WwTW to be delivered via DPC-lite and tender a contract to a third-party provider. As the contract could be awarded to a single entity or a consortium, we have assumed a SPV to be the delivery vehicle for the successful bidder.

We believe a Late tender model is the best suited for Whitfield WwTW. Under the Late model, we would complete the initial design, surveys, planning, and consents required. Following a competitive procurement process we would award the contract to a SPV to be responsible for the detailed design, construction, financing, operation and maintenance of the assets.

Figure 34 illustrates the allocation of responsibility between us and the third-party provider under late tender model.

Figure 34 – Allocation of responsibility under the late tender model



The Late model has the potential to offer several benefits:

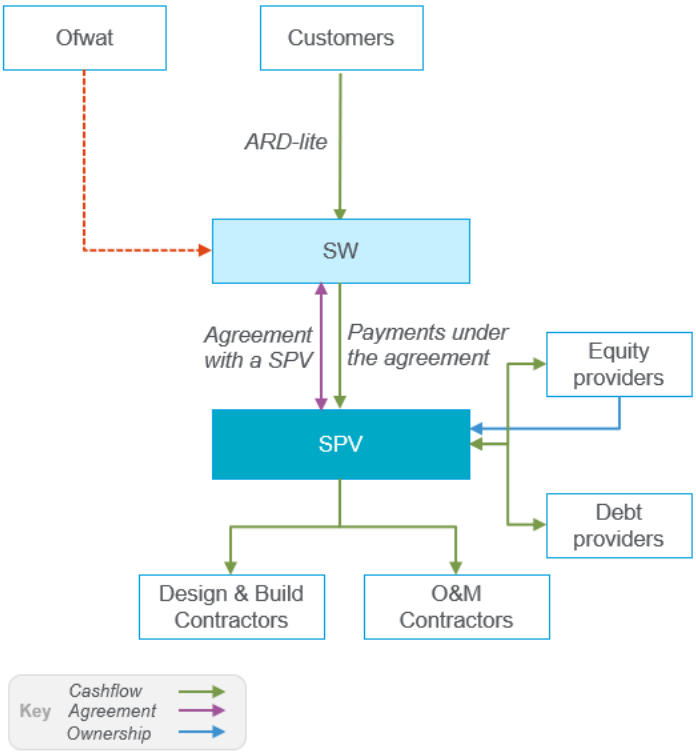
- We are familiar with the project's requirements and are best positioned to select the site for the new assets, undertake essential surveys, obtain consents, and initiate the outline design. We are also well-positioned to ensure flexibility is maintained in the planning envelope and within project specifications. Completion of key activities (such as consenting) prior to the procurement process also de-risks the project from bidders' perspective, allowing them to offer more competitive bid prices.
- The detailed design for the project will be undertaken by those with skill and experience in delivering similar assets, allowing both us and customers to benefit from efficiency and innovation in the construction and operation of the assets.
- Competitive pressure in the procurement process will drive down the cost of delivering the works. This will also help to ensure that project risks are priced efficiently.

7.6. Commercial model

We propose to conduct a procurement process to appoint an SPV who we currently assume deliver the Design, Build, Finance, Operation and Maintenance (DBFOM).

Figure 35 illustrates contractual structure.

Figure 35 – Contractual model structure



Upon contract award we and the SPV would enter into a project agreement with the following key features:

- The contract would outline the SPV's obligations and payment terms. An availability-based payment mechanism is likely best suited to the nature of the assets.
- The contract would include the operations and maintenance of the assets over a defined period of time, likely 25+ years.

The project is proposed to be delivered via DPC-lite route and we assume that the key value for money drivers suggested for the DPC framework to be present here:

- The diversity of treatment technologies provides scope for innovation that can drive down the price of solutions.
- The project is relatively discrete and using a competitively appointed third-party provider may enable capital and operational efficiencies in the delivery of the project.
- Once the project design is sufficiently developed (site selected, interfaces identified, required capacity known, key construction challenges identified), we believe it could attract multiple bidders and ensure competitive pressure during the procurement process.

It is important to note that all the above considerations are subject to further project development, including market engagement, given the project's current early stage. We will either confirm or revise the proposed approach as we progress the project.

Risk Allocation

The table below outlines a high level currently assumed risk distribution for the project if progressed under the Late tender model. The risks identified align to those set out in Ofwat's DPC guidance. However the allocation has been updated as necessary to reflect the specific characteristics of the project and its delivery under a Late tender model. The risk allocation proposed below assumes that some principles of the DPC model will be adopted for the delivery of the project.

Table 20 – Construction and asset delivery risk assessment – Whitfield WwTW

Construction and asset delivery risks	Application to the project				
	Cust.	SW	SPV	Assessment	Mitigations
Planning	✓	✓		Under a late model, we would secure planning, land and any other necessary consents.	N/A
Land	✓	✓			
Other Consents	✓	✓			
On time delivery			✓	Under a late model SPV would be responsible for ensuring timely construction of the assets.	Compensation events for delay and/or damages.
Cost overruns	✓	✓	✓	Shared risk. A target cost contract is assumed.	N/A
Site conditions			✓	SPV best placed to manage.	N/A
Works information		✓		We would manage under a late model.	N/A
Detailed design			✓	SPV best placed to manage.	N/A
Third Parties		✓	✓	Shared risk of stakeholder and customer management during delivery of works	Performance incentive could be applied.
Changes in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations if required.
Interfaces with our existing assets		✓		We are best placed to manage.	N/A

Construction and asset delivery risks	Application to the project				
	Cust.	SW	SPV	Assessment	Mitigations
Commissioning			✓	SPV best placed to manage.	N/A
Financing costs	✓		✓	The SPV will be responsible for financing the project. Adjustment may be required for changes in financing costs.	N/A
Refinancing gains	✓		✓	In the event of refinancing by an SPV we would seek to benefit with savings passed on to customers.	N/A

Table 21 – Operations and maintenance risk assessment – Whitfield WwTW

Operations and maintenance risks	Application to the project				
	Cust.	SW	SPV	Assessment	Mitigations
Cost (operations and maintenance)			✓	The SPV will be responsible for and bear risk related to operating the assets efficient.	Benchmarking and/or market testing provisions will enable the comparison of long-term opex against comparable projects.
Operational performance			✓	SPV best placed to manage.	Asset availability and flow volumes incentives as part of the payment mechanism as appropriate.
Compliance with statutory and regulatory obligations		✓	✓	EA discharge permits are likely to be required. Whether these requirements can be transferred will need to be determined.	SPV likely to be incentivised / penalised under contract for any failures resulting in a breach of statutory / regulatory duty.
Defects during operations		✓	✓	SPV to be responsible for defects.	N/A
Demand risk	✓	✓		Appointee best placed to manage and to match expected demand and levels of utilisation.	N/A
Over-utilisation	✓	✓			
Change in scope	✓	✓		As per Ofwat's risk allocation.	N/A

Operations and maintenance risks	Application to the project				
	Cust.	SW	SPV	Assessment	Mitigations
Value testing	✓		✓	As per Ofwat's risk allocation.	N/A
Condition of asset/hand back risk			✓	SPV best placed to manage.	Deductions from Residual Value Payment or similar reconciliation to account for condition at the end of the contract term.

Market Engagement

No assessment has yet been made of the likely level of interest for a DBFOM contract for a new WwTW. Based on existing knowledge and level of interest in our HWTWRP project, we believe there is likely to be interest.

We will need to conduct extensive market engagement to build a pool of potential bidders and foster interest in the schemes up to tender launch, to ensure a competitive procurement process.

Key issues which are likely to be tested and are likely to be of interest to the market include:

- The project's scope, including which assets are to be designed, constructed, financed, operated and maintained by the SPV.
- The commercial arrangements.
- Treatment specification and the applicable permits for the operation of the assets.

These issues and others will need to be tested with the market as the project is developed further.

Payment Mechanism

The payment mechanism is yet to be developed under a bespoke commercial model. We currently consider using an availability payment mechanism.

The availability payment mechanism refers to a payment structure where the third-party provider receives compensation based on the availability and performance of the assets. Under this mechanism the payment is linked to the asset's ability to operate and provide the agreed-upon level of service, rather than being tied directly to volumes generated. The payment amount is predetermined and based on the plant's availability and compliance with specified performance criteria and fulfilment of contractual obligations.

The availability payment mechanism provides an incentive for the third-party provider to ensure that the asset remains operational and performs optimally throughout the contract period, encouraging it to manage and maintain the plant efficiently to receive the full payment. This payment mechanism promotes accountability, ensuring reliable and consistent water supply and overall provides a predictable revenue stream for the provider, facilitating financing arrangements.

7.7. Costs

Capex costs

Given the early stage of the project development, we estimate construction costs of £49.8m. A more detailed cost profile is developed as the project is progresses. The provided estimation is made before the completion of design, surveys, and planning activities. Each of these activities may reveal factors that could change the projects' estimated costs. Additionally, acquiring land and/or consents for the assets may impact costs depending on availability. We currently assume all capex costs to be within a DPC-lite scope.

Development costs

Whitfield WwTW will require a typical set of project development activities, including design, planning, consenting, surveys and studies and procurement. At this stage, a top-down approach has been used to

estimate development costs using the approach used by Ofwat at PR19 [43]. Including design costs, pre-tender and tender costs and management costs, we currently assume development costs of £5.4m. Ofwat's development cost calculations do not take into account the specific nature of the project and may result in an insufficient allowance for the project. Further work will be needed to calculate a bottom-up estimation of project development costs.

Payments to the SPV

Whitfield WwTW is currently planned to be commissioned in early 2030. If it was eligible as a DPC project, it would not need to begin payments to a CAP before the assets are in commission. However, as we have identified and propose a delivery via DPC-lite, we need to consider the implications of the project not being excluded from the Construction Act. As we are unable to determine or estimate the level of payments that may be required during construction, we have not included payments to an SPV during construction. The estimates will be made and refined as we gain more knowledge.

[43] Calculation of project development cost is based on Ofwat's guidance as per supply demand balance enhancement feeder model https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM_E_WW_SDB_FD.xlsx - Sheet Deep dive_ANH

8. Smart Metering – Project Business Case for DPC-lite

8.1. Introduction

The purpose of this document is to provide a case for a DPC-lite delivery route for our Smart Metering project. It is expected to be read in conjunction with the enhancement case for the project, which can be found in SRN05 Wholesale Water costs and Outcomes, SRN28 Smart metering Enhancement Business Case and SRN24 Meter Replacement Cost Adjustment Claim.

8.2. Project overview

The project involves a comprehensive and proactive rollout of over one million smart meters (advanced metering infrastructure, AMI) across our entire network. [44] Smart metering is a key part of our WRMP as an enabler to reduce household consumption and customer leakage. The project involves the replacement of the existing meter base, which comprises a mixture of basic and automated meter readings (AMR) meters, for both household and non-household customers.

The project includes six components of an end-to-end Smart Metering solution shown in Figure 36.

Figure 36 – Components of the smart metering programme

1. Meter Asset	2. Meter Replacement	3. Communications Network	4. Meter Data Management	5. Integration to Southern Water systems	6. Demand Reduction
Smart AMI meters aligned to the Ofwat definition on slide 8 (incl. any associated devices to ensure communication)	Replacement of existing basic or AMR meters with AMI meters for Households and Non-Household customers.	Enabling a communications network to enable data to be transmitted from the smart meter assets to Southern Water.	Capability to store meter read data (>billions per year), and manage the completeness and quality of data received.	Enable our BAU organisation to use smart meter readings in billing and customer services processes (among other uses of meter read data)	New data analytics-led capability to identify customer side leaks or high consumption, and help them to take action to fix / reduce.

Our current assumption is that the scope is likely to include the procurement of meters, communications network, installations, operations and maintenance. We are currently considering if the scope could also include data management, integration with our systems for billing and systems to drive supply/demand benefit. The scope is planned to be chosen following an assessment as to whether these functions are better delivered inhouse or by an external provider and engagement with the market.

Risks and issues

Smart metering does not involve the same level of pre-tender activities (surveys, environmental consenting, design etc) as a large infrastructure project, as much of the works may be undertaken as permitted development. However, the timely delivery of the project will depend on the granting of land and planning consents required for the smart communications network before construction March 2025.

[44] See the enhancement case for the different delivery approach options considered for smart metering, including the justification for the adoption of a proactive approach to replacement over a replace-on-fail approach.

The planning and consents requirements will depend on the technology selection. It is possible that the communications network provider needs to install "sites" (masts etc) to enable delivery of the project which would require securing further consents. We will need to be involved in parts for some or all council engagement. This would likely be iterative area by area / site by site basis.

Evidence from the RFI suggests that it would take 4-9 months to make a "site" available from project initiation to delivered (for [redacted]), and while the third-party provider would lead this process there would need to be a significant amount of alignment with us.

The delivery timeline is also subject to several critical assumptions, including availability of funding, ability of the supply chain to scale up to this volume of installs early in AMP8 and the nature of the technical solution across the region.

8.3. Eligibility for DPC

In July 2023 Ofwat released an additional guidance on the scalability test.[45] The guidance introduced a criteria for the scalability test: bundled projects should have individual asset values of at least £5m-£10m, and with asset life at least as long as a standard DPC contract. This guidance effectively excludes the delivery of a smart metering programme via DPC.

We have applied Ofwat's DPC test to assess the project's potential to be delivered via DPC-lite. It has identified the project to have the parameters needed to be delivered via DPC-lite, offering innovation and efficiency to the benefit of customers and SWS. Table 22 illustrates the assessment for smart meters.

Table 22 – Summary of DPC eligibility assessment outcome – Smart metering

DPC Eligibility Test	
Construction capex in AMP8	£165.4m
Annual opex	£11.2m
Renewal Capex[46]	Not yet known, depending upon commercial model
Assumed asset life	15 years
Whole life totex	£333.0m
Size Test	***Pass***
Programme scalability test	Smart meters do not qualify as DPC projects as individual asset values are required to be of at least £5m-£10m. Estimated 15 year

[45] Ofwat (3 July 2023) Letter [redacted] to Regulatory Directors in respect of Technical Discreteness Guidance.
[46] To maintain consistency with our investment planning processes and with figures presented elsewhere in the business plan, renewal capex has been calculated using forecast data to the end of AMP13.

	asset life is also significantly shorter than a standard DPC contract of c.25 years.
Separability test	We currently have identified the project as being sufficiently separable from our operations.
Construction risk test	No significant reasons have so far been identified as to why most construction risks cannot be transferred or mitigated.
Operations and maintenance risk	No significant reasons have so far been identified as to why most operations and maintenance risks cannot be transferred or mitigated.
DPC Eligible	***No***

At capex costs of £165m, we expect the project 's whole life totex to be significantly over Ofwat's guidance threshold of £200m. The project also passes the separability test as it is a relatively stand-alone project. We therefore propose the smart metering project to be delivered via DPC-lite.

8.4. Delivery timeline

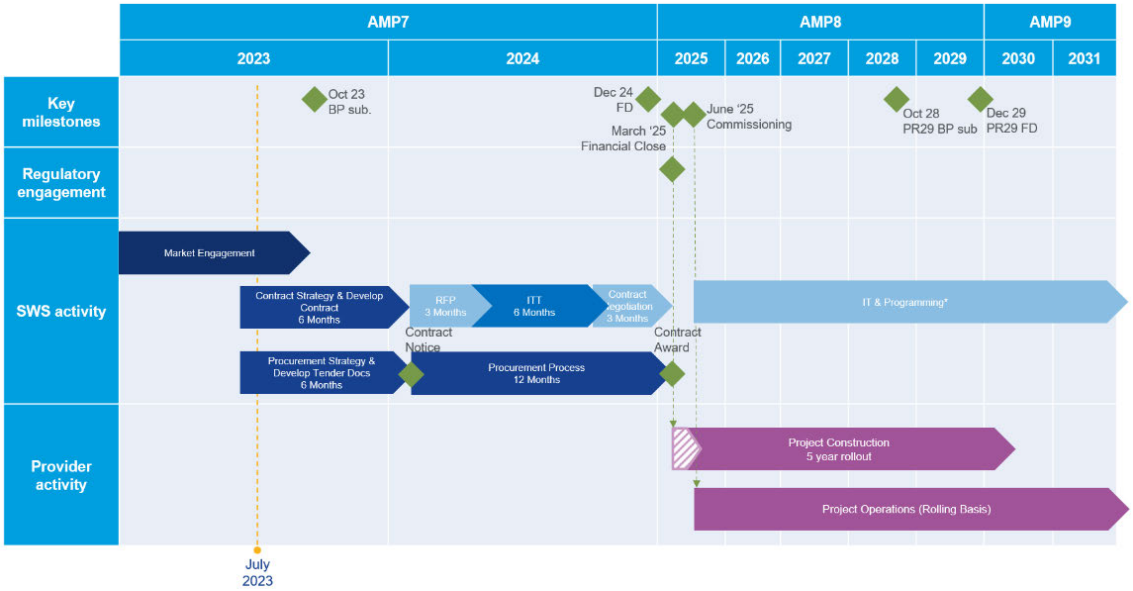
Our current programme envisages a 5-year rollout across AMP8, with meter installation to begin in March 2025 (construction start) and a rolling operations start every 3 months based on the number of meters installed. The timeline is illustrated in

Figure 37.

The timeline is based on the following assumptions:

- Planning consent is granted at the end of procurement process;
- The first tranche of rollout takes 3 months; and
- IT& Programming is kept in-house (subject to further analysis).

Figure 37 – Smart metering delivery timeline



As the contract could be awarded to a single entity or a consortium, we have assumed a SPV to be the delivery vehicle for the successful bidder. To meet the 2030 target deadline, we believe the project should be delivered in accordance with the following principles:

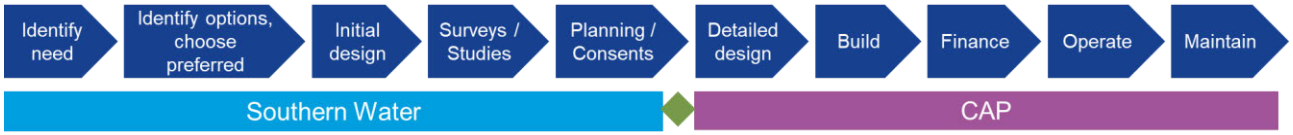
- **A phased delivery**: The SPV is to deliver the project. It may procure subcontractors for works. The SPV can begin the applications for planning and consents for different sites. The current assumption is the rollout to be area by area. Based on the evidence of other rollouts, the optimum approach is likely to be to sequence the mobilisation of a comms network, followed as closely as possible by the install of meters area by area. The SPV would manage the coordination of network deployment and mobilisation and the subsequent installation of meters within the Water Resource Zone.
- **An overlap between the delivery and operational phases:** Works will be carried out and commissioned in small packages over time. Each package could be delivered within 3 months. As the assets are separable, construction can begin as consents are received and operations begin once the meters are connected to the comms network.
- This could enable an efficient delivery as more packages of work can be carried out in parallel.

8.5. Tender model

A Late tender model is considered best suited for the smart metering project. Under the late model, the SPV is responsible for the detailed design, financing, construction, and operations and maintenance of the assets. We would lead the specification and initial design process given we have the most updated knowledge of the project specifics which will be further enhanced by market engagement. Given our involvement in the initial design process an early tender model is not suitable. The responsibility of who performs the planning and consenting for the comms network will be assessed once the technology selection process is complete and the relevant requirements for consenting are clear.

Figure 38 illustrates the allocation of responsibility between us and the SPV under a late tender model.

Figure 38 – Allocation of responsibility under the late tender model



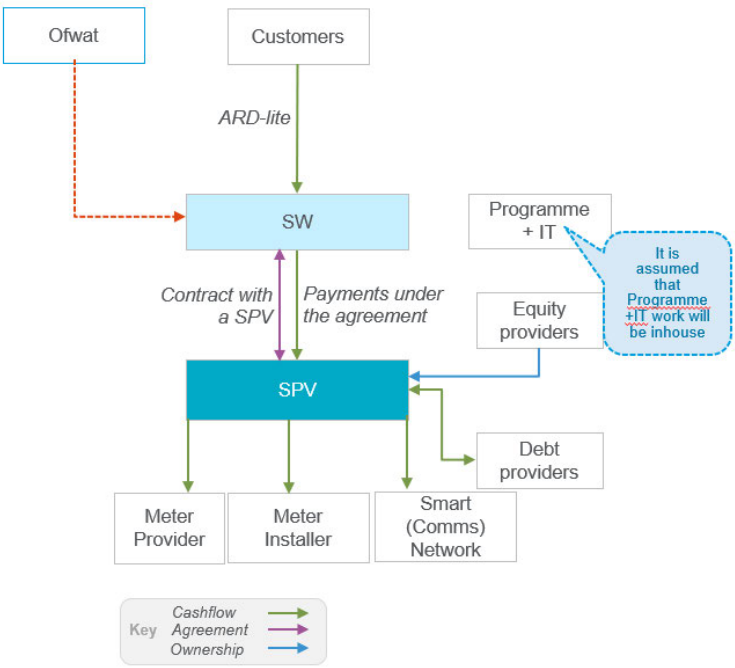
The Late model has the potential to offer several benefits to the delivery of the project through the procurement of a SPV at an earlier stage:

- We are familiar with the project's requirements and is best positioned provide information relating to the existing smart meter base.
- The detailed design for the project is to be undertaken by those with the skills and experience in delivering similar assets, allowing both us and our customers to benefit from efficiency and innovation in the construction and operation of the assets. The smart metering provider may be able to offer a combination of services (e.g. physical meter installation and data management) which may offer additional efficiencies.
- Competitive pressure in the procurement process will drive down the cost of delivering the works. This is to ensure that project risks are priced efficiently, as bidders who include significant provision for risk are unlikely to be awarded the contract.
- Competitive pressure in the procurement process are expected to drive down the cost of delivering the project.

8.6. Commercial model

We propose to conduct a competitive procurement process to award the contract to a company/ consortium that will be responsible for the Design, Build, Finance, Operation and Maintenance (DBFOM) of the project. The contractual structure is shown in Figure 39.

Figure 39 – Contractual model structure



Upon contract award, we along with the SPV would enter into a project agreement, setting out the SPV's obligation and payment terms, likely related to the availability of the metering service.

Payment mechanism

The payment mechanism for a smart metering programme would be tied to the availability of the service provided. This may include components related to the installation of the meters and/or the availability of the data provided. The structure could be:

- Based on a fixed rental fee structure tied to the installation of meters.
- Based on the availability of data provided by the meters, perhaps also incentivised based on data analysis.

The total install smart meter period is assumed to be c.10-20 years. The useful life of the smart meters is around 15-20 years (accelerated life testing), and the battery may need replacing every 9 years[47].

[47] RFI evidence and working life experience for current stock is that batteries last at least 9 years, and most quote between 10-15 years.

Risk Allocation

The tables below outline the high-level possible risk distribution for the project from our perspective if progressed under the Late tender model. The table below outlines the expected risk distribution for the project from our perspective if progressed under the Late tender model. The risks identified align to those set out in Ofwat's DPC guidance, however the allocation has been updated as necessary to reflect the specific characteristics of the project and its delivery under a Late tender model. An alternative delivery contract may not be limited to a single cycle of smart metering assets. The appropriate commercial model would need to be informed through engagement with the market to determine a delivery model which best suits the asset type and technology selected. The risk allocation proposed below assumes that some principles of the DPC model will be adopted for the delivery of the project.

Table 23 – Construction and asset delivery risk assessment – Smart metering

Risk	Risk allocation				
	Cust.	SW	SPV	Assessment	Mitigations
Planning	✓	✓	✓	For meter installation, we have permitted development rights as a statutory water undertaken. We would need to test whether these rights could be transferred to the SPV. It is expected that the delivery of the comms network could require some land, consents and planning and who is best places to manage this is dependent on the technology selected.	Compensation events for delay / additional cost where consents we obtain may be insufficient.
Land	✓	✓	✓		
Other consents	✓	✓	✓		
On time delivery		✓	✓	Predominantly a SPV risk, some sharing may be required where co-ordination of rollout causes delays.	Liquidated damages for delayed delivery. Availability based payment mechanism. Possible compensation events for delay/ additional cost.
Cost overruns	✓	✓	✓	Project is not complex. A target cost contract may be most appropriate.	N/A
Site conditions		✓	✓	SPV best placed to manage, however, we may bear risk where it provides network information which proves false.	Compensation events for delay / additional cost.
Works information		✓		We are best placed to manage this. Works information likely to consist of location database for rollout.	N/A

Risk	Risk allocation				
	Cust.	SW	SPV	Assessment	Mitigations
Detailed design			✓	SPV best placed to provide meters and data.	N/A
Third parties		✓	✓	Shared risk on customer engagement.	Performance incentive could be applied for customer engagement.
Changes in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations if required.
Interfaces with our existing assets		✓		Appointee best placed to manage.	Compensation events for delay / additional cost.
Commissioning			✓	SPV best placed to manage.	N/A
Financing costs	✓		✓	The SPV will be responsible for financing the project. Adjustment may be required for changes in financing costs.	N/A
Refinancing gains	✓		✓	In the event of refinancing by an SPV we would seek to benefit with savings passed on to customers.	N/A

Table 24 – Operations and maintenance risk assessment – Smart metering

Risk	Application to project				
	Cust.	SW	SPV	Assessment	Mitigations
Cost (operations and maintenance)			✓	The SPV will be responsible for and bear risk related to operating the assets efficiently.	Benchmarking and/or market testing provisions will enable the comparison of long-term opex against comparable projects.
Operational performance			✓	SPV best placed to manage performance of assets.	Potential performance incentives related to improvements in PCC and leakage.
Compliance with statutory and regulatory obligations which impact the scope		✓	✓	Risk shared. We will retain some obligations and responsibilities.	Potential area for incentivisation, e.g., meeting statutory installation windows.

Risk	Application to project				
	Cust.	SW	SPV	Assessment	Mitigations
Defects during operations			✓	SPV bears risk of metering defects and has full control of data service. Asset replacement does not require significant renewal capex. No sharing required.	N/A
Demand risk	✓	✓		We and our customers bear the risk that requirements for smart meters changes during contract term.	Contractual variations.
Over-utilisation	✓	✓		Nature of the assets means there is no potential for over-utilisation.	N/A
Change in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations.
Value testing	✓		✓	As per Ofwat's risk allocation.	N/A
Condition of asset/hand back risk			✓	Definition of asset hand back would need to be considered given short asset life and potential to hand back assets with varying remaining lives.	Deductions from Residual Value Payment or similar reconciliation to account for condition at the end of the contract term, if any asset life remained.

8.7. Market engagement and future planned activities

Market engagement

To inform our smart metering project we have engaged with interested smart metering suppliers. We launched a PIN in July 2023 to obtain market feedback in key areas, including:

- What elements of the smart metering programme can be provided directly by individual suppliers and which elements could be provided by their partners.
- What type of commercial structure might be adopted, including expectations around payment terms, revenue commencement, contract length, warranties, performance incentives and the allocation of key risks.
- Whether the market perceives any risks in the delivery of the programme within desired timescales.
- What communications network would be utilised by the smart meters.
- Suppliers' experience in delivering demand reductions through smart metering.
- Possible additional services suppliers could provide.
- Indicative costs and expectations on the level of return.

In the UK within the water sector the smart meter market is still in its relative early stage with a number of potential technology options available. We have seen interest from parties operating internationally and in the UK water sector as well as UK companies involved in the delivery and services of smart meters in the energy sector.

Other pre-tender activities and procurement process

Following our market engagement with strong feedback on the scope and deliverability of the project, we plan to begin project development activities to inform the appropriate packaging of the works.
We plan to develop a contract and procure more quickly than typical projects of this nature given the tight rollout delivery timeline in AMP8. Contract strategy works are to start this year. The procurement strategy is planned to run concurrently with the contracting strategy and the development of tender documents.
The publication of the contract is planned for March 2024. ITT and contract negotiation are expected to take c.9 months with contact award with financial close expected March 2025.
The procurement process is to run under the baseline delivery model and the length of the process is likely to greatly depend on the planning and consent process done by us and the approach adopted by successful bidder and their reliance on the existing relationships with contractors.

8.8. Costs

Capex costs

The smart meter roll out is planned to begin in 2025 and complete by early 2030. For the complete project total capex costs are estimated to be £165m. Additionally, renewal capex is expected to be required as the battery life is expected to require replacing after 9 years with an estimated useful life of a smart meter device of between 15 and 20 years.

The proposed rollout of smart meters over AMP8 represents a mixture of base and enhancement expenditure. This involves upgrading the existing meter base (currently basic and AMR technology) with new AMI (Advanced Metering Infrastructure) technology and associated business capabilities within AMP8, as

well as connection to the Communication Network. We have also submitted a cost adjustment claim to cover the costs associated with the replacement of like-for-like meters.[48]

Development costs

Whilst project development activities for smart metering are expected to be mainly commercial (procurement, contracting etc.) rather than technically (design, planning, etc.) focused, we will still need to incur additional costs associated with developing a contract and running a complex procurement process.

We will need to provide information relating to the proposed sites specification and requirements (e.g. the number of meters installed in a specific timeframe and connected to network or amount of leakage reduce). We expect the SPV to provide the design. Although different from a DPC project procuring infrastructure assets, we believe the standard development cost assumptions used for DPC projects are still applicable. At this stage, a top-down approach has been used to estimate development costs using the approach used by Ofwat at PR19[49]. Including design costs, pre-tender and tender costs and management costs, we currently assume development costs of £14.2m.

Costs payable to a third-party provider

We expect to pay the third-party provider during AMP8 as the roll-out commences. As smart metering is not to be delivered via DPC, we expect to pay the third-party provider when smart meter roll out commences in stages.
Due to the uncertainty of the bid prices received during the eventual tender process, we have produced estimates to enable us to show the potential costs for these payments in AMP8. The estimates will be refined as we gain more knowledge. See Data Table RR9.

8.9. Incentives

There is no existing PR19 incentive solely for smart metering. Smart metering is incentivised indirectly via two common performance commitments – primarily Per Capita Consumption (PCC), but also leakage – where it is a crucial part of WRMP delivery and the PR24 business plan. We will seek to engage with Ofwat to agree an appropriate incentive for the delivery of this programme based on a more detailed understanding of project timescales.

Smart meters will support meeting our water demand targets by providing information to customers that will help then to reduce overall consumption. AMI technology will enable a reduction in per capita consumption (PCC) through behavioural shifts as a result as more frequent reads, as well as a reduction in customer-side leakage (CSL) through identification of continuous flows, which is not currently possible through bi-annual reads on the existing AMR platform.

[48] SRN24 Meter Replacement Cost Adjustment Claim
[49] Calculation of project development cost is based on Ofwat's guidance as per supply demand balance enhancement feeder model https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM_E_WW_SDB_FD.xlsx - Sheet Deep dive_ANH

In order to incentivise the SPV to meet certain ODI requirements, we are considering contractual mechanisms that link to improved performance against our ODIs. The appetite from the market for inclusion of these requirements will need to be tested through market engagement.
The extent for which these contractual mechanisms can be implemented will be dependent on the final scope of the SPV. For example, PCC and leakage could be incentivised if the scope of the contract includes IT integration and data analytics, while the risk around replacement and maintenance and site condition could be managed through specific contract terms to incentivise certain behaviour.

9. Bioresources: Ham Hill and Ashford – Project Business Case for DPC-lite

9.1. Introduction

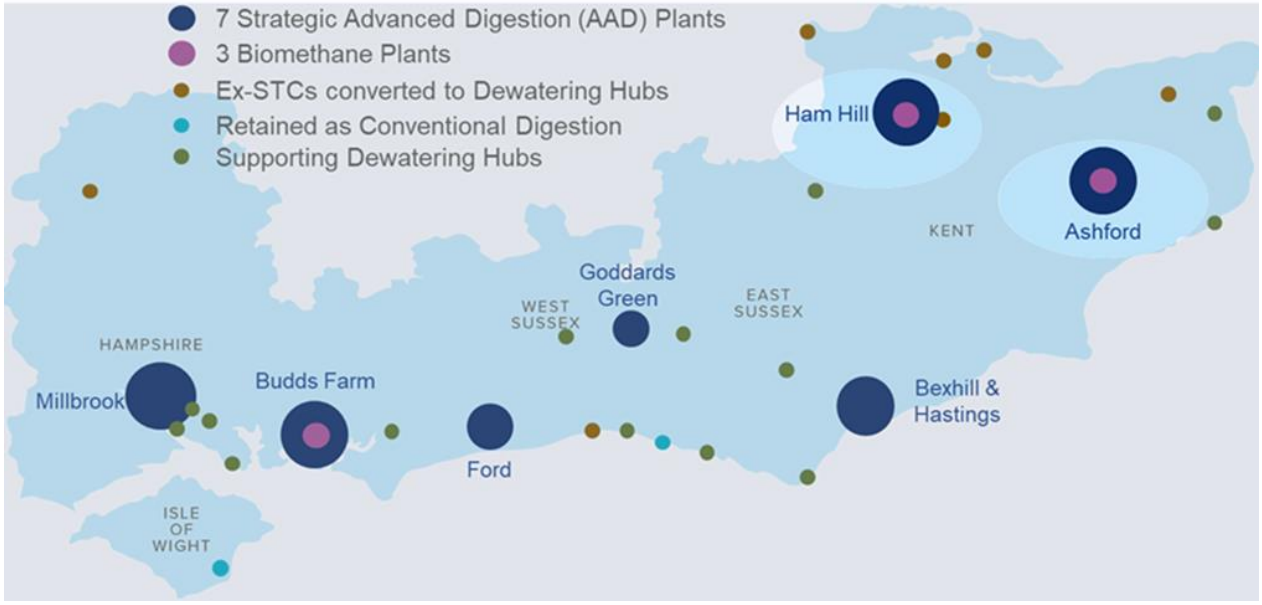
The purpose of this business case is to propose a DPC-lite delivery route for the Ham Hill and Ashford projects. It is expected to be read in conjunction with SRN06 Wholesale Wastewater Costs and outcomes, SRN43 WINEP Bioresources Cake Storage Enhancement Business case, SRN37 Industrial Emissions Directive (IED) Enhancement Business Case and SRN21 Advanced digestion Cost Adjustment Claim.

9.2. Project overview

The project encompasses the delivery of:

- Two new Advanced Anaerobic Digestion (AAD) plants which include the sludge pre-treatment of sludge at Ham Hill and Ashford. The schematic below illustrates the relative location of the Ham Hill and Ashford sites, located circa 30 miles apart;
- The additional storage for treated sludge (cake) at Ashford & Ham Hill;
- Compliance with IED requirements at Ashford & Ham Hill.

Figure 40 – Location of Ham Hill & Ashford sites (other plants per future long term strategy)



The project is driven by our need to replace aging assets and ensure the need for higher capacity will be met. Ham Hill is the project with a planned higher capacity than Ashford. We currently plan for both facilities to be delivered by a single service provider, subject to future market engagement. Current considerations are for the projects to include:

- Dewatering facilities;
- Advanced Anaerobic Digestion (AAD);
- Combined Heat and Power (CHP) or biomethane upgrade;

- Thermal treatment (pyrolysis, gasification, incineration) equipment; and
- Cake storage facilities at both sites;
- Secondary containment solutions; and
- Impermeable surfaces.

Risks and issues

Both Ham Hill and Ashford are expected to be built on land owned by us. There is limited space on both sites to construct the new assets with some land currently occupied by aging bioresource assets, which may be necessary to be removed and the land readied.

Interfaces with both existing facilities are expected to be limited, but likely include electrical, water, sludge and treated sludge interconnections.

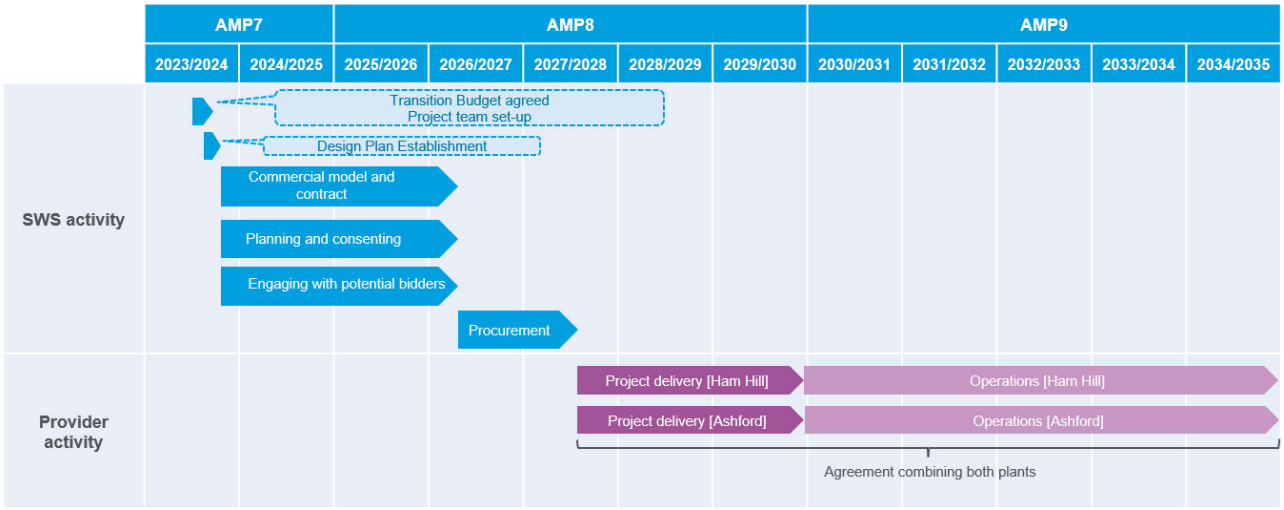
9.3. Delivery timeline

The need for the project is driven by a range of factors, including population growth (and impact from WINEP on sludge production), impending changes to the EA's Farming Rules for Water (FRfW). Therefore, whilst at present there is no specific delivery deadline (e.g. a required in-service date) by which these plants need to be in operation, faster delivery is preferable as this will enable us to more efficiently manage our bioresources.

Delivering the plants sooner will also mitigate the impact of impending changes to the EA's Farming Rules for Water (FRfW), due for review in 2025. We expect the disposal costs of biosolids to increase as a result. Our overall strategy is to upgrade our bioresources assets and capacities, beginning with the works at Ham Hill and Ashford.

Under our baseline delivery schedule construction for both Ham Hill and Ashford is currently planned to begin in 2027 and completed in 2030.

Figure 41 – Delivery timeline for the Ham Hill and Ashford



9.4. Eligibility for DPC

Ofwat has explicitly excluded bioresources from delivery via DPC[50]. Nevertheless, as a project that is discrete and of a significant size, we have applied Ofwat's DPC eligibility test to assess the project's potential to be delivered through alternative delivery.

It has identified the project to have the parameters needed to be delivered via DPC-lite, potentially offering innovation and efficiency to benefit us and our customers. Table 25 illustrates our assessment.

Table 25 – Summary of DPC eligibility assessment outcome – Ham Hill and Ashford

DPC Eligibility Test	
Construction capex in AMP8	£170.0m
Annual opex[51]	-£2.2m
Renewal Capex[52]	To be assessed when solution is developed
Assumed asset life	20 year for AAD (pre-treatment) 20 years for cake barns 50 year for new digesters 15 years for CHPs
Whole life totex	£113.3m
Size Test	***Possible pass***
Programme scalability test	Bioresources does not qualify and is not eligible for DPC delivery.
Separability test	We currently have identified the project as being sufficiently separable from our operations.
Construction risk test	No significant reasons have so far been identified as to why most construction risks cannot be transferred or mitigated.
Operations and maintenance risk	No significant reasons have so far been identified as to why most operations and maintenance risks cannot be transferred or mitigated.
DPC Eligible	***No***

As the project is likely to enable the generation of revenues from the sale of energy, the actual operational cost of the facilities are not well represented under a whole life totex model. Nevertheless, our analysis indicates that the project is discrete and of a suitable size that is considered by Ofwat to be of sufficient size in general to potentially attract investors. We therefore believe that is could be delivered via our proposed DPC-lite route.

[50] Appendix 5 Direct Procurement for customers https://www.ofwat.gov.uk/wp-content/uploads/2022/12/PR24_final_methodology_Appendix_5_DPC.pdf

[51] Sale of power and/ gas from the CHP plant will generate revenue that may be higher than operating costs, hence we show a negative number.

[52] To maintain consistency with our investment planning processes and with figures presented elsewhere in the business plan, renewal capex has been calculated using forecast data to the end of AMP13.

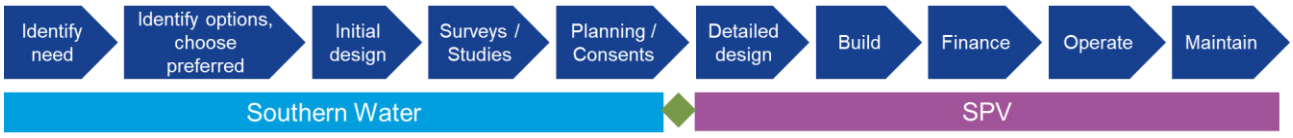
Ofwat's intent for treating bioresources infrastructure separately is to develop a market for bioresources with the added benefit to develop low-carbon energy generation and reduce water bills. The proposed DPC-lite delivery route could help us achieve Ofwat's intent.

9.5. Tender model

A Late tender model we believe is the best suited for the delivery of Ham Hill and Ashford. Under the Late model we would complete the initial designs, surveys, planning, and consents required for the project. As the contract could be awarded to a single entity or a consortium, we have assumed a SPV to be the delivery vehicle for the successful bidder. The SPV would be responsible for the detailed design, construction, financing, operations and maintenance of the assets.

The diagram below illustrates responsibility allocation between ourselves and the SPV under the Late tender model.

Figure 42 – Allocation of responsibilities under the late tender model



The Late model has the potential to offer several benefits to the delivery of the project.

- We are familiar with the project's requirements and are best positioned to undertake essential surveys and obtain consents. It is also well positioned to engage with the service provider contracted for the initial design. Initial design including optioneering is critical for the planning and consenting and an iterative process is likely to be followed between the initial design and engagements associated with planning and consenting.
- We are also well-positioned to engage with potential bidders during these development activities to ensure flexibility is maintained in the planning envelope and within project specifications. Completion of key activities prior to contract award also de-risks the project from bidders' perspective, potentially allowing more competitive bid prices.
- The detailed design for the project will be undertaken by the SPV and/or their associated subcontractors with the skills and experiences in delivering similar assets, allowing our customers to potentially benefit from efficiency and innovation in the construction, operations and maintenance of the assets.
- Competitive pressure in the procurement process is to drive down the cost of delivering the works. Bidders who include significant provisions are unlikely to be awarded the contract.
- The SPV may be able to realise an efficient cost of capital that better reflect the risks involved in the delivery of the project.

9.6. Commercial model

Although our bioresource project is excluded from delivery via DPC, we consider delivery via DPC-lite to offer benefits to conventional inhouse delivery. These include:

- Innovation and efficiency in the design of the project's assets;
- Timely asset delivery and effective risk management during construction;
- An efficient cost of financing; and

- There may also be opportunities for an SPV with experience in the operation of bioresources plants to generate additional revenues which, in turn, may reduce the overall costs of the project.

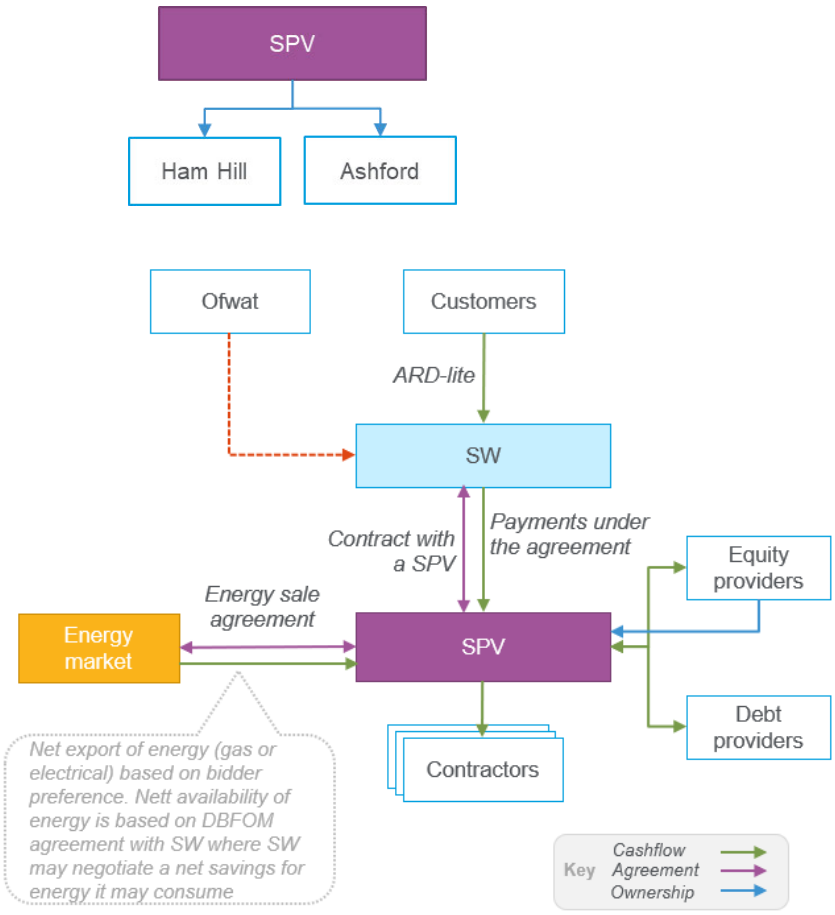
Upon contract award, we and the SPV would enter into a DBFOM agreement that outlines in detail the obligations and payment terms.

- The contract would outline the SPV's obligations and payment terms. This would include the design, construction, financing, operations and maintenance of the assets in line with specifications set by us.
- The commencement of payments to the SPV[53].
- The SPV's Tender Revenue Stream (TRS) would be paid over a typical term for a project finance contract (c.25 years[54]).
- The project involves the potential for the generation of third-party revenues (most likely arising through the sale of energy to the grid). The contract will need to accommodate the management of these revenues; specifically how any profits generated by the SPV would be used to offset payments owed.

The contractual structure is as shown in Figure 43 below.

[53] Subject to the potential application of the provisions of S.109 of Housing Grants, Construction and Regeneration Act 1996 (legislation.gov.uk) which entitles the contractor to stage payments during construction.
[54] The actual term would be subject to further analysis of a suitable term for the project and feedback obtained through market engagement.

Figure 43 – Contractual model structure



Risk Allocation

The tables below table outline a high-level possible risk allocation for the project, considering the Late tender model and our proposed delivery via DPC-lite with an ARD-lite. On accordance with DPC Guidance and their specific application to Ham Hill and Ashford, the risk allocation tables provides a comprehensive overview of how risks may be assigned and managed throughout the project's lifecycle, ensuring transparency and clarity in terms of responsibility and accountability.

Table 26 – Construction and asset delivery risk assessment – Ham Hill & Ashford

Construction and asset delivery risks	Application to the project				
	Cust.	SWS	SPV	Assessment	Mitigations
Planning	✓	✓		Works to be undertaken on our sites. We would acquire any additional sites required. We are likely to conduct planning and consenting activities as current site owner.	N/A
Land	✓	✓			
Other Consents	✓	✓		We already have permits and consents for the existing sites and may be best placed to seek additional permits.	Existing site and in house planning and consenting expertise
On time delivery		✓	✓	SPV best placed to manage delivery. We may retain some residual risk (for example increased costs of disposal under new FRfW) if capacity is not available as required and our mitigations prove ineffective.	Compensation events for delay and/or damages if the SPV cannot meet its obligations. Alternate mitigations for managing capacity constrains for planned or unplanned outages
Cost overruns		✓	✓	Likely shared between us and the SPV as part of target cost approach.	Compensation events may be given for delay / damages where appropriate.
Site conditions			✓	Market best placed to manage.	Compensation events for unforeseeable ground risk.
Works information		✓		We are best placed to manage.	N/A
Detailed design			✓	SPV best placed to manage.	N/A
Third Parties		✓	✓	Shared risk during delivery of works.	Performance incentive could be applied.
Changes in scope	✓	✓		We are likely to bear risk on any changes in scope required.	Contractual variations if required.
Interfaces with our existing assets		✓	✓	Insofar as there are any interfaces between our existing assets and the new assets delivered by the	Compensation events for delay and/or damages.

Construction and asset delivery risks	Application to the project				
	Cust.	SWS	SPV	Assessment	Mitigations
				SPV, there will likely be some risk shared between both parties.	
Commissioning			✓	SPV best placed to manage.	N/A
Financing costs	✓		✓	As per Ofwat's risk allocation. Assuming a target cost arrangement, adjustments may be required for changes in financing costs.	N/A
Refinancing gains	✓		✓	In the event of refinancing by an SPV we would seek to benefit with savings passed on to customers.	N/A

Table 27 – Operations and maintenance risk assessment – Ham Hill & Ashford

Operation and maintenance risks	Application to the project				
	Cust.	SWS	SPV	Assessment	Mitigations
Cost (operations and maintenance)			✓	SPV best placed to manage.	N/A
Operational performance			✓	SPV best placed to manage.	Performance incentives, potential share of additional revenue generated from operations (energy sales).
Compliance with statutory and regulatory obligations which impact the scope		✓	✓	Project has a net-positive effect on our ability to manage restrictions on disposal to land bank. Ability to transfer obligations will need to be investigated but likely limited.	Contractual penalties and other mechanisms to transfer risks to the market, where possible and efficient.
Defects during operations		✓	✓	Risk likely to be shared in practice based on root cause assessment. Market to be responsible for defects up to the statutory time limit and or performance.	Contractual variations to address defects.
Demand risk	✓	✓		We will generally be responsible for scoping the project to meet demand.	A usage-based revenue model may be used to manage different levels of demand.
Over-utilisation	✓	✓			
Change in scope	✓	✓		We are likely to bear risk on any changes in scope required.	Contractual variations if required.
Value testing	✓		✓	As per Ofwat's risk allocation	Contractual variations if required.

Operation and maintenance risks	Application to the project				
	Cust.	SWS	SPV	Assessment	Mitigations
Condition of asset/hand back risk			✓	End of term provisions would need further consideration. However, risk will generally sit with the market.	Deductions from Residual Value Payment or similar reconciliation to account for condition at the end of the contract.

Market Engagement and Appetite

At this early stage of the project's development, we have not formally engaged with the market. However, some positive preliminary discussions have been held and the appetite for the construction of new AAD plants are likely to be strong. Further evidence of a competitive market is illustrated on by the Anaerobic Digestion and Bioresource Association [55] comprehensive listing of market participants some of which include investors.

We plan a formal market engagement later this year which can further inform the project. The purpose is twofold (1) to foster interest in the project before tender launch and (2) to garner insight into the most appropriate packaging of the project. This will help to ensure that the tender process is well received by the market.

Key issues which are likely to be tested and are likely to be of interest to the market include:

- The project's scope, including which assets are to be designed, constructed, financed, operated and maintained by the SPV.
- Whether the joint procurement of Ham Hill and Ashford can generate efficiencies or if it would be preferable to deliver the assets separately.
- Potential construction strategies given the location of the two sites and options for an accelerated delivery.
- Any access restrictions, planning, operational planning, governance for the two sites will need to be considered, including its possible impact during construction.
- The proposed commercial arrangement between ourselves and the SPV.
- The potential for the generation of third-party revenues, their treatment under the project agreement and impact on the TRS payable.

These issues and others will be tested with the market as the project is developed further.

Payment Mechanism

We currently assume an availability payment mechanism to the SPV is likely best suited. Under this mechanism the payment is linked to the plants' ability to operate and provide the agreed-upon level of service, rather than being tied directly to the volume throughput only. The payment amount is predetermined and based on the plant's availability and compliance with specified performance criteria, such as meeting specifications, maintaining operational efficiency and fulfilling contractual obligations.

This payment mechanism promotes accountability, as the SPV is responsible for the plant's availability and performance, ensuring reliable and consistent service.

The details of the payment mechanism will need to be developed further and tested with the market. The following key risks should be considered in the payment mechanism design:

[55] About AD | ADBA | Anaerobic Digestion & Bioresources Association (adbioresources.org)

- Risk that the services will not be delivered to the requisite outcome/performance/availability levels.
- Capacity of the plants are assumed to be known and variability in a volume/throughput basis is less likely.
- A clear and agreed approach in regard to the waste characteristics feeding into the plant and the waste streams discharged.
- Inflow and outflow streams need to be maintained within set bounds.
- SPV is incentivised to pursue efficiency gains.
- Minimum throughput required for SPV to maintain financial viability.

9.7. Costs

Capex costs

We currently estimate the complete capex costs to be part of the SPV's delivery scope. This may need to be reassessed as the project is developed.

Development costs

Ham Hill and Ashford will each require a typical set of project development activities, including planning, consenting, surveys and studies, procurement, and contractual design. However, given the use of markets in bioresources and the likelihood that the assets will generate third party revenues, additional commercial consideration may be required. At this stage, a top-down approach has been used to estimate development costs using the approach used by Ofwat at PR19[56]. Including design costs, pre-tender and tender costs and management costs, we currently assume development costs of £8.4m for Ham Hill and £7.0m for Ashford.

Payments to the SPV

Under a DBFOM contract delivered via DPC-lite using a long-term payment mechanism (ARD-lite), we will need to consider the project's ability to generate additional revenues. The project is expected to be a net exporter of energy and contribute to the grid and promoting green energy solutions. With the sale of excess energy, the SPV would generate additional income.

This potential income could be shared and reduce payments to the SPV. This could encourage the SPV to seek further efficient market operations and optimise their processes. By maximising revenue generation, bidders will be incentivised to explore innovative solutions and technologies that not only enhance the project's performance but also contribute to a more sustainable energy landscape.

Due to the uncertainty of the bid prices received during the eventual tender process, we have produced estimates to enable us to show the potential costs for these payments in AMP8. The estimates will be refined as we gain more knowledge. See Data Table RR9.

[56] Calculation of project development cost is based on Ofwat's guidance as per supply demand balance enhancement feeder model https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM_E_WW_SDB_FD.xlsx - Sheet Deep dive_ANH

9.8. Incentives and benefits

We recognise the importance of delivering the project expediently and remain committed to address the demands of biosolids disposal pending the expected change in the FRfW. By following the suggested delivery model we may benefit from:

- Reduced resource requirements during initial design, construction and operations;
- Reduced financing requirement for the construction and operational periods of the asset;
- In delivering the projects we will have a mitigation to the operational cost increases due to the application of expected Farming Rules for Water, which could increase the cost of Biosolids disposal 5-fold as 2/3 of the Biosolids produced in the UK would be affected and require alternative treatment (likely landfilling and incineration, assuming space is not a constraint), increasing our current opex.
- The following technical considerations could increase interest in the project, attracting investors as well as motivating us to deliver the projects as soon as possible:
- Increase farmer acceptance of product by an expected 50%;
- Ensuring compliance with BAS (biosolids assurance scheme) pathogen and updated BAS dried solids standards;
- Increased product dryness (better stacking of product in fields resulting in reduced slumping, smaller field footprints and reduced risk of run-off to surface water);
- Enhanced pathogen destruction allowing farmers to apply enhanced product to a wider range of land (e.g. grassland - one-third of agricultural land in the South-East of England); and
- Reduced odour.

10. CSO: Wetlands – Project Business Case for DPC-lite

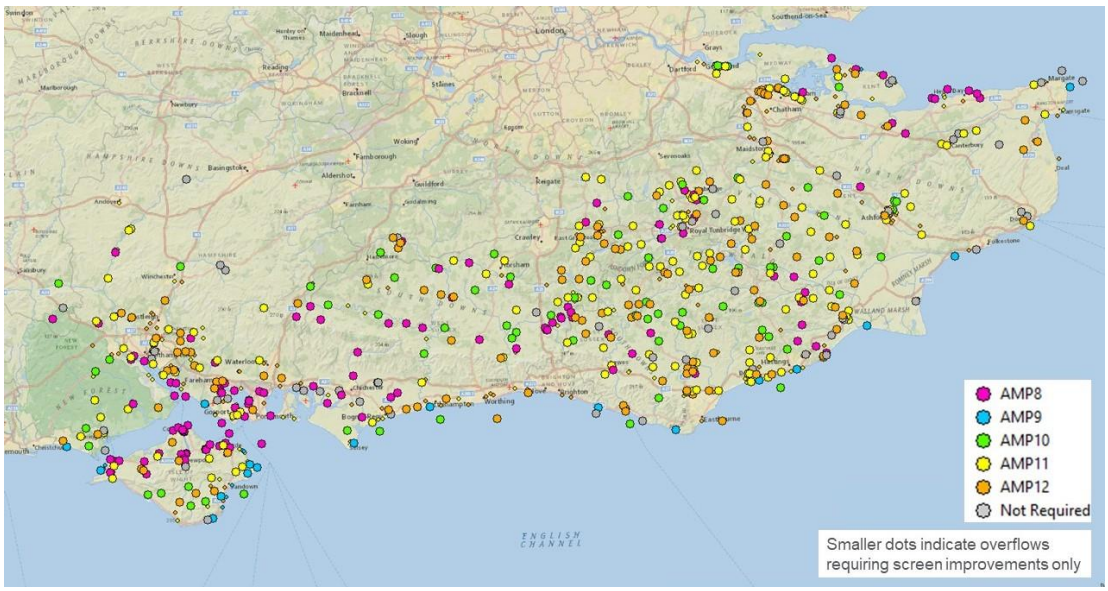
The purpose of this business case is to propose a DPC-lite delivery route of the wetlands programme. It is expected to be read in conjunction with the enhancement case for the project, which can be found in SRN06 Wholesale Wastewater Costs and Outcomes and SRN40 WINEP – Storm Overflows Enhancement Business Case.

10.1. Project overview

The wetlands programme involves the development and construction of 32 wetland sites (approximately 55 hectares, including wetlands in harbours) across our network in AMP8. Wetlands are a nature-based solution to support reducing the use of storm overflows and managing catchment flows. They are typically built through the installation of constructed wetlands or reedbeds which are highly effective filtration systems to treat wastewater.

The wetlands are planned to generally be positioned adjacent to our existing wastewater treatment works and pumping stations, allowing flows to be directed into the wetlands during times of heavy rainfall. This is to alleviate pressure on the network and reduce the frequency of combined sewer overflow (CSO) spills. Figure 44 illustrates the locations where improvements are required across our network. Wetlands are needed at some sites to be delivered in AMP8[57].

Figure 44 – Location of improvements required to address storm overflows across our network



[57] Our wetlands programme spans multiple AMPs, however at present we have included only those intended for delivery in AMP8 within this assessment.

The construction of wetlands is part of a large programme and several other investment activities over the next AMPs to reduce and eliminate the frequency of spills at combined sewer overflows. The scope for the wetlands programme is heavily influenced by the development of scope and activities proposed across the WINEP improvement programme.

Lining and sealing of sewers is needed to enhance the watertightness of our sewer network to reduce infiltration of groundwater. Sewers in condition grade 4 and 5 are routinely inspected and relined as part of our normal operational and maintenance activities and funded from base operational expenditure (botex). However, our experience and evidence from our sewer rehabilitation programme shows that sewers in a condition grade 1 and 2 are hydraulically efficient but can allow significant ingress from groundwater. Sealing sewers will improve the sewers beyond normal Grade 1 and private laterals will need to be tackled as well in order to reduce infiltration, and be part of an Infiltration Reduction Plan (IRP).

If an IRP is not in place and acted on first, the EA is unlikely to allow a wetland to be constructed.

Wetlands for ground overflows

We plan to eliminate any residual spills at related overflows by providing Integrated Constructed Wetlands (ICWs) to treat any overflowing water before discharge to the environment. Wetlands are a nature-based solution and part of a wider solution of infiltration reduction to ensure that action is taken to tackle the problem at source where possible.

We will need to ensure that wetlands do not increase the risk of groundwater pollution (e.g. by using liners), and we need to consider how we provide a sustaining flow for the plant health in drought conditions. Where located at existing treatment works, we anticipate that the final effluent could be used to sustain the wetland in periods of no spills from the storm overflow (otherwise the planting in the wetland could die during drought conditions).

As wetlands are a nature-based wastewater treatment technology, the required size and cost of a wetland is determined by the contributing population. For the purposes of WINEP planning we have therefore assumed that the size (and cost) of distinct wetlands within catchments with more than one qualifying overflows is proportionate to the size of the annual spill volume at each overflow. The construction of integrated wetlands will treat any overflowing water from storm overflows.

In AMP7 we are progressing the development of four wetlands as part of our storm overflow accelerated plan. As wetlands schemes are new to the industry, with different solutions available and best practice being developed, these initial four schemes will aid in refining the scope formulated for the larger implementation scheme in AMP8.

We expect phased delivery to assist our understanding of the technical and regulatory challenges, to enable us to better understand the actual costs for delivery of this project.

Risks and issues

Permitting

We have held initial discussions with the EA about using wetlands to treat discharges from storm overflows, which will require a change in the existing storm overflow permit. Adding a treatment step, a wetland, to our treatment would effectively increase the amount of flow we could treat to final effluent standard and / or any other standard required for the receiving watercourse for example in the case of network or works storm tank overflows they might be UPM / FIS standards (urban pollution model, fundamental intermittent standards). For network overflows (8 of the 32 overflows) an approach is being discussed with the EA and Defra to

develop this permit route. However, we are experiencing delays with the EA approving and processing the changes.

Delivery risks

Land will be required for these sites and planning permission upon that. Land may need to be acquired (lease or purchase) or there may be land available. Engagement and negotiation with land owners may be retained by Southern Water.
We will then require to complete technical feasibility studies, ecological surveys and submit design and planning applications.

AMP8 will be the first AMP where the industry is to attempt to deliver green solutions such as wetlands on a large-scale basis. We therefore expect that the sector capabilities; need to increase considerably across AMP8 as contracting organisations scale up to meet demand. This may also impact the supply chain's ability to deliver the required aquatic plants and other needs.

Other

The maintenance and wetting flow will need to be provided to keep the wetland operational in periods of low flow. Wetland assets are passive in nature. It is therefore likely that we will control the flows into and out of the asset, meaning that whilst the SPV will be responsible for the operation of the wetlands themselves, in practice there is likely to be minimal operational activity for the SPV to undertake.

10.2. Eligibility for DPC

In July 2023 Ofwat released an additional guidance on the scalability test.[58] The guidance introduced new criteria as bundled projects should have individual asset values of at least £5m-£10m, and with asset life at least as long as a standard DPC contract.

The delivery of wetlands via DPC is therefore excluded. However, we believe as discrete assets of a total construction value of £80m, we consider that our proposed DPC-lite delivery may be the optional route for the project, offering innovation and efficiency to the benefit of us and our customers. We therefore have applied Ofwat's DPC test to assess the project's potential to be delivered through alternative delivery.

[58] Ofwat (3 July 2023) Letter from Keith Mason to Regulatory Directors in respect of Technical Discreteness Guidance.

Table 28 illustrates the assessment.

Table 28 – Summary of DPC eligibility assessment outcome – Wetlands

DPC Eligibility Test	
Construction capex in AMP8	£80m
Annual opex	£0.8m
Renewal Capex[59]	To be determined
Assumed asset life	60 years
Whole life totex	£102.2m
Size Test	***Possible fail***
Programme scalability test	Wetlands do not qualify for DPC using Ofwat's updated guidance with individual asset values for individual wetlands on average c.£3.5m.
Separability test	We currently have identified the project as being sufficiently separable from our operations.
Construction risk test	No significant reasons have so far been identified as to why most construction risks cannot be transferred or mitigated.
Operations and maintenance risk test	No significant reasons have so far been identified as to why most operations and maintenance risks cannot be transferred or mitigated.
DPC Eligible	***No***

Given the scale of the project and the similar nature of the works across different sites, we consider the project as suitable for our proposed DPC-lite delivery route as individual wetlands can be delivered as discrete assets and operated and maintained independently by a third party.

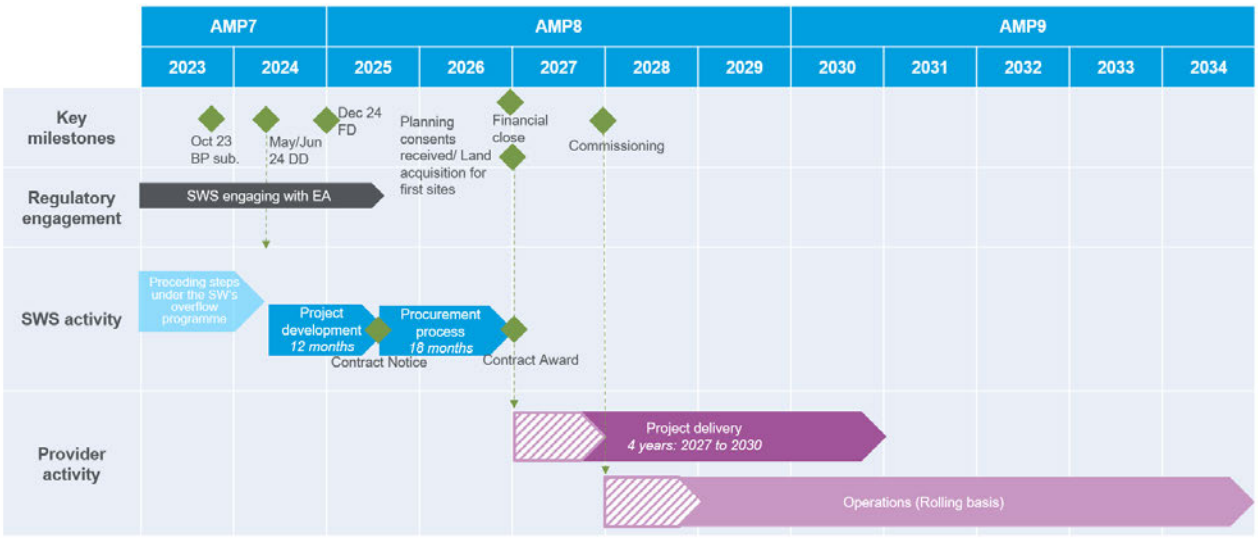
As a relatively new activity, we expect that the construction and operations and maintenance may be better placed to be delivered by a third-party provider as we do not currently possess significant experience and expertise in the delivery of wetlands. Delivery by a third-party provider may further allow innovation and generate capital and operational efficiencies.

10.3. Delivery timeline

Our current schedule for delivery estimates construction starting in 2027 and commissioning of assets throughout the rest of AMP8 into early AMP9. This is illustrated in Figure 45.

[59] To maintain consistency with our investment planning processes and with figures presented elsewhere in the business plan, renewal capex has been calculated using forecast data to the end of AMP13.

Figure 45 – Wetlands delivery timeline



Most of the works are required by the Environment Act 2021 (clauses on Storm Overflows) and need to be completed by 2030. In the event that works are not delivered to schedule and there are environmental breaches deriving from CSOs, we could be subject to enforcement from the EA, and may receive an adverse Environmental Performance Assessment (EPA) score.

The timing of project delivery is likely to be predominantly driven by the need to secure planning and consents over the land to be used as wetlands. Securing land across a range of sites may present a risk to timely completion of the project development phase. We expect that it will be necessary to lease adjacent land (agricultural) (up to c.85% in total) and purchase the remaining c.15%[60].

In order to meet the target delivery timeline, the wetlands programme will need to be developed in conjunction with the wider CSO programme:

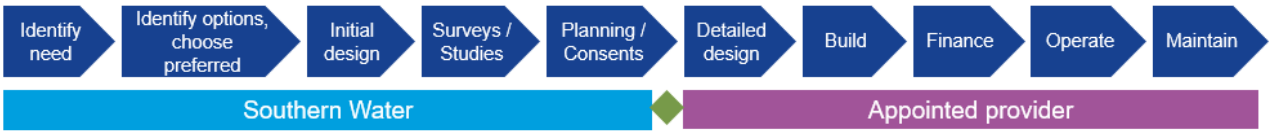
- To define the scope of the WINEP improvement programme (including wetlands, SuDS etc.), we will complete the previous steps set out in the wider storm overflow management programme (optimisation of existing solutions, dealing with misconnections, designing the non-household SuDS).
- A phased delivery as the third-party provider is likely to procure subcontractors for relatively smaller pieces of work. The first package of works could start when planning and consents for a few sites have been granted. The current assumption is that once planning consent/ land acquisition is completed for 4-5 sites, construction can begin.
- Works can be carried out and commissioned in small packages over time and each package could be delivered within 12 months. We currently assume construction for all 32 sites to be completed in 2030 with commissioning of wetlands from 2028.
- The project delivery phase could be shortened if several work packages are carried out in parallel.

[60] The referenced split of leased versus purchased land is an estimation based on current project development which may be subject to change.

10.4. Tender model

A Late tender model is proposed based on the project's timeline and characteristics. Under the Late model, we would complete the initial design, surveys, planning, and consents required. As the contract could be awarded to a single entity or a consortium, we have assumed a SPV to be the delivery vehicle for the successful bidder. The SPV would be responsible for the detailed design, planning and consenting, financing, construction, operations and maintenance of the project. Figure 46illustrates the allocation of responsibility between us and the SPV.

Figure 46 – Allocation of responsibility under the late tender model



The Late model has the potential to offer several benefits to the delivery of the project through the procurement of an SPV:

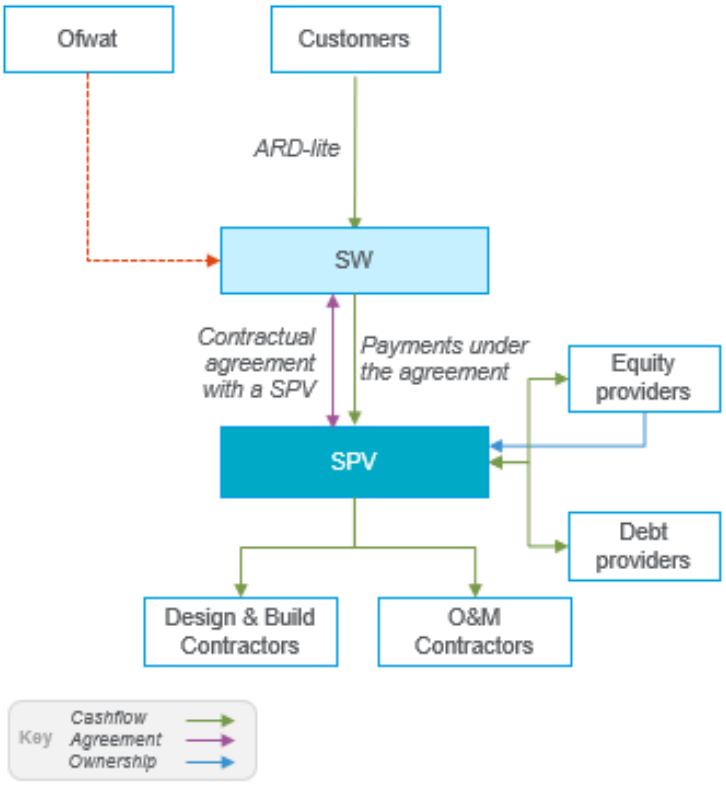
- We are familiar with the project's requirements and are best positioned to site the new assets, undertake essential surveys, obtain consents, and initiate the outline design. We are also well-positioned to engage with bidders during the development activities to ensure flexibility is maintained in the planning envelope and within project specifications. Completion of key activities (such as consenting) prior to contract award also de-risks the project from bidders' perspective, allowing them to offer more competitive bid prices.
- The detailed design for the project will be undertaken by those with the skills and experience in delivering similar assets, allowing both us and our customers to benefit from efficiencies and innovation in the construction and operation of the assets.
- Competitive pressure in the procurement process are to drive down the cost of delivery.

10.5. Commercial model

We propose to conduct a procurement process to appoint an SPV which will assume responsibility for the design, build, finance, operation and maintenance of the assets. The contractual structure is shown in

Figure 47.

Figure 47 – Contractual model structure



Upon contract award we along with the SPV would enter into a project agreement with the following key features:

- The contract would outline the SPV's obligations and payment terms. An availability-based payment mechanism is likely to be best suited to the nature of the assets.
- The contract would include the operation and maintenance of the assets over a defined period of time. However, in practice the assets are passive meaning that whilst the SPV would be responsible for the operation of the wetlands themselves, we propose to manage the discharge of overflows into wetlands as part of the wider network management.
- We will investigate the opportunity to incentivise the SPV.

Based on the revenue stream under the agreement, the SPV would raise long-term debt and equity to finance the works. Debt providers would place obligations on the SPV that make modifications to the agreement once signed potentially difficult. The specifics on how this will be structured will depend on the commercial model offered to the market and firmed up by bidders during the tender stage.

Risk Allocation

The table below outlines the high-level risk distribution for the project if progressed under the Late tender model. The risks identified align to those set out in Ofwat's DPC guidance. However the allocation has been updated as necessary to reflect our proposed DPC-lite delivery route with an ARD-lite and the nature of the project.

Table 29 – Construction and asset delivery risk assessment – Wetlands

Risk	Application to project				
	Cust.	SW	SPV	Assessment	Mitigations
Planning	✓	✓		We assume to be responsible for planning and land acquisition and long-term lease agreements.	N/A
Land	✓	✓			
Other consents	✓	✓	✓	We are generally best placed to manage. However some risk related to environmental consents of wetlands may be transferrable to the SPV.	Possible compensation events for damages arising from breach of consents.
On time delivery		✓	✓	Projects require significant earthworks, likely exposing the project to ground risk. It is likely that some risk will be shared with us and our customers.	Target cost contract assumed.
Cost overruns	✓	✓	✓		
Site conditions		✓	✓	SPV best placed to manage, however ground risk is likely to be shared where conditions are worse than expected.	Possible compensation events for ground risk. Potential to use a Geotechnical Baseline Report.
Works information		✓		We are best placed to manage.	N/A
Detailed design			✓	SPV best placed to manage.	N/A
Third parties		✓	✓	Shared as per Ofwat's risk allocation.	Performance incentive linked to stakeholder engagement.
Changes in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations if required.

Risk	Application to project				
	Cust.	SW	SPV	Assessment	Mitigations
Interfaces with our existing assets		✓		Interfaces likely to be minimal given passive assets. We are best placed to manage.	Compensation events for delay and/or damage.
Commissioning			✓	SPV best placed to manage.	N/A
Financing costs	✓		✓	The SPV would bear the risk associated with raising finance for the project.	N/A
Refinancing gains	✓		✓	In the event of refinancing by an SPV we would seek to benefit with savings passed on to customers.	N/A

Table 30 – Operation and maintenance risk assessment – Wetlands

Risk	Risk allocation				
	Cust.	SW	SPV	Assessment	Mitigations
Cost (operations and maintenance)			✓	The SPV to be responsible for and bear risk related to operating the assets efficiently.	Benchmarking and/or market testing provisions will enable the comparison of long-term opex against comparable projects.
Operational performance			✓	SPV best placed to manage.	Payment mechanism likely to be availability based.
Compliance with statutory and regulatory obligations which impact the scope		✓	✓	Obligations around CSOs unlikely to be transferrable to the SPV. Risk transfer would be sought where efficient. However, performance would likely be based on availability, with residual regulatory risk retained by us.	Performance deductions for unavailability.

Risk	Risk allocation				
	Cust.	SW	SPV	Assessment	Mitigations
Defects during operations		✓	✓	SPV generally best placed to manage, however some residual risk for some issues (e.g. environmental effects) likely to remain with us.	N/A
Demand risk	✓	✓		We are best placed to manage.	Payment mechanism likely to be availability based. Over- or under-utilisation not a factor in contractual terms.
Over-utilisation	✓	✓		We are best placed to manage, de facto as an element of scope (i.e. sizing of assets).	
Change in scope	✓	✓		As per Ofwat's risk allocation.	N/A
Value testing	✓		✓	As per Ofwat's risk allocation.	N/A
Condition of asset/hand back risk			✓	SPV best placed to manage. Depending on the nature of planning and land ownership, there may be some end of term reinstatement obligations with which a SPV may need to comply.	Deductions from Residual Value Payment or similar reconciliation to account for condition at the end of the contract.

Market engagement

Market interest for a wetlands programme of this size and scale is yet to be fully established. We have some experience only with wetlands contractors through the four sites currently being progressed.
We will need to conduct market engagement to develop a market of potential bidders and foster interest in the project before tender launch. This will help to ensure that the procurement process can be competitive. Key issues which are likely to be tested and are likely to be of interest to the market include:

- The project's scope, including which assets will be constructed, operated and maintained by the SPV.
- The programme for delivery of the assets, including the approach to securing consents, phasing of the wetlands works, and timing of delivery.
- Market appetite for ground risk

Payment mechanism

Wetlands schemes are new to the industry with different solutions and best practice being developed. Additionally, the technical scope of the assets is not known at this stage.

Given the nature of wetlands and their integration into water discharge networks and sewers, we believe that the payment mechanism will be structured in the form of an availability payment that takes into account all appropriate performance incentives and adjustments. The availability payment mechanism refers to a payment structure where the SPV is compensated based on the availability and performance of the assets. Under this mechanism, payment is linked to the ability of the assets to operate and provide the agreed level of service. It also transfers certain risks, such as operational and maintenance risks, to the project provider (SPV), encouraging them to manage and maintain the assets efficiently in order to receive full payment. This payment mechanism promotes accountability as the project provider is responsible for availability and performance, ensuring reliable and consistent surface water management. It also provides a predictable revenue stream for the project provider, facilitating financing arrangements.

10.6. Costs

Capex costs

We are currently planning to appoint a SPV who is expected to deliver the assets with us obtaining the required land and consents. Construction of the wetlands requires pipework, earthworks, minor civil works, lining and planting. We expect that key interfaces between our existing assets and the pipeline to a wetland are to be delivered by us with us also remaining the permit holder.

For this submission we have assumed the full scope to be delivered by a third-party provider. We assume that we will be responsible for land acquisition and the agreement to agree long-term leases with landowners. We may also be responsible for some of the construction. This is likely to be reassessed as the project is developed.

Development costs

Wetlands will require close collaboration between the EA and ourselves. We will need to provide information relating to the sites and specifications. The SPV is planned to provide design. Despite not being delivered via DPC, but a proposed DPC-lite route, we believe that the standard development cost assumptions used for DPC projects could be applied here. At this stage, a top-down approach has been used to estimate

development costs using the approach used by Ofwat at PR19[61]. Including design costs, pre-tender and tender costs and management costs, we currently assume development costs of £7.4m.

Payment to a third-party provider

We expect to pay the SPV upon commissioning with the first wetlands expected to be commissioned in 2028. While progressing the project, we will need to consider the Construction Act and that we are unlikely to be able to benefit from the DPC's exclusion Order of the Construction Act. We are currently assuming to begin paying the SPV in 2029.

Due to the uncertainty of the bid prices received during the eventual tender process, we have produced estimates to enable us to show the potential costs for these payments in AMP8. The estimates will be refined as we gain more knowledge. See Data Table RR9.

10.7. Incentives

As part of the WINEP, there are timescale obligations attached to the delivery of these projects and the reduction of discharges at storm overflows. In the event that works are not delivered to schedule and there are environmental breaches deriving from CSOs, a performance commitment related to storm overflows for AMP8. We could also be subject to enforcement from the EA and may receive an adverse Environmental Performance Assessment (EPA) score.

[61] Calculation of project development cost is based on Ofwat's guidance as per supply demand balance enhancement feeder model https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM_E_WW_SDB_FD.xlsx - Sheet Deep dive_ANH

11. CSO: Local Authority Highways SuDS – Project Business Case for DPC-lite

11.1. Introduction

The purpose of this business case is to propose a DPC-lite delivery route of the Local Authority Highway Sustainable Drainage System programme. We refer to LA Highways SuDS throughout this section. This is for convenience to describe the types of public bodies that may be involved as described, including county councils and unitary authorities. It is expected to be read in conjunction with the enhancement case for the project, which can be found in SRN06 Wholesale Wastewater Costs and Outcomes and SRN40 WINEP – Storm Overflows Enhancement Business Case.

11.2. Project overview

Roadside SuDS collect runoff from roads and pavements (as opposed to roofs), intercepting rainwater before it passes into the combined sewer network. These measures can be installed on streets and within parks and green spaces throughout our region to reduce storm overflows and enhance the aesthetics and biodiversity of the area. Where green spaces are unavailable, the construction of SuDS in grass verges and roads can include swales, pocket basins, tree pits and raingardens.

This project is focused on the delivery of SuDS on 348km of roads across several local authorities (LAs) acting as Highways Authorities. For our programme throughout our area this involves the collaboration with five county councils (Isle of Wight, Hampshire, West Sussex, East Sussex, and Kent) and five unitary authorities (such as Portsmouth CC). The project is part of our larger surface water management programme, which is being addressed through various measures. It is also part of a larger multi-AMP programme to address compliance at Storm Overflows, although this project relates only to the AMP8 component.

11.3. Eligibility for DPC

In July 2023 Ofwat released an additional guidance on the scalability test[62]. The guidance introduced new criteria for the scalability test with bundled projects needing individual asset values of at least £5m-£10m and with asset life at least as long as a standard DPC contract.

The delivery of LA highways SuDS is therefore excluded. However, we consider that the total size of the project and its separability of the delivery and operability from our network makes a delivery via DPC-lite the optimal route for the project, offering innovation and efficiency and delivery to the benefit to us and our customers. We have applied Ofwat's DPC tests to assess the project's suitability for an Alternative Delivery route (see Table 31).

[62] Ofwat (3 July 2023) Letter from Keith Mason to Regulatory Directors in respect of Technical Discreteness Guidance.

Table 31 – Summary of DPC eligibility assessment outcome – LA highways SuDS

DPC Eligibility Test	
Construction capex in AMP8	£197.2m
Annual opex	£1.1m
Renewal Capex	To be assessed when solution is developed
Assumed asset life[63]	60 years
Whole life totex[64]	£228.2m
Size Test	***Pass***
Programme scalability test	The project does not meet the scalability test using Ofwat's guidance with individual assets below the minimum £5m-£10m.
Separability test	We currently have identified the project as being sufficiently separable from our operations.
Construction risk test	No significant reasons have so far been identified as to why most construction risks cannot be transferred or mitigated, subject to the development of an appropriate commercial model involving the relevant Local Authorities.
Operations and maintenance risk test	No significant reasons have so far been identified as to why most operations and maintenance risks cannot be transferred or mitigated, subject to the development of an appropriate commercial model involving the relevant Local Authorities.
DPC Eligible	***No***

The project does not meet the DPC eligibility criteria. However, given the large scale of the project, we consider that the project could be suitable for our proposed DPC-lite delivery route. The delivery model will need to be discussed with local authorities and Ofwat, and market interest should be confirmed before making a final decision on the delivery route.

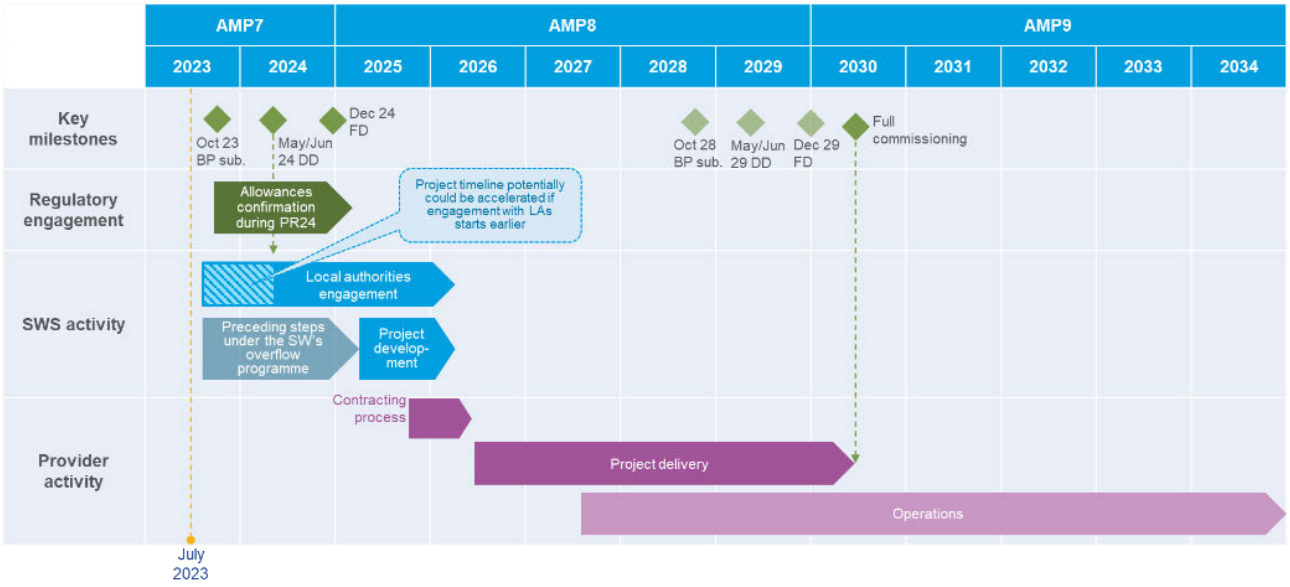
11.4. Delivery timeline

Most of the works are required by the Environment Act 2021 (clauses on Storm Overflows) which requires that the worst performing storm overflows are addressed by 2030. Our current schedule therefore involves asset delivery beginning in 2027 and continuing throughout the rest of AMP8. This is illustrated in

Figure 48.
To meet the 2030 target, the LA highways SuDS programme should be delivered in a phased approach. As some are likely to be procured by LAs, the delivery time is heavily depend on this agreement.

[63] Totex does not include renewal capex as yet to be determined. Very susceptible to model chosen with LAs.
[64] Very susceptible to model chosen with LAs.

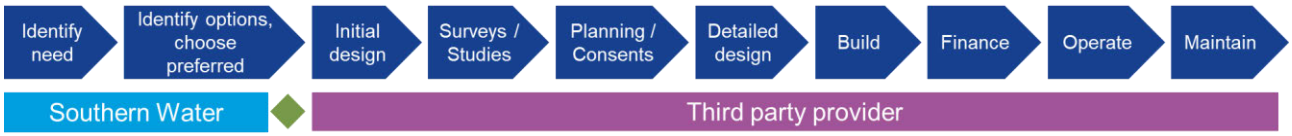
Figure 48 – Delivery timeline of the LA highways SuDS programme[65]



11.5. Tender model

Local authorities have the responsibility to maintain a network of highways. With a need to reduce and eliminate the frequency of spills at combined sewer overflows, the specific solutions for each location can vary. The scope of the works potentially considered with each local authority could therefore significantly vary. The decision on scope of works will require agreement with the LAs following individual assessments. Therefore, an early tender model is better suited for this project. It ensures that the solution is assessed and decided with the third-party provider. It ensures that the third-party provider is not only responsible for detailed design, construction, finance, operations and maintenance, but also the initial design, planning and consenting and any surveys and studies required. Figure 49 illustrates the allocation of responsibilities under the Early tender model.

Figure 49 – Allocation of responsibility under the early tender model



[65] Note that the delivery schedule for the SuDS programme is likely to be affected by the commercial model adopted.

The early model has the potential to offer several benefits to the delivery of our project:

- Our experience as a water and sewerage undertaker will be valuable in ensuring that the interventions devised will sufficiently address the objectives of the project.
- LAs' knowledge of their areas and existing responsibility for management of public infrastructure will provide valuable insight into the siting of improvements and the co-ordination of delivery. Their involvement will also streamline any consenting and access issues relevant to delivery of the works.
- LAs and their contractors are likely best placed to offer best solutions and have the delivery capabilities to implement the project within the required timescales.

11.6. Commercial model

Delivery models considered

With the maintenance of a network of highways the responsibility of Local Authorities, the project has two clear delivery options, but there may be variants of each.

- Option 1 – LAs agree to delivery the project. Their delivery would be pre-agreed and could be part of a larger package of works procured by LAs. LAs could use existing contractors, a competitive tender process or a PPP/PFI contract to delivery the agreed works.
- Option 2 – We are competitively tendering a contract without the agreement with LAs, directly contracting with a SPV.

There are pros and cons to both options. A preliminary view on the models is below and will need to be reassessed after engagement with the LAs, Ofwat and the market.

Table 32 – Analysis of SuDS delivery options

Criteria	Option 1 Delivery by LAs	Option 2 Procurement by SW
Responsibilities	LAs are responsible for the full Design-Build-Finance-Operate-Maintain (DBFOM) process. LAs coordinate procurement, interact with the appointed provider, provide land access, and manage interfaces.	The SPV is responsible for project delivery. LAs ensure land access and manage interfaces.
Interfaces	Due to responsibility of LAs to deliver the project in their areas, interface management is simpler.	There are more interfaces to consider between us, the SPV and LAs. We are likely to be responsible for enabling the SPV and responsible for their activities.
Cost Effectiveness	LAs' access to less expensive financing may enable us to benefit from lower financing costs. The bundling of works with other LA projects could offer synergies and efficiencies.	Costs can be controlled through competitive procurement of the provider. Potential synergies with other LA works would not be possible.
Pros	LAs' direct control reduces interface complexity and may offer access to cost-effective debt financing.	We are directly involved in the procurement process. Cost efficiencies are achieved through the competitive process.

Criteria	Option 1 Delivery by LAs	Option 2 Procurement by SW
Cons	Reliance on LAs for delivery with incentives to be defined.	Interface management complexities due to trilateral arrangements that could negatively impact the project delivery. Benefits of synergies is limited.
Time Efficiency	Direct LA control can ensure prompt decision-making and project progression.	Coordination between multiple parties may extend timelines.

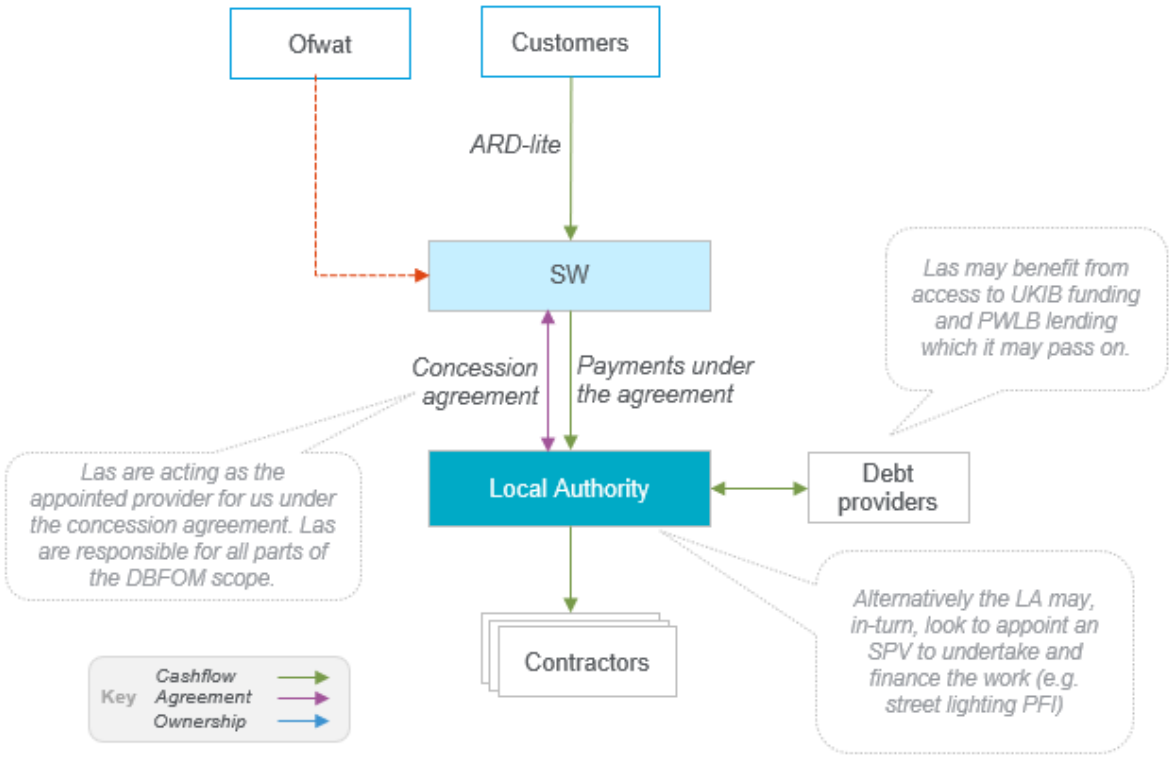
Option 1 – Delivery by LAs (as the baseline delivery model)

Option 1 outlines a scenario where LAs are delivering the project, including procuring the works. To be agreed with us, this could be through their existing contract partners, a competitive procurement process or though the PPP/PFI framework. We assume that the LAs, who are responsible for the operation and maintenance of the highways, could rely on their existing contractors to deliver the project[66]. We would retain the overall responsibility of the final surface water management services as under our license.
Significant benefits of this delivery model could include:

- ✓ We may be able to benefit from LAs' access to cost-effective financing, if passed on, as made possible via the UK Infrastructure Bank (UKIB) funding program or the Public Works Loan Board (PWLB) facilities.
- ✓ Both LAs and us could potentially realise synergies by packaging works as a larger contract to construct assets and with ongoing operations and maintenance activities.
- ✓ This delivery model keeps land access management processes simple as LAs maintain close control over all aspects due to their direct involvement in the procurement process.
- ✓ This delivery model minimises interface risks.

[66] A key assumption is that these works will likely be delivered by contractors who are already active in the sector. The commercial model has been used before in similar form.

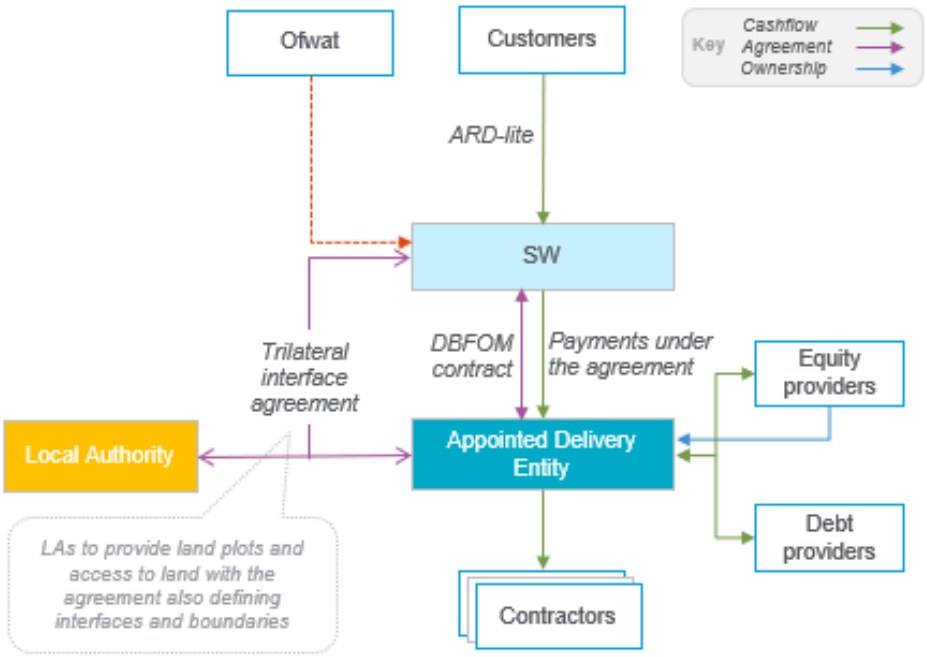
Figure 50 – Option 1 – Delivery via LAs – contractual model structure



Option 2 – Delivery by SW

Option 3 proposes a hybrid approach where the infrastructure project is primarily procured by us and delivered and financed by a SPV. In this setup, Local Authorities engage mainly to grant land access, defining and demarcating property rights. This structure does not require LAs to delivery the project, with us using a competitive appointed SPV to deliver based on our specifications. We and our customers can benefit from the SPV's technical expertise and efficiencies.
However, the needed tripartite arrangement significantly complicates interface management regarding land access and existing highways creating additional risks. Synergies as potentially available through Option 1 are also less likely.

Figure 51 – Option 2 – Delivery by us – contractual model structure



Delivery of the overall project

LA highway SuDS are a new initiative in the industry with several possible solutions and evolving best practices. The technical specifics for our SuDS programme are yet to be confirmed. Additionally, we need to agree with a number of LAs on a model to deliver the complete works in their area.

LAs maintain a large network of highway assets. With existing arrangements with contractors to construct, renew and maintain roads, LAs are ideally positioned to deliver this project. We are already in early discussions with a few LAs.

Under the proposed delivery model, Option 1, LAs would extend their existing obligations regarding highways taking the leading role on the project delivery. Together with LAs and their contractors, we would agree on specific requirements and the scope of works. We would aim to seek synergies where possible. In our other proposed delivery model, Option 2, we would directly procure the scope of works required. With an agreement with the LAs, we would competitively tender a contract. As the contract could be awarded to a single entity or a consortium, we have assumed a SPV to be the delivery vehicle for the successful bidder. The SPV would be responsible for the delivery of the project. We currently assume this to include the design, construction, financing as well as the maintenance of the assets.

Risk Allocation

The tables below outline the expected risk distribution for the project if it progressed under the Early tender model and under Option 1. The risks identified align to those set out in Ofwat's DPC guidance. However the allocation has been updated as necessary to reflect the specific characteristics of the project and proposed DPC-lite delivery route with an ARD-lite.
Under option 1 LAs would assume responsibility for contracting with the delivery entity, many of the risks for construction, operation and maintenance are expected to be held by the LAs. We would likely retain some risk relating to the scope and specifications of the project.

Table 33 – Construction and asset delivery risk assessment – LA highways SuDS

Risk	Application to project (under the baseline delivery model)				
	Cust	SW	LAs	Assessment	Mitigations
Planning			✓	Works to be undertaken on LAs' sites alongside LAs' maintained highways.	N/A
Land			✓		
Other consents		✓	✓	LAs are best placed to seek additional / maintain permits.	N/A
On time delivery		✓	✓	LAs generally best placed to manage. However sharing may be necessary where the reason for the delay is out of LAs' control.	Possible compensation events for delays and incentives for early delivery.
Cost overruns	✓	✓	✓	A clear division of responsibility would be required. Risk could be shared.	N/A
Site conditions			✓	LAs should manage the risk being responsible for the road maintenance and adjacent areas.	N/A
Works information		✓	✓	Under a proposed early model the LA's would be responsible for the solution design. We are likely to have some residual exposure related to design specifications.	N/A

Risk	Application to project (under the baseline delivery model)				
	Cust	SW	LAs	Assessment	Mitigations
Detailed design			✓	LAs are best placed to design the solution to meet our specification.	N/A
Third parties		✓	✓	Shared risk of stakeholder and customer management during delivery of works.	Performance incentive could be applied.
Changes in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations if required.
Interfaces with our existing assets		✓	✓	LAs responsible for operating interfaces for assets within their remit. We are responsible for points of LAs' interface with our assets.	Compensation events for delay and/or damage.
Commissioning			✓	LAs responsible for asset commissioning.	Compensation events for delay and/or damage.
Financing costs	✓		✓	Financing costs assumed to be fixed by LAs considering the access to different financing programmes (UKIB, PWLB).	N/A
Refinancing gains	✓		✓	In the event of refinancing by an SPV we would seek to benefit with savings passed on to customers.	N/A

Table 34 – Operations and maintenance risk assessment – LA highways SuDS

Risk	Application to the project				
	Cust	SW	LAs	Assessment	Mitigations
Cost (operations and maintenance)			✓	LAs best placed to manage, especially considering the synergy with highways maintenance.	Benchmarking and/or market testing provisions will enable the comparison of long-term opex against comparable projects.
Operational performance			✓	LAs best placed to manage, especially considering the synergy with highways maintenance.	Performance incentives.

Risk	Application to the project				
	Cust	SW	LAs	Assessment	Mitigations
Compliance with statutory and regulatory obligations which impact the scope		✓	✓	We will retain responsibilities under our license.	N/A
Defects during operations			✓	LAs are best placed to take this risk, given their wider responsibilities for delivery.	N/A
Demand risk	-	-	-	Not applicable given the nature of the assets.	Not applicable given the nature of the assets.
Over-utilisation	-	-	-		
Change in scope	✓	✓		As per Ofwat's risk allocation.	Contractual variations as required.
Value testing	✓		✓	As per Ofwat's risk allocation.	N/A
Condition of asset/hand back risk			✓	Not applicable given the nature of the assets.	Not applicable given the nature of the assets.

Market Engagement

Given we need the agreement of different LAs including on the delivery models to deliver the whole of our programme, we assume that different delivery models are likely to be agreed throughout our area that are appropriate for the authority concerned and we expect that through this process that we would agree a procurement route with the local authority and other stakeholders as appropriate. We therefore expect some market procurement process is likely to be undertaken. Specific contracts have not yet been identified and market interest not yet tested.

Payment Mechanism

As SuDS schemes are new to the industry and different solutions available, the technical scope of the assets is not known at this stage. With different delivery models likely to be developed a single best payment mechanism cannot be determined at this early stage.
A possible payment mechanism may be an availability payment to ensure ongoing maintenance and incentivise the continual availability of assets. An availability-based payment mechanism could promote accountability, ensuring reliable and consistent surface water management.

11.7. Costs

Capex costs

Construction capex costs are estimated at £197m in AMP8 for the project.

Development costs

LA highways SuDS programme is likely to require an atypical development process, involving close collaboration with the LA, us and potentially the SPV / project contractors. LAs will need to provide information relating to the proposed sites. We will need to provide information relating to specification and requirements (e.g. the volume of water captured by SuDS)[67], and the SPV/ contractor provide solutions. Despite these differences from the DPC process, we believe that the standard development cost assumptions used for DPC projects could be applied here.

At this stage, a top-down approach has been used to estimate development costs using the approach used by Ofwat at PR19[68]. Including design costs, pre-tender and tender costs and management costs, we currently assume development costs of £15.8m.

[67] Our current assumption is that our main role in the development of the project would be to help the LA and/or SPV to understand the project need and help understand whether the solutions proposed is likely to address this need.
[68] Calculation of project development cost is based on Ofwat's guidance as per supply demand balance enhancement feeder model https://www.ofwat.gov.uk/wp-content/uploads/2019/12/FM_E_WW_SDB_FD.xlsx - Sheet Deep dive_ANH

Payments to a third-party provider

With the first SuDS assets expected to be commissioned in 2028, we expect to pay the LAs or SPV upon commissioning. Due to the uncertainty of the bid prices received during the eventual tender process, we have produced estimates to enable us to show the potential costs for these payments in AMP8. The estimates will be refined as we gain more knowledge. See Data Table RR9.

11.8. Incentives

As part of the WINEP, there are timescale obligations attached to the delivery of these projects and the reduction of the frequency of discharges at storm overflows. The headline target must be achieved for most (at least 75%) of storm overflows discharging in or close to high priority sites by 2035.

In the event that works are not delivered to schedule and there are environmental breaches deriving from CSOs, we could be subject to enforcement from the EA, and may receive an adverse Environmental Performance Assessment (EPA) score.

Subject to future engagement, the relevant local authorities may also have their own incentives which they wish to be worked into the contractual and commercial arrangements for the delivery of the project.