Appendix 8
Making use of markets

Section 1

Introduction - Why and how we use markets

1.1 To deliver our vision - *Here for you, in a changing world* - it is essential we understand the world around us, the way it is changing, and the impact this has on our business and customers.

1.2 It is therefore important that we collaborate and explore ideas with third parties as this has the potential to bring more innovative, resilient and efficient solutions to meet the needs of our customers. Markets are an important potential route to tap into these wider skills and ideas and obtain the best solutions for customers, and in particular we will look at more developed utility markets, for example, as found in the energy sector.

1.3 We have had an outward-looking approach to markets for a number of years, for example:

- We were the first company to make use of the SIP Regulations arising from the Flood Management Act 2010 to build the Thames Tideway Tunnel (TTT) and facilitate the competitive process for the build and operation of the tunnel, which led to significant benefits to customers from lower costs and WACC;
- We were the first water company to use the OJEU process in 2012 ahead of PR14, to seek bidder interest to provide raw and treated water for the next 25 years;
- A third of New Appointment and Variation (NAV) sites are in our area, demonstrating that we have been open-minded in working with this developing market; and
- We sold our non-household (NHH) retail business at the outset of the competitive market providing diversity in ownership and helping to stimulate the market.

1.4 Our approach to make the best use of markets will be consistent with the principles that were determined as part of our strategic review informed by our experience. The key principles adopted were that we should outsource where:

- Providers have a material cost/outcome advantage;
- It is possible to control execution;
- The cost of contracting can be minimised; and
- Ideally there is a liquid market.

1.5 We have considered the full range of market mechanisms across our business activities including engagement across the supply chain, bi-lateral trades, information sharing and

direct procurement for customers (DPC). We have reviewed 775 projects and include two as DPC projects in our PR19 plans.[1]

1.6 In line with our ambitions to stimulate market activity we have also produced our bid assessment framework (BAF)[2] to increase third party awareness of opportunities, increase engagement in our bidding processes and ensure we operate transparently, fairly and proportionally.

1.7 While this document focuses on the potential to identify innovation through markets, our business plan includes a wide range of innovation across our business which is summarised in Appendix 5 – Innovation.[3]

1.8 The remainder of this Appendix sets out our approach to markets, in particular with respect of water resources and bioresources:

- Section 2A sets out in summary where we engage with markets and third parties;
- Section 2B describes the use of markets within our business; and
- Section 3 covers our approach to direct procurement for customers.

[1] Thames Water, CSD011-PR19-Direct Procurement for Customers
[2] Thames Water, CSD012-PR19-Bid Assessment Framework
[3] Thames Water, Appendix 5-PR19-Innovation

Section 2

Market Ambitions

A Where we engage with markets and third parties

2.1 We engage with a wide range of third parties and markets across our business in a variety of ways. The main areas of engagement are:

- Water resources – we have been trading in this relatively mature market for decades, using bi-lateral agreements as a buyer and seller. We actively encourage third parties to participate in our twin-track approach to meet expected supply/demand deficits, covering both demand side activities - leakage control, metering and water efficiency services - and supply side measures. In AMP7 we will embrace markets to deliver or develop key initiatives including a strategic reservoir option, groundwater development, a major new water transfer and a system operator model.
- Bioresources – the opportunities created by an emerging market allow us to innovate and explore through testing the opportunities for trading with neighbouring companies, committing to transparent information sharing and in the longer term, third party asset ownership.
- NAVs and new connections – these markets benefit from us embracing competitive forces and assuming the role of facilitator and broker to actively promote the use of a trusted alternative provider who can deliver services with efficiencies. Working with market participants also allows us to innovate and hone our own service and product offerings such as more cost reflective tariff structures and clearer communications.
- Retail market – since exiting the NHH market we have acted as a wholesale participant and innovator when it comes to streamlining service offerings, tariff structures and credit terms which all play a part in stimulating the market. In the household market we have a number of outsource contracts to use the market and ensure efficient delivery of services.
- Supply chain – we actively engage with markets to create our supply chain where we spend c.£1,500m per annum, providing access to many products and services ranging from commodities to professional services and major capital delivery capability. Whether we are seeking additional support, specialist capabilities or partnering on innovation projects we consider the supply chain across our entire business to ensure we maximise the opportunity to leverage the latest market thinking, innovation and efficiency.

2.2 We expand on these areas in Section 2B and with supporting documents as appropriate. There are many other areas where we are engaging with markets, which are described elsewhere in our submission, for example:

- Drainage and Wastewater – we are contributing to the future Drainage and Wastewater Management Plan (DWMP) methodology which is building the foundations that will underpin market activity in AMP8. Further details on this developing market are set out in CSD029.[4]
- Financial markets – we use a variety of financial markets to diversify our funding, optimise our cost of debt (whether it be via banks, private placements or public bond issuance) and hedge our interest rate, currency and inflation exposure. Given the long-dated nature of our lending relationships we are committed to a programme of ongoing investor engagement to update investors on our operational and financial performance with a growing focus on corporate social responsibility, as evidenced by the establishment of our Green Bond Framework[5] earlier this year.

B Use of markets within our business plan

2.3 We have a track record of using markets across a range of activities and in particular water resources and bioresources. This section outlines this record and our plan for AMP7.

Water Resources

2.4 We and other water companies in the South East of England are facing an increasingly difficult task to deliver a reliable supply of safe water to customers. We will use markets more actively in the future to help us achieve our vision. Using markets to partner on regional solutions and explore more efficient and resilient delivery channels can help to secure the future of our water resources.

2.5 Our strategic priorities are to provide a secure supply of water for our customers, whilst improving resilience to a severe drought. In doing this, we will look beyond our region to the growing needs of the wider South East of England. These priorities underpin our Water Resources Strategy (WRS)[6] and Water Resources Management Plan (WRMP).[7] The WRS sets out our long term vision for delivering water to our region and the WRMP outlines our plan for delivering a resilient and sustainable resource for 2020-25 and beyond whilst protecting our environment.

Track Record

2.6 We have water trading agreements with six companies: Essex & Suffolk Water, Anglian Water, Severn Trent Water, Wessex Water, Affinity Water and Sutton & East Surry Water. We also have agreements with three NAV companies. These trades demonstrate our long standing and ongoing commitment to the use of water markets.

[4] Thames Water, CSD029-PR19-Drainage and Wastewater Management Plan
[5] Thames Water, TSD294-PR19-Green Bond Framework
[6] Thames Water, CSD026-PR19-Water Resources Strategy
[7] Thames Water, CSD023-PR19-revised draft Water Resources Management Plan 19

2.7 In addition, in 2015 we entered into two additional water trades, with Essex and Suffolk Water and RWE npower, making the most of opportunities created by increases in capacity and reductions in demand, to allocate resources effectively without damaging the environment. In May 2016 we became the second company to have an Ofwat approved Trading and Procurement Code,[8] which allows us to access trading incentives for these trades.

2.8 Our WRMP aims to find the optimal balance of outsourcing and insourcing, seeking opportunities to partner on both the supply and demand side of water resourcing. Our engagement programme included:

- Holding supplier relationship meetings, opportunity assessments and strategic sourcing initiatives to identify developments in leakage services and demand management;
- Advertising our requirements and inviting interested parties to bid in the Official Journal of the European Union ("OJEU") since 2012, considering all third party and market opportunities;
- Approaching individual abstraction licence holders to explore opportunities for trading, which enabled us to adopt and refurbish a borehole in Tottenham, in addition to the trade with RWE npower;
- Publicly consulting twice on our draft and revised draft WRMPs, to maximise the opportunities for feedback;
- Exploring transfers across our borders and beyond with United Utilities, Severn Trent Water, Welsh Water, Affinity Water, Southern Water and South East Water; and
- Providing an efficient and transparent BAF to increase awareness of engagement opportunities and encourage third parties to bid for work. (The BAF extends what is already available to prime the market, including publishing market information on our water supply balance and a "rejection register" to list solutions that we have assessed and rejected, helping third party bidders to enhance their solutions and future bids.)

2.9 We are also investigating the potential for trading other products, such as nitrates or phosphates, using a preventative auction system. Where we identify 'hot spots' of nitrate or phosphate which have an adverse effect on our catchments, we will incentivise land users to reduce or cease their use through direct payments. We will develop and explore this further during AMP7.

2.10 We have been active members of the Water Resources in the South East (WRSE) Group since its inception. We want to identify potential opportunities for regional planning and sharing resources in South East England.

[8] Thames Water, TSD236-PR19-Trading and Procurement Code, May 2016

2.11 As part of our use of markets, we sponsored new thinking on potential system operator options, with United Utilities and Severn Trent Water.[9] We will develop our thinking further in AMP7 including reviewing how system operators work in energy markets.

AMP7 Plan

2.12 Our WRMP[10] includes a number of items which show our commitment to use markets to provide efficient and resilient services to our customers, where appropriate. The revised plan includes:

- Initial work on a regional collaboration to deliver the South East Strategic Reservoir Option (SESRO), with a capacity of 150Mm.[3] We expect that this will benefit from delivery via the DPC approach. SESRO could facilitate a reduction in some of our abstractions that are perceived to have an impact on vulnerable chalk streams and water courses. It could become an important and reliable trading hub for other companies in the South East and act as a catalyst for the bilateral market. It could also be an important receiver of water trades from Wales and North West England (the Severn Thames Transfer).
- Preparatory work on our innovative Deephams wastewater re-use scheme, which we expect to benefit from delivery via the DPC approach.
- An agreement with the Canal and River Trust to transfer raw water from the Oxford Canal.
- Large scale transfer of raw water from Wales or North West England, possibly via the River Severn, into a tunnel which carries the water to the River Thames. This scheme would benefit from the DPC approach and could stimulate the bilateral and bidding water markets as well as supporting the SESRO to provide improved resilience in the South East.

2.13 A number of variants of the Severn Thames transfer have been considered as we developed our plan, up to 250 Ml/day. United Utilities, Severn Trent, Welsh Water and the Canal and River Trust have provided options to free-up water in the River Severn catchment. We have considered these options for transferring water from the River Severn and River Wye to the River Thames. The earliest the transfer is required is 2039.

2.14 Given the national strategic importance of the Severn to Thames transfer scheme, as recognised by the National Infrastructure Commission report 'Preparing for a Drier Future', we remain committed to ensuring that momentum is maintained. To this end, we will continue to work on appropriate technical and environmental aspects in 2020-25, (for example ecological work, losses and reliability, water quality, regulation, and river temperature), in partnership with other companies. We will continue to work closely with the other companies to examine these options in more detail. This will allow the transfer options

[9] Severn Trent, Thames Water and United Utilities, TSD068-PR19-What role for system operators in the water sector-November 2017

[10] Thames Water, CSD023-PR19-revised draft Water Resources Management Plan 19

to be considered further in future WRMPs. In preparing our plans we have been conscious of the need to consider any impact on our future supplies.

2.15 Where market activity is mature and potential volumes of market trades are known our plans include details of any impact on future supply requirements. Whilst we agree with Ofwat's view that the bilateral market is likely to be small before 2025 and therefore the impact on future supplies will be low in AMP7, we are optimistic for the long term future of this market and we understand the significance our ambitions and plans have on the market.

2.16 Another mechanism that supports resilience in the water resources market is the risk-sharing mechanism, which is designed to protect customers from over investment in unutilised options. We have laid the groundwork[11] for this mechanism and in AMP7 we will be enhancing this work as we prepare to invest in AMP8.

2.17 We understand that getting the RCV allocation correct is an important underpinning for the development of markets and our updated view of our RCV allocation between water and water network plus is provided in CSD033-A.[12]

On-going engagement

2.18 Water transfers are important for our region to thrive and we are continuously exploring how best to approach transfers and bilateral trade across our region including understanding how markets work in energy to see if these mechanisms can add value in the different context of water trading. Figure 1 illustrates future confirmed and potential transfers.

Figure 1 How markets could help alleviate resource challenges

Source: Thames Water

[11] Thames Water, PCD4-PR19-Water Resources, Appendix A - Water Resources Risk Sharing Mechanism Summary

[12] Thames Water, CSD033-A-PR19-Water Resources RCV allocation final position

2.19 Our Water Resources[13] and Water Network Plus[14] Price Controls provide more detail on our business plans, including market strategies to utilise third parties in the delivery of our twin-track approach of solutions to the supply and demand challenges we face.

2.20 Ultimately our ambition is that our plans will be enhanced by DPC, our BAF, our third party delivery initiatives and approved trading and procurement codes. These will all stimulate and protect the market in the long term and provide benefits for our customers.

Bid Assessment Framework

2.21 Greater third party engagement has the potential to bring more innovative, resilient and efficient solutions to the market which can help us to better meet our customers' needs. We support this through the Bid Assessment Framework.[15] We believe it will stimulate greater competition in the bidding market and support the development of the bilateral market.

2.22 We engage with the water market extensively through our WRMP and our BAF creates an additional channel to increase third party awareness of opportunities and enhances engagement in our bidding process. Formalising and augmenting the existing processes which we had in place, the BAF will increase third parties' awareness of our needs and help bidders to identify new opportunities in the market. It should also give third parties confidence that their bids will be treated fairly and that in-house solutions will not be unfairly favoured.

2.23 The BAF ensures that the principles of transparency, equal treatment, non-discrimination and proportionality in the procurement process (which were already followed through compliance with the Utility Contracts Regulations 2016 – UCR2016), are used consistently for water resources, demand and leakage services. These principles are embedded into our BAF, which includes a number of our own best practice recommendations plus those in line with Ofwat's guidance.

2.24 In addition to our current engagement programme across individual markets we will continue to proactively engage with third parties to help them identify new opportunities and submit bids. We are committing to accepting bids for water resources of a relatively small volume at any time, publishing a Periodic Indicative Notice (PIN) at least every five years and enhancing our published market information to give increased functionality to third parties as well as committing to publish it more frequently.

2.25 Whilst enhancing our market activity we also want to protect our business from any conflicts of interest and we are committed to operating a governance structure that facilitates the development of new resource markets. To facilitate a controlled approach to procurement we are implementing a number of initiatives including prohibiting our associated companies from bidding, ensuring that the decision making process is subject to review and approval by a Project Board, resourcing a separate independent expert from outside Thames Water

[13] Thames Water, PCD4-PR19-Water Resources
[14] Thames Water, PCD5-PR19-Water Network Plus
[15] Thames Water, CSD012-PR19-Bid Assessment Framework

to review the bid assessment process, providing a robust complaints process for third parties, instructing the independent third party assessor to assess any concerns raised by third parties around a conflict, and storing commercially sensitive information received under the BAF process in a secure location.

2.26 There is also an opportunity for the thinking from the BAF to be transferred into other markets including bioresources and we will also continue to explore its suitability over the next AMP.

Bioresources

2.27 The Bioresources market provides us with an opportunity to take a long term view of how we can participate in and influence market forces to strengthen the resilience and affordability of our wastewater services. The market is currently still in its infancy, with companies exploring how best to open up trade and where best to realise the potential benefits in the long term interest of customers. We are committed to exploring how we can use the market in both the short term through trading with our neighbours, where spare capacity exists, and the long term through engaging with third parties to build and operate new capacity.

Track Record

2.28 We have assessed the market opportunities and the potential benefits of importing and exporting sludge for treatment, as well as collaborating with our neighbours on longer term joint projects. We are mindful of the need to balance the benefits to customers of retaining resilience in our system (in the form of spare capacity) against the potential benefits to customers of using spare capacity to support trades.

2.29 We issued a Request for Information (RFI) via OJEU in May 2017 to understand who in the market could offer alternative services to those currently being employed and what the appetite for trades was from other suppliers. The results showed that inter-site trading between wastewater companies was certainly possible, but similar opportunities with other service providers were less certain. The full analysis of these possibilities can be seen in our Bioresources Price Control document, appendix D.[16]

2.30 In addition to the formal OJEU process, we have also engaged on a more informal one-to-one basis with our neighbouring WaSCs, as well as with specialist technology suppliers and other organic waste treatment suppliers:[17]

Redaction: Section 2.30 has been redacted because of company sensitive information that could prejudice commercial negotiations.

[16] Thames Water, PCD3-PR19-Bioresources, Appendix D – Market data request
[17] Thames Water, PCD3-PR19-Bioresources, Section 3.9, Table 3-6 - Summary of engagement with other bioresource companies

Redaction: Section 2.30 has been redacted because of company sensitive information that could prejudice commercial negotiations.

2.31 Current legislation limits the potential benefit from co-digestion, with the cost of stricter co-treatment outweighing the benefit of introducing the process. We will continue to evaluate these opportunities over AMP7 and if the balance changes we will look for ways to extract the benefits for customers.

2.32 For us to be able to accept a larger volume of imports we need to be able to create more headroom in the system. We have developed and progressed several industry leading innovation projects within the bioresources field to enhance resilience and/or stimulate further market opportunities. These include the use of Bucher presses, taken from the cider-making sector, and Advanced Energy recovery (pyrolysis). More information can be found in the innovation section of PCD3 Bioresources Price Control.[18]

2.33 We have taken advantage of the market in transport services to outsource all our transport needs both for external delivery and inter-siting.

[18] Thames Water, PCD3-PR19-Bioresources-Section 2.6 Innovation in our plan

AMP7 Plan

2.34 Our bioresources strategy, incorporated into our Bioresources Price Control document,[19] is designed to benefit our customers, society and the environment by unlocking the potential benefits of these resources while continuing to provide a safe, efficient, sustainable and reliable bioresource service into the future. We want to take an ambitious, yet considered, approach which allows us to realise sustainable benefits for our business and our customers.

2.35 We will continue to develop the discussions with a number of parties as outlined above and seek opportunities to improve efficiency through use of the market. We have identified a number of gains where haulage distances can be reduced through sludge trading with our neighbouring companies.

2.36 Our plan assumes that approximately 1,000 tDS per year will be traded out of region and treated by third parties. This represents around 3 per cent of the sludge transported around our region.[20]

2.37 We believe these types of contracts will increase as the market develops and we will be actively searching for these opportunities. Our analysis suggests there is potential for trading a further 3,000 tDS per year during AMP7.[21]

2.38 We understand that getting the RCV allocation correct is an important underpinning for the development of markets, and particularly so for bioresources. Our updated view of our RCV allocation between bioresources and wastewater network plus, which takes into account the feedback we received on our initial submission, is provided in CSD033-B.[22]

Other markets

2.39 In addition to the active role we play in the water resources and bioresources markets, we also have ambitions to deliver efficiencies through other markets, including the NAV market, connections, NHH retailers and the supply chain.

NAV Market[23,24]

Track record

2.40 We have been working with NAVs for a number of years (Thames Water is the host company for around one third of all NAV sites) and have used this experience to review and improve the services we provide to them, including providing dedicated account

[19] Thames Water, PCD3-PR19-Bioresources
[20] Thames Water, PCD3-PR19-Bioresources-Section 3.9 Delivering our plans
[21] Thames Water, PCD3-PR19-Bioresources, 4,363tDS / yr export potential in AMP7 as per Figure 3-9, minus 1,000 tDS per annum included in plan
[22] Thames Water, CSD033-B-PR19-Bioresources RCV allocation final position
[23] Thames Water, CSD028-PR19-Delivering Outcomes for Retailers and NAVs
[24] Thames Water, CSD027-PR19-Delivering Outcomes for Developers

management and streamlined processes. We currently have agreements with four NAVs and are seeing the number of connected properties that NAVs serve grow sharply. We are also undertaking a review of NAV tariffs.

AMP7 Plan

2.41 We expect NAV connected properties for water and wastewater to approximately double between 2015 and 2020, and then to double again by 2025 to around 40,000 properties.[25] We continue to improve our services to NAVs and actively communicate NAVs as an alternative route for developers in our charging arrangements,[26] on our website, in quote letters, and at our Developer Days.

Connections[27]

Track record

2.42 The connections market has seen competition growing through AMP6 with both NAVs and Self Lay Providers (SLPs) connecting customers to our network. Since we introduced a dedicated programme to promote choice in connections, at the beginning of 2016, uptake of self-lay as an option has increased by 28%.[28] At our latest SLP customer forum event in July 2018, we were recognised as leaders in the field by Fair Water Connections, the membership body representing SLPs.

AMP7 Plan

2.43 Our efforts in AMP7 will build on the success of competition in AMP6 and we have plans to further encourage SLP delivery of single connections with an innovative market brokerage scheme to connect customers and providers. Actively encouraging competition will result in market efficiencies delivering benefits to our customers. In preparation for the next AMP we have completed an extensive engagement programme with customers across all segments including large scale developers, SLPs, NAVs, homeowners and small-scale builders.

NHH Retailers[29]

Track record

2.44 We engage with NHH Retailers through regular account management discussions, six monthly Retailer forums and dedicated research, all of which have helped us to understand their service priorities better and for them to understand what we do and how it will affect them. Through this engagement, as well as with other market stakeholders, we have been

[25] Thames Water, CSD028-PR19-Delivering Outcomes for Retailers and NAVs, section 3A
[26] Thames Water, TSD077-PR19-Charging Arrangements, page 4
[27] Thames Water, CSD027-PR19-Delivering Outcomes for Developers
[28] Thames Water, TSD079-PR19-Thames Water Self-lay forum 12 July 2018, slide 25
[29] Thames Water, CSD028-PR19-Delivering outcomes for Retailers and NAVs

able to innovate and improve our offerings to Retailers and reduce barriers to market entry through lowering or removing credit requirements and providing greater tariff transparency. It has also allowed us to drive efficiency through various service improvements including introducing an accredited entity scheme for disconnections.

AMP7 Plan

2.45 Efficiency will be enhanced further through our key focus on improving the completeness and accuracy of market data that we provide and introducing a Retailer portal for submitting and managing requests. We plan to use the power of market mechanisms to help with key operational challenges in two ways - first, by offering Retailers a Gap Site Incentive Scheme helping to keep bills down by spreading costs across more customers, and second, through an innovative Water Efficiency Incentive Scheme which we hope will stimulate more non-household water savings, bringing customer bills down and also helping us to balance supply and demand. In addition, we have entered into a formal performance commitment to use external and internal data to identify occupied NHH voids (vacant premises) and to share this collectively with Retailers.[30]

Household Retail

Track record

2.46 We make extensive use of the markets that exist to ensure we deliver services as efficiently as possible. Currently we have outsource contracts covering:

- Inbound telephone enquiries;
- Outbound collections contacts and dialler;
- Back office service request processing; and
- Meter reading.

2.47 This model was chosen for AMP6 through an assessment of the most effective balance of service delivery and cost efficiency when the contracts were tendered in 2014/15.

AMP7 Plan

2.48 Our approach to tendering in the market allows us to assess the services that are offered by competing outsourcing companies. This provided an understanding of unit costs for specific activities, which we have used to assess whether services that are delivered in-house are efficient against the market.

2.49 We propose to follow the same process when the contracts that we have in place expire. Requests for proposals will be issued to the market allowing interested parties to submit proposals which we will review and test against insourced performance. The principle service delivery contracts expire in October 2020, with the meter reading contract expiring in March 2022-23.

[30] Thames Water, CSD005-EWS08-PR19-Empty Business Properties

2.50 Our engagement with markets, including our work on gap sites is set out in our Retail Price Control document[31] and in specific Performance Commitments for gaps[32] and voids.[33]

Supply Chain

Track record

2.51 It is essential that we have a thriving, efficient and effective supply chain. We typically spend c£1,500m per annum in the supply chain making us a major UK client organisation and attracting diverse market offerings. A significant element of our delivery capability is provided by long-term 'tier 1' contractors either operating as part of one of our three alliances or major stand-alone service contracts. To leverage our significant scale and annual spend we also contract 'tier 2' suppliers, contractors and consultants via framework agreements which are typically advertised in the Official Journal of the European Union (OJEU) and procured via the UCR2016. This process ensures that we capture a broad range of potential suppliers offering new approaches and innovation. Typically, these framework agreements are non-exclusive and not sole supply allowing us to accommodate further contestation to assure best value where appropriate.

2.52 We segment our supply chain which constitutes over 300 strategic agreements to allow us to apply proportional levels of capability, control and attention to generate value for our business and customers. Our strategic sourcing team run up to 60 market engagements at any one time and we consistently engage with other relevant markets outside of water to transfer knowledge, e.g. food industry to bring new dewatering technology into our sector.

2.53 From a 'tier 1' perspective in AMP6 we have attempted to attract and unlock new types of market value through our unique alliancing approach. This market innovation sought to create mutual benefit for us, our customers and the supply chain by establishing autonomous contracting vehicles grounded in strong principles of collaboration, innovation and an aligned desire to deliver with maximum value for money. Although successful in a number of ways, these models have been operationally and commercially enhanced to ensure they are fit for the future needs of our business and our customers.

AMP7 Plan

2.54 Our AMP7 plan has been viewed within the wider market context, where we believe there are a number of emerging themes which present a range of challenges and opportunities;

- Global trade uncertainties and impacts on commodities;
- Potential impacts of Brexit on both labour markets and procurement routes;
- Increasing UK construction demand and output; and
- The need for greater assurance of supply chain resilience and financial stability.

[31] Thames Water, PCD1-PR19-Retail
[32] Thames Water, CSD005-ER01-PR19-Unregistered Household Properties
[33] Thames Water, CSD005-ER02-PR19-Empty Household Properties

2.55 We see a broad range of work content in our AMP7 plans – from very large one-off projects through to sub-programmes of work made up of small individual projects. This increased diversity of work in AMP7 will require us to seek out and secure a broader range of supply chain capabilities and skills which enhance our current market engagement.

2.56 All these factors are informing our AMP7 delivery strategy, and we are listening closely to our supply chain to take on board their thoughts and insights. It is already clear that AMP7 will require us to have strong and well considered supply chain plans which have flexibility to adapt and react to emerging factors.

2.57 Whilst we have benefited in AMP6 from working with our alliances, there has also been a huge amount of learning. Creating and delivering value from collaborative vehicles such as alliances requires all parties to think differently and in the interests of our customers. Where we have seen benefit in making amendments to how the alliances operate, these changes have been made. A notable example in AMP6 was the changes made in our operating, commercial and contracting approach with our Infrastructure Alliance which deliver our Water Infrastructure Repair and Maintenance programme.

The role of alliancing in AMP7

2.58 We believe that alliancing has a strong role to play in our AMP7 delivery. We, and our supply chain partners, have invested a significant amount of effort over AMP6 to mobilise and embed our alliances, and we remain committed to this innovative delivery route. In AMP7, our eight2O and Infrastructure Alliance will therefore likely continue to focus on the substantial parts of our plan which play to their strengths.

2.59 However, it has become clear during AMP6 that our alliance strategy needs to be supplemented by other delivery routes which provide us with fit-for-purpose solutions and flexibility of choice and we are actively exploring these alternative delivery routes.

2.60 As an example, we are exploring whether low value, high volume totex solutions may benefit from alternative contracting routes and whether in some cases the best value for money solution offering maximum customer experience is to in-source activities (for example, our Logistics Management Centre). Conversely, very large and complex projects may benefit from market competition and this is currently our preferred route.

2.61 Projects within the DPC portfolio also represent an exciting opportunity to bring further innovation and potentially new market players into the industry. The development and delivery of these projects will also be ring-fenced from our alliances and delivered as significant stand-alone schemes.

Section 3

Direct Procurement

A Our approach

3.1 We have spent a considerable amount of time investigating the extent to which DPC could offer further value for our customers above and beyond a more conventional Design and Build (D&B) approach traditionally operated by the water industry. We summarise our approach below and full details are provided in a supporting document.[34]

3.2 Our normal way of working is to challenge the status quo and explore new ways to contract and operate. Examples of this can be seen from how we developed our TTT solution and in our alliance approach for capital works (eight2O alliance). When the optimal mechanism is found to work effectively with the market, a clear benefit to all parties and our customers is created.

3.3 Although DPC has a number of key differences to how TTT was delivered, we believe the same principles apply. To ensure we have taken as rounded an approach as possible, we have engaged with other water companies, contractors, operators, financial institutions and independent consulting experts over the last year and have developed a suite of tests which we believe identifies the projects where customers may benefit from DPC. Indeed, we believe we have gone further than the minimum guidance provided by reducing the totex threshold from £100 million to £80 million over the contract term and really challenging ourselves to identify new capex and opex efficiencies.

3.4 Positive guidance and advice from our Board has also seen us pushing to embrace the spirit of DPC and consider this contracting approach in areas not initially contemplated, including our Bio-resources programme of Thermal Hydrolysis Process (THP) and our potential one-off Guildford Sewage Treatment Work (STW) re-location scheme (funded directly by Guildford Borough Council). Both these schemes are in the early stages of review with potential to create customer value.

3.5 With regard to our PR19 Programme, we have completed a robust review of over 775 individual projects (see Figure 2) and identified four projects (all in our WRMP) that are likely to add significant value to our customers. Although we have many other large schemes proposed in our programme which meet the totex threshold, they are generally not sufficiently discrete to meet the market needs. For example, our Riverside Sewage Treatment Works growth scheme has many operational interfaces and in itself is not a service which can be contracted in a way that adds value to customers over and above a more conventional D&B approach. Likewise, there are a number of network infrastructure

[34] Thames Water-CSD011-PR19-Direct Procurement for Customers

projects, which in aggregate also meet the totex threshold, such as new, and rehabilitation of, trunk mains, but the significant engineering and operational interfaces mean that service and risk cannot be sufficiently unbundled at this time.

3.6 These technical reviews were carried out in a number of detailed working sessions with our asset management, operational and engineering teams, where a scoring methodology was applied to find only those projects which could technically be sufficiently discrete for DPC to work. This assessment was also tested through a number of market and stakeholder engagements.

3.7 Of the four WRMP solutions we identified for DPC, two are included in AMP7. These are SESRO and the Deephams Re-Use Plant projects. We have also completed detailed investigation and modelling of the Severn Thames Transfer and Teddington Direct River Abstraction projects, in case the expected timing of either or both of these projects comes forward. DPC appears to be an appropriate value driver of these projects due to their scale, value, predictability of supply and running cost, and ability to be unbundled into discrete construction and operational service contracts. The approach for joint development of the SESRO project with Affinity Water also makes DPC an attractive method for delivery potentially increasing the ability for value to be created for a wider customer base.

3.8 We consider DPC to be another tool in our toolbox to be explored on an on-going basis and variants of the approach may also create value. DPC has been added to our standard contracting methodology evaluation review for all future projects of the right scale, value and technical characteristics. For example, the above mentioned Guildford STW relocation project may not benefit from a market finance provider (due to the way in which the scheme is being funded by the local authority). However, a Design, Build, Operate and Maintain (DBOM) contract is being considered. We met with Northern Ireland Water (Project Omega) and Irish Water to review their approaches and both have shown evidence of value creation over and above conventional D&B.

3.9 Whilst it remains to be seen whether the market can provide financing at a level comparable with Thames Water, we consider that there is significant potential in working with builders, designers, operators and experienced finance providers. Our soft market testing with these organizations has shown significant positive appetite and further assisted us in establishing a view on what basis we should go to market for SESRO and Deephams Re-Use. This feedback was used to inform the third 'risk based approach' test to arrive at a view as to the type of DPC tender model to be applied in order to leverage most value.

3.10 We believe that in both these instances the late tender model offers the best chance to develop significant customer value and meet some challenging project complexities, whilst also allowing risks to sit with the most appropriate organization. For example, Planning Permission or a Development Consent Order (DCO) for the SESRO project is an activity best placed with us, as the transfer of this significant risk to the Competitively Appointed Provider (CAP) would likely drive a disproportionately high risk premium, potentially destroying the additional value anticipated.

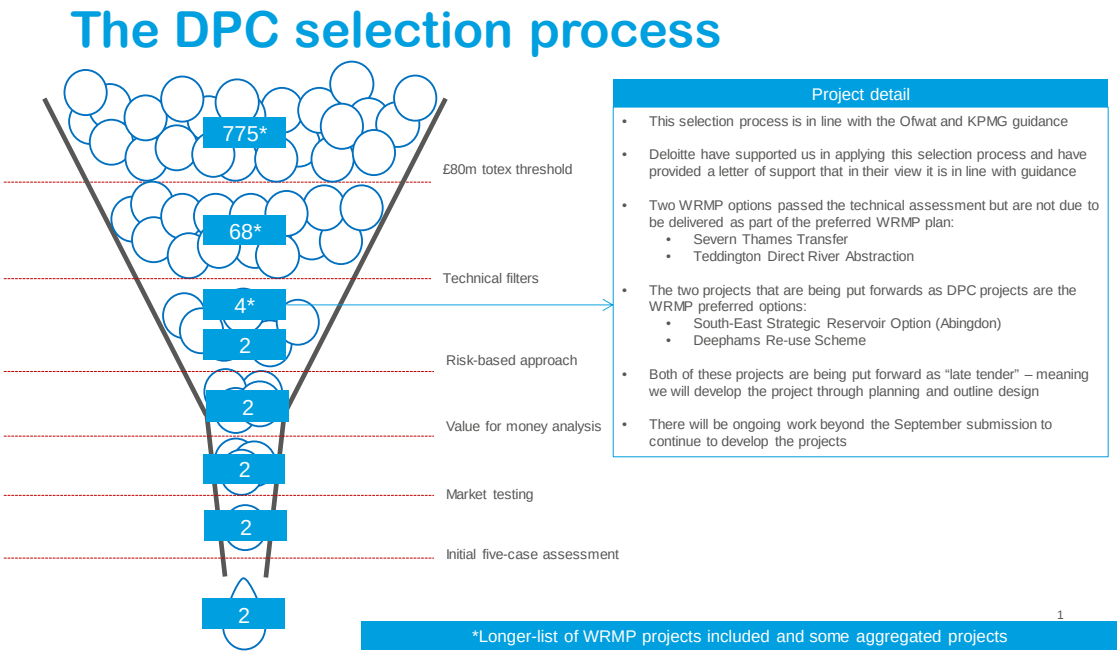
3.11 With this in mind, for our fourth test we have worked with a number of independent consulting organizations to build a 'value for money' analysis tool, which models scenarios

against a number of commercial assumptions including, but not limited to, opex and capex efficiency, WACC, period until first payment is made to the CAP, contract length, capex renewal profile, contract management and procurement costs and profile of development and project expenditure during construction.

3.12 In both cases this modelling has indicated that the SESRO and Deephams Re-Use Plant projects could generate additional value to customers if delivered via DPC. Clearly, a final review needs to be undertaken following more detailed market engagement. There are a number of challenges that remain to be resolved so as to ensure that a beneficial DPC procedure can be run efficiently and effectively, but we fully expect that these can be overcome by working closely with our industry peers, markets and Ofwat.

3.13 In preparation for delivery of these two projects via DPC an initial assessment using the Treasury 'Five Case Model' with supplementary Green Book guidance has also been completed and we are beginning to reform our capability to deliver this new type of contracting model.

Figure 2: The DPC selection process



Source: Thames Water Analysis