

# Appendix 11a: Direct procurement for customers

# Assessment of potential direct procurement for customers (DPC) schemes

## Dales / Thornton Steward Resilience

- This potential DPC scheme was for a large pipeline within the water network to increase the resilience of supplies in North Yorkshire. This investment was not progressed for analysis, as the risk that generated the need was not deemed a priority by the Decision Making Framework (DMF) review. Should investment into this risk be re-prioritised at a later date then further evaluation will be applied using the stated criteria.

## Huddersfield Waste Water Treatment Works (WWTW) Rationalisation

The potential DPC scheme at Huddersfield WWTW was to meet the proposed limit of 0.25 mg/l P in the final effluent at the Cooper Bridge Outfall.

DMF analysis confirmed the scheme’s inclusion in the final business plan as a result of the quality drivers associated with WINEP funding. It was further confirmed that the value would pass the objective value test with a calculated £170m totex over 25-years. (£99.8m Capex and £2.8m per annum Opex (£70m over 25 years)).

Applying the subjective discreetness and complexity tests to this project gave the following result:

### Single or small number of large discreet infrastructure projects

	Consistent risks	Portfolio of risks on equal rating	Portfolio of risks of varying scales
Single project			
Small directly connected cluster		X	
Multiple sites			

This rationalisation scheme was deemed to fail the discreetness test on the basis that the resolution of the risk would require investment into very different solutions over a significant geographic area:

## DEIGHTON WASTEWATER TREATMENT WORKS

- Replace primary tanks at Deighton with six new scraped radial primary settlement tanks.
- Existing primary settlement tanks will either be abandoned or converted to storm tanks;

- Existing gravity carrier that takes primary effluent to Colne Bridge and Heaton Lodge is to be replaced by a pumped rising main taking all of the flow coming out of the new primary settlement tanks to Lower Brighouse;
- Replace the existing sludge mains by a new pumped sludge main that will carry all sludge from Deighton (including Syngenta sludge) directly to Upper Brighouse; and
- New Primary Sludge Fermenters and Thickeners will be provided.

### UPPER BRIGHOUSE WASTEWATER TREATMENT WORKS

- Existing assets retained and refurbished; and
- Addition of two new primary tanks.

### LOWER BRIGHOUSE WASTEWATER TREATMENT WORKS

- Existing activated sludge plant (ASP) increased in size by the addition of an extra ASP lane
- Existing conventional ASP is to be converted to a BNR process by the addition of baffle walls

#### Minimal complex interfaces

	DPC arrangement covers entire site	DPC arrangement covers major processes end-to-end	DPC arrangement covers a proportion of the major processes end-to-end
<b>Standalone asset</b>			
<b>Linearly connected asset</b>			
<b>Complex asset configuration</b>	<b>X</b>		

The nature of solutions generated would be such that only a small number of WWTW within a wider asset configuration would be involved, introducing new and complex operational interfaces on sites with many interconnecting flows, should a DPC arrangement be put in place. On this basis it was concluded that this investment fails the ‘minimal complex interfaces’ test.

### Hull Sewer Flooding

This potential DPC scheme was an amalgamation of many flood alleviation schemes in the Hull and wider area as part of the overall sewer flooding strategy, likely involving a range of soft and hard engineering solutions. The proportion of this overall strategy that will progress into the final business plan is £30m of expenditure with an anticipation of partnership working raising this to c. £60m. On this basis this scheme has failed the objective value threshold text of £100m totex.

## National Environment Programme

This potential DPC scheme was an amalgamation of a range of solutions at a large number of wastewater treatment sites to achieve tighter nutrient (phosphorous) consents. DMF analysis confirmed that this scheme would be included within the final business plan as a result of the quality drivers associated with WINEP funding. In total investment at 82 sites at a value of £950m is included within the final business plan. This scheme passed the value threshold test of £100m totex.

Applying the subjective discreetness and complexity tests to this project gave the following result:

### Single or small number of large discreet infrastructure projects

	Consistent risks	Portfolio of risks on equal rating	Portfolio of risks of varying scales
Single project			
Small directly connected cluster			
Multiple sites		X	

This potential DPC scheme was deemed to fail the discreetness test as the resolution of the risk would require investment into a range of solutions at a very large number of sites, 82 in total. It is likely that the solutions would be common (adding tertiary treatment) considered to be consistent in terms of risk.

### Minimal complex interfaces

	DPC arrangement covers entire site	DPC arrangement covers major processes end-to-end	DPC arrangement covers a proportion of the major processes end-to-end
Standalone asset			
Linearly connected asset			
Complex asset configuration			X

The nature of solutions generated would be such that only parts of treatment process on sites would gain investment, leading to new and complex operational interfaces if a DPC arrangement was put in place. On this basis it was concluded that this investment fails the ‘minimal complex interfaces’ test.

## Waste Water Treatment Works New Sites Bundle

This potential DPC scheme was originally conceived to cover design, build and future operation of three new WWTW: Withernsea, Green Hammerton, and Parlington. With a total investment value of £49.65m for all three WWTW, the scheme failed the objective value threshold of £100m totex.

Scheme	Capex	25 year Opex	25 Year Totex
Withernsea	£12.65m	£11.75m	£24.4m
Green Hammerton	£10.3m	£4.5m	£14.8m
Parlington	£8.2m	£2.25m	£10.45
Total			£49.65

## Water Treatment Works (WTW) Investment Bundle

This potential DPC scheme was originally conceived to cover design, build and future operation of six WTW: Chellow, Tophill Low, Doncaster Boreholes, Loxley, Fixby, and Langsett. Prioritisation and full risk appraisal using our DMF has revised the overall Water Quality Programme; three investments were removed (Doncaster Boreholes, Loxley and Langsett) and three investments added (Embsay, Oldfield and Sladen Valley). The overall cost forecast for these schemes in the Water Quality programme was £170m totex over 25-years.

Scheme	Capex	25 year Opex	25 Year Totex
Chellow	£33.4m	£29.0m	£62.4m
Tophill Low	£19.8m	£9.25m	£29.1m
Fixby	£8.7m	£2.0m	£10.7m
Embsay	£8.51m	£4.0m	£12.5m
Oldfield	£29.8m	£3.8m	£33.6m
Sladen Valley	£15.8m	£6.0m	£21.8m
Total			£170.1m

This scheme passed the objective value threshold test of £100m totex.

Applying the subjective discreetness and complexity tests to this project gave the following result:

### Single or small number of large discreet infrastructure projects

	Consistent risks	Portfolio of risks on equal rating	Portfolio of risks of varying scales
Single project			
Small directly connected cluster			
Multiple sites			X

This bundled scheme was deemed to fail the discreteness test. Each of the six sites would require a range of interventions of varying complexity levels and risks.

**Minimal complex interfaces**

	DPC arrangement covers entire site	DPC arrangement covers major processes end-to-end	DPC arrangement covers a proportion of the major processes end-to-end
<b>Standalone asset</b>			
<b>Linearly connected asset</b>			
<b>Complex asset configuration</b>			<b>X</b>

The nature of solutions generated would be such that only a small number of WTW within a wider asset configuration would be involved, introducing new and complex operational interfaces on sites should a DPC arrangement be put in place. The sites listed within the Water Quality Programme are spread across the Yorkshire region rather than being consolidated in a geographic area. On this basis it was concluded that this investment fails the ‘minimal complex interfaces’ test.