

APPENDIX DS7(a)

DERIVATION OF CHARGES & PAYMENTS



General

Most of our fixed charges can be put into one of four broad categories, these are:

- Application fees
- Design fees
- Construction fees
- Administration fees

Every fixed charge includes for a number of tasks. These tasks are set out in the various sections of the Charging Arrangements document and are made up of a number of cost components which together total the fixed charge.

There are 4 costs components:

Labour – this is calculated based on the average labour costs we incur in respect of the tasks described and includes travel time where applicable

Contractor - this is calculated based on the contractor's schedule of rates and the average time taken to complete the tasks described.

Materials – this is the average cost of job specific materials and consumables required to complete the described tasks.

Plant and equipment – this is the average cost of non-consumables such as vehicles, tools and machinery required to complete the described tasks.

DERIVATION OF CHARGES & PAYMENTS



General

Application fees

Tasks	Cost Component			
	Labour	Contractors	Materials	Plant/ Equipment
Processing and recording application and fees	✓		✓	
Acknowledging receipt of application	✓		✓	
Visits to site where required	✓		✓	✓
Preparing a quotation for a requisition	✓		✓	
Providing an estimated cost for a diversion	✓		✓	
Network capacity assessment	✓		✓	
Issue of a decision letter	✓		✓	
Operational risk assessment	✓		✓	

Design fees

Tasks	Cost Component			
	Labour	Contractors	Materials	Plant/ Equipment
Processing and recording application and fees	✓		✓	
Assessing of an SLP or developer's design	✓		✓	
Acknowledging receipt of application	✓		✓	
Visits to site where required	✓		✓	✓
Preparing a quotation	✓		✓	
Providing a design where we are asked to do so	✓		✓	
Revision of designs where developers' proposals change	✓		✓	
Network capacity assessment	✓		✓	
Issue of a decision letter	✓		✓	
Operational risk assessment	✓		✓	

DERIVATION OF CHARGES & PAYMENTS



General

Construction charges

Tasks	Cost Component			
	Labour	Contractors	Materials	Plant/ Equipment
Construction of the new assets	✓	✓	✓	✓
Connection of the new assets we have constructed to our existing network	✓	✓	✓	✓
Connection of new assets that have been self-laid by the customer	✓	✓	✓	✓
Excavation, backfill and reinstatement of the ground where we have carried out construction	✓	✓	✓	✓
Removal and disposal of any spoil from our excavation	✓	✓	✓	✓
Inspection and testing of assets constructed by us	✓	✓	✓	✓

Construction costs account for around 91% of the overall cost of requisitioned water mains in the Northumbrian region and 92% in Essex & Suffolk. The majority of construction works we carry out for customers in relation to new development is delivered by our framework partners. The framework partners were successful, via a competitive tendering process in the open marketplace that was conducted in full compliance with The Utilities Contract Regulations.

DERIVATION OF CHARGES & PAYMENTS



General

Administration fees

Tasks	Cost Component			
	Labour	Contractors	Materials	Plant/ Equipment
Processing and recording of payments	✓		✓	
Dealing with customer queries and correspondence	✓		✓	
Network Capacity Assessment (service connections)	✓		✓	
Visits to site (for non self-lay connections or requisitioned mains)	✓		✓	✓
Preparing a self-ay agreement or draft sewer adoption agreement	✓		✓	
Planning and scheduling the construction of the connections (for non-self-lay connections only)	✓		✓	
Where necessary the serving of notices on third parties and local authorities	✓		✓	
Quantity Surveying	✓	✓	✓	
Recording of asset information on completion of the construction	✓		✓	
Operational risk assessment	✓		✓	
Calculation of service connection construction costs based on actual costs	✓		✓	

DERIVATION OF CHARGES & PAYMENTS



Income Offsets

Our income offset amounts have been derived as follows:

We carried out a study to consider the costs associated with providing new mains to development sites over a period of three consecutive years ending 31 March 2017. In the same period we calculated the amount of the contributions developers made towards the cost of those mains.

The data related to nearly 300 developments in Essex & Suffolk and over 600 developments in the Northumbrian region.

To derive income offsets for the 2018/19 charging year, we calculated the average income that we had offset per property from our data for each operating area. We excluded those developments where network reinforcement was required in relation to non-site specific work as this work will be funded by infrastructure charges in future.

For this charging year, 2019/20, we have increased our income offset amounts. The percentage increase in offset amount is equivalent to the average increase in water and sewerage bills for household customers in both of our operating areas.



DERIVATION OF CHARGES & PAYMENTS

Water infrastructure charges

Our charges have been derived based upon a forward looking assessment of our water network reinforcement needs to support new development. This includes providing additional capacity to ensure that we are able to provide water to new homes in terms of sufficient volume and pressure. We must also ensure that there is no adverse impact upon these levels of service experienced by our existing customers as a consequence of development.

Network reinforcement includes for increasing the capacity of pipes, booster stations and service reservoirs. It specifically excludes investment to improve water resources, reservoirs, boreholes and water treatment works.

Accurately predicting the actual timing, location and build out rates for new development can be difficult so we have taken a balanced risk-based approach using our experience of the development market. Importantly our assessment uses data regarding actual sites within the development pipeline and the results of detailed network analysis using our library of models.

We have calculated our infrastructure charge based upon the average annual network reinforcement needs for the period from 1 April 2018 to 31 March 2023. We have also assumed the following in terms of housing delivery:

- 7800 new properties will be connected each year within the north east
- 5400 new properties will be connected each year to the Essex and Suffolk network of which around 200 will be via bulk supply connections in NAV areas.

Water infrastructure charges will include for network reinforcement to provide additional capacity for all sites requiring water for domestic purposes.

We have used a wide range of data sources on future development to identify areas where network reinforcement schemes will be required. We have then estimated the total cost of the provision of new infrastructure. Where we are replacing existing water networks or carrying out refurbishment of water pumping stations in areas of high growth we have included a percentage allowance for growth to future proof them. That calculation is based upon the relevant percentage increase in future housing when compared to the existing number of connected houses.

In terms of housing delivery we have used a variety of data sources which include:

- Our Water Resources Management Plan
- Office of National Statistics data
- Pre-development enquiries
- Local Plan data
- Planning approvals



DERIVATION OF CHARGES & PAYMENTS

Water infrastructure charges

- NAV applications

We are confident that we have a good sense of the most likely location of development over the next five years and through our modelling an equally good understanding of those areas with network reinforcement requirements.

In terms of actual housing delivery, our current assumption is that annual build rates will be approximately 70% of that within the local plans and we will use this as our default where capacity is needed only after so many houses are completed rather than at the actual commencement of the development.



DERIVATION OF CHARGES & PAYMENTS

Water infrastructure charges

Our charges have been derived based upon a forward looking assessment of wastewater network reinforcement needs to support new development. This includes providing additional capacity to prevent flooding from our networks and ensuring continued compliance with permits for sewage pumping stations and combined sewer overflows to protect the natural environment. It specifically excludes investment to increase capacity at waste water treatment works.

Accurately predicting the actual timing, location and build out rates for new development can be difficult so we have taken a balanced risk-based approach using our experience of the development market in the north east. Importantly our assessment uses data regarding actual sites within the development pipeline and capacity factors from our library of drainage area models.

We have calculated our infrastructure charge based upon the average annual network reinforcement needs for the period from 1 April 2018 to 31 March 2023. We have also assumed that on average 8000 new direct or indirect wastewater connections will be made each year.

Wastewater infrastructure charges will include for network reinforcement to provide additional capacity for the connection of foul flows. It also includes for the connection of surface water from development sites providing that the developer has satisfied the Lead Local Flood Authority (LLFA) requirements relating to surface water management through the planning process. In particular we would expect as a minimum that there has been a full assessment of the hierarchy of preference for the connection of surface water contained with Part H of the Building Regulations. In addition requests for the provision of capacity for the connection of surface water into wastewater networks should be in strict accordance with both local and national planning policy.

In calculating our infrastructure charge we have assumed that:

- Developers will continue to work with planning authorities and lead local flood authorities to “separate, minimise and control” surface water and seek to achieve the most sustainable run-off destination.
- Where brownfield sites are to be redeveloped and there are no separation opportunities; surface water discharge rates shall be reduced to a minimum of 50% of the run-off in the site’s previously developed state. Where a LLFA imposes a greater reduction this will be the figure we use to increase capacity.
- Where a greenfield development site comes forward and it is demonstrated that connection to a sewer is the only surface water discharge option, flows shall be



DERIVATION OF CHARGES & PAYMENTS

Water infrastructure charges

limited to the equivalent greenfield run-off figure agreed with the LLFA through the planning approval process.

- As the assessment of surface water from developments of ten or fewer houses is currently outside the remit of the surface water planning duties of the LLFAs we require developers of these smaller sites to consult with us prior to the submission of any planning application to agree the most appropriate run-off destination and discharge rates.

We have used these broad principles alongside a number of data sources on future development to identify a range of wastewater network reinforcement schemes. We have then estimated the total cost of the provision of new infrastructure. Where we are carrying out refurbishment of our sewage pumping stations in areas of high growth we have included a percentage allowance for growth to future proof the station. That calculation is based upon the relevant percentage increase in future housing when compared to the existing number of connected houses.