

Anglian Water / Anglian Water Services Financing Green Bond Framework

July 2017



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Anglian Water Services Ltd (the “Company” or “Anglian Water”), together with its financing subsidiary vehicle Anglian Water Services Financing plc has developed a framework under which it can issue Green Bonds.

The Anglian Water Green Bond Framework supports the financing of our water and water recycling projects that demonstrate our environmentally sustainable management of natural resources and land use, as well as climate adaptation.

The Anglian Water Green Bond Framework follows the ICMA Green Bond Principles (“GBP”), which has four components:

1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting

This Green Bond Framework is developed in alignment with the Green Bond Principles 2017. It is Anglian Water’s intention to follow, where possible, best practices in the market as the standards develop.

1. Background

a. About Anglian Water – Introduction

Anglian Water supplies water and water recycling services to more than six million customers in the east of England and Hartlepool. It employs over 4,000 people and direct employee salaries contribute around £115 million to the regional economy every year. Everyday Anglian Water looks after over 38,000 km of water mains, 76,000 km of sewers, 140 water treatment works and 1,123 water recycling centres.

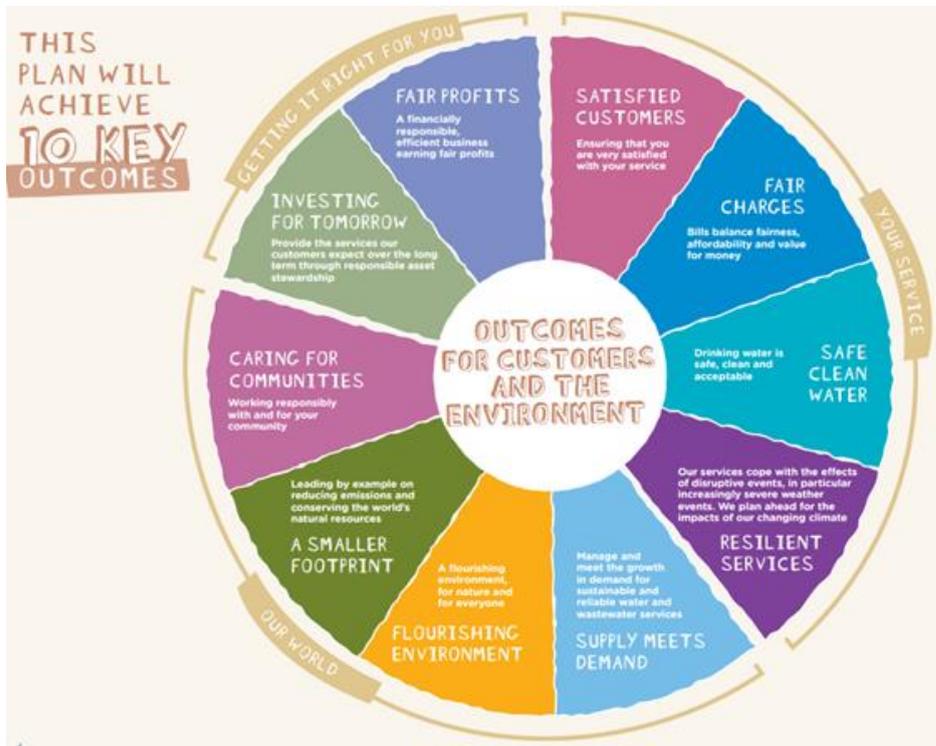
The activities of Anglian Water can be summarised as follow:



Over 2015 to 2020, Anglian Water will spend almost £5 billion on running the business, protecting communities from extremes of weather including flooding and helping to underpin economic growth, while at the same time keeping bills affordable.

Following its mission of providing a consistent supply of clean and safe water, and on the back of big challenges to be faced – in particular a combination of climate change, population and economic growth, and the need to protect the environment – Anglian Water strongly believe that it is its duty to support sustainable growth, increase the resilience of the region, and reduce its impact on the environment and on the climate.

Anglian Water has agreed 10 key outcomes that it will deliver for its customers through the plan to deliver the “regulatory contract” for the period 2015 -2020, and business performance is monitored using these:



Performance against these Outcomes is currently reported in our Annual Integrated Report. The 10 most important are highlighted in a performance dashboard and many are featured throughout the Strategic Report section. All 32 Outcome Delivery Incentives are included in the Outcome Performance Table in the Annual Performance Report section.

b. Anglian Water – Corporate Sustainability Framework

Sustainability is embedded in the core business of Anglian Water.

Anglian Water has adopted a long-term visionary campaign and business strategy “Love Every Drop” which captures the Company’s commitment to sustainability and includes the whole business, from the water it supplies to the recycling of used water before it is returned to the environment.

Anglian Water has adopted a carbon mitigation strategy called “Drop CO2” – which aims to minimise both the “operational” carbon created in its everyday operation and the capital carbon used in building assets such as water mains, sewers and pumping stations – as well as a stated target to achieve carbon neutrality by 2050. Anglian Water has already delivered a 54% reduction in capital carbon and 10% reduction in operational carbon in real terms in 2015 from a 2010 base line.

Anglian Water has also achieved PAS 2080 accreditation, a standard launched by the Green Construction Board to encourage a consistent approach to the management of carbon by all involved in infrastructure, setting out principles and components to manage whole life carbon emissions and deliver reduced carbon over the whole value chain.

Anglian Water’s sustainability strategy runs throughout the Company’s Business Plan 2015-20 which includes investment in resilience to climate change impacts as directly reflected in Anglian Water Business Plan Outcomes

and supporting Goals.

Anglian Water projects fall within the following category from the Green Bond Principles 2017: "sustainable water and wastewater management (including sustainable infrastructure for clean and/or drinking water, wastewater treatment sustainable urban drainage systems and river training and other forms of flooding mitigation".

2. Use of Proceeds

Anglian Water intends to provide institutional investors with the opportunity to invest in Anglian Water's Green Bond to finance parts of the environmental investments made through the Asset Management Plan for the period 2015-2020.

Anglian Water will allocate an amount at least equal to the net proceeds from sales of the Green Bonds to investments in a portfolio (**Eligible Green Portfolio**) of projects (**Eligible Green Projects**) that deliver the 2015-2020 regulatory contract. Some of these projects have already been financed since the commencement of the regulatory contract in April 2015, and a proportion of proceeds will be used to refinance these projects.

Anglian Water intends to maintain a healthy buffer of investments and expenditures and ensure the quantum of spend is no less than investments in the Eligible Green Portfolio at any time. The Eligible Green Portfolio will finance, in whole or in part:

- Projects helping mitigating climate change impacts by GHG emissions reduction through the use of energy-efficient facilities and conservation of water resources,
- Projects helping adapting to long term impacts of climate change such as flood risks.

Environmental benefits will be demonstrated through reducing the amount of embodied and operational carbon from the Company's agreed baseline, measured across the Eligible Green Projects in the Eligible Green Portfolio.

"Eligible Green Projects" means:

- **Sustainable Water Management Projects with a reduced climate footprint**

Use of Proceeds: Investments in water management projects with a reduced climate footprint:

- Capital Maintenance
- Enhanced Service Level: and additional standby generation
- Growth (Supply Demand)
- Quality

- **Sustainable Water Recycling Projects with a reduced climate footprint**

Use of Proceeds: Investments in water recycling projects with a reduced climate footprint:

- Capital Maintenance
- Enhanced Service Level
- Growth (Supply Demand)
- Quality

3. Process for Project Evaluation and Selection (Eligibility Criteria)

All capital expenditure which Anglian Water undertakes must meet Anglian Water’s AMP 6 Governance Framework (the **Eligibility Criteria**), a summary of which is set out below. Accordingly, all capital expenditure which Anglian Water undertakes is capable of being an Eligible Green Project for inclusion in an Eligible Green Portfolio.

It is expected that the list of selected Eligible Green Projects, investments and expenditures within the Green Bond Portfolio will be dynamic, and change over time depending on the investment and expenditure priorities of Anglian Water. It is expected that these will include projects achieving a minimum carbon reduction of 50 % from the Company’s agreed baseline, for example large infrastructure projects with a baseline of 2000tCO₂, sustainable abstraction schemes, river restoration projects, work on the natural environment programme and significant energy saving schemes. An overview of example schemes is available in Appendices A-E.

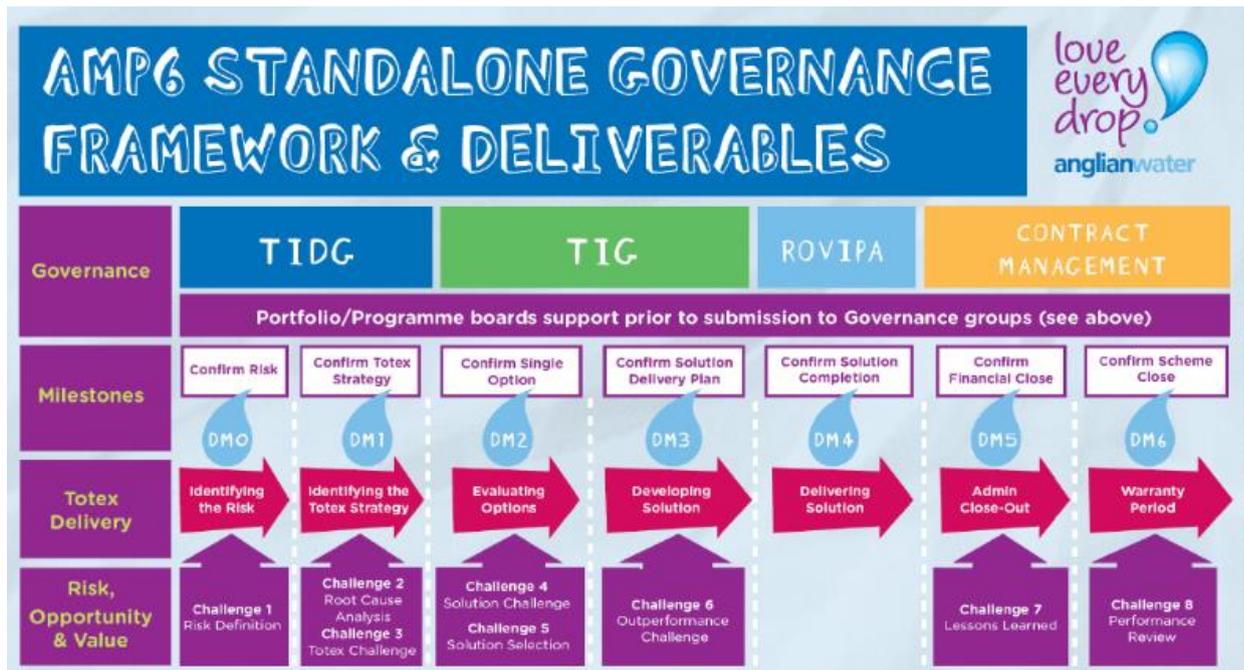
	Capital Maintenance	Enhanced Service Level	Growth (Supply Demand)	Quality
<u>Appendix A</u> Grafham and Wing Standby Generation		x		
<u>Appendix B</u> Grafham Resilience		x		
<u>Appendix C</u> Kings Lynn STC Cake Reception	x			
<u>Appendix E</u> Norwich Sustainability			x	
<u>Appendix F</u> Semer WTW Raw Water Deterioration				x

Anglian Water has a strict governance process for investments. This process includes risk identification, solution selection and carbon reduction calculations through monitoring, Decision and Delivery Milestones.

Anglian Water will continuously:

1. Agree business outcomes and identify potential output measures against strategic and customer requirements
2. Identify risks
3. Develop solutions to mitigate risks using private and societal costs to measures value and approve investments for consideration
4. Collaboratively plan an optimal set of investments and timing to maximise value against its agreed outcomes, within and across portfolios
5. Publish a 5 year plan in line with regulatory cycles and approve internally annually
6. Execute the delivery plan
7. Monitor and review plans

8. Review outputs and performance



The carbon related measures considered in the Governance Framework are embodied carbon, changes in operational carbon and changes in power consumption. Risks are assessed and then prioritised collaboratively by business representatives from Operations, Asset Management, Wholesale Services and Regulation. Promotion into the Totex Delivery Process is signed off at DM0 at the Totex Investment Development Group (TIDG) which includes representation from Operations, Asset Management, Regulation and Finance. The delivery teams for both capex and opex solutions are challenged at DM2 (single option) and DM3 (confirm delivery plan) to ensure the most efficient, sustainable and effective solution to deliver both optimum risk reduction and answer the challenges of carbon reduction, water reduction and efficiency in meeting the 10 key outcomes and 32 Outcome Delivery Incentives. Selection of projects into the Green Bond Portfolio is undertaken at DM2. The Totex Investment Group (TIG) challenges major capital solutions and has representation from across the business, primarily at Management Board Director level.

Anglian Water maintains minimum environmental and social requirements for all activities, including those financed with the proceeds of the Green Bonds. These are enshrined in the 10 Outcomes, agreed with customers in the development of the AMP6 business Plan. Anglian Water's focus on these 10 Outcomes also means that negative impacts are avoided. We comply with UK legal requirements and the regulations governing the UK water are extensive. Below are the definitions of the most relevant Outcomes and the complete set can be found in the company's Outcomes in Detail document.

http://www.anglianwater.co.uk/assets/media/54702_OID_v3a_WEB.pdf

FLOURISHING ENVIRONMENT

A good outcome will be...

The environment in our region flourishes. Rivers, lakes, aquifers and coastal waters support a rich biodiversity, contribute to a growing economy and provide a valuable amenity for families and communities. There is joined-up, effective and collaborative management of the water cycle in our catchments (an area drained by a river) from source to tap and back to the environment. Our activities are sensitive to environmental needs, and risks and adverse impacts are avoided. People, businesses, water- and land-users in our region are engaged in the challenges of maintaining a sustainable environment. All legal requirements are met.

A SMALLER FOOTPRINT

A good outcome will be...

We lead by example on mitigating climate change and protecting natural resources. Decarbonisation and resource efficiency are central to investment and operational decisions. We continue to reduce energy consumption and carbon emissions related to water production, consumption and disposal. Water footprinting is established as a social and business norm and drives down usage.

Anglian Water senior-level Climate Change Steering Group assesses the implications for the Company's business and has visibility of the delivery of Anglian Water mitigation and adaptation strategies. Climate change scenarios are being integrated into the decisions about future investment.

4. Management of Proceeds

The proceeds from the Green Bonds will be managed by Anglian Water's Treasury Team on a portfolio approach.

Funds raised from the Green Bonds will be paid to its Capex Reserve Account. Funds will be transferred to the Payment Account matching the amount of investments and expenditures in the Eligible Green Portfolio . The proceeds of the Green Bonds will be allocated to a portfolio of Anglian Water's Eligible Projects in the company's accounting records.

Anglian Water maintains a healthy buffer of investments and expenditures over green funding. Over-collateralisation of c. 30% within the Eligible Green Portfolio is targeted to provide this buffer. Anglian Water will provide investors with information regarding the projects financed by Green Bond issuance. This information will be made available in the allocation reporting (see section 5).

To prevent double counting of Eligible Projects, Anglian Water will issue Green Bonds allocated to eligible investments and expenditures on a unique project identifier basis. Reconciliation to the project budget will prevent any double counting in allocation of proceeds. Anglian Water has expenditure targets allocated for the regulatory review period, the current period being 2015-2020.

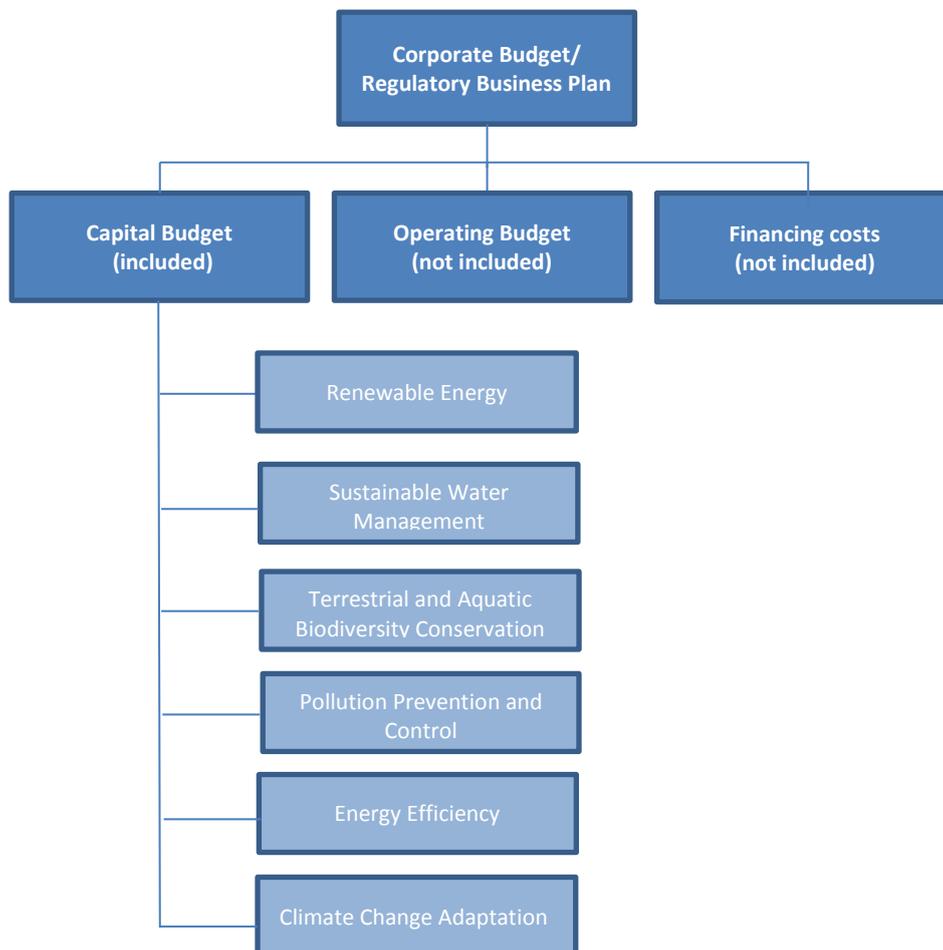
Pending the allocation of the Green Bonds proceeds, the Company will temporarily invest an amount equal to the balance of the proceeds held in the Capex Reserve Account in cash or cash equivalents. Payment of principal and interest on the Green Bonds will be made from the Company's Debt Service Payment Account.

Anglian Water ensures that the systems and processes as specified in section 4 (Management of Proceeds) above meet their requirements over the lifetime of the bond.

Excluded budgetary categories

The use of proceeds may include capital expenditures of eligible investments and expenditures in respect of projects identified. Specific sections of the relevant investments and expenditures that will be excluded are:

- Personnel expenditures
- Financing costs (the example chart shown as below)



5. Reporting

Allocation Reporting

Allocation reporting will be available to investors within one year from the date of a Green Bond issuance and annually thereafter, until the proceeds have been fully allocated, and as necessary thereafter in the event of material developments. This will be contained in the integrated Annual Report and Accounts and the Investor Report. The report will detail:

- i. insights into the total amount of the investments and expenditures in the Eligible Green Portfolio in the format in section 3 above
- ii. The savings/mitigations of embodied and operational carbon from the Company's agreed baseline measured across the Eligible Green Projects within the Eligible Green Portfolio
- iii. the balance of unallocated cash and/or cash equivalent still held by the Issuer.

Anglian Water may additionally report on impact indicators mentioned in the ICMA document Suggested Impact Reporting Metrics for Sustainable Water and Wastewater Management Projects (published June 2017)

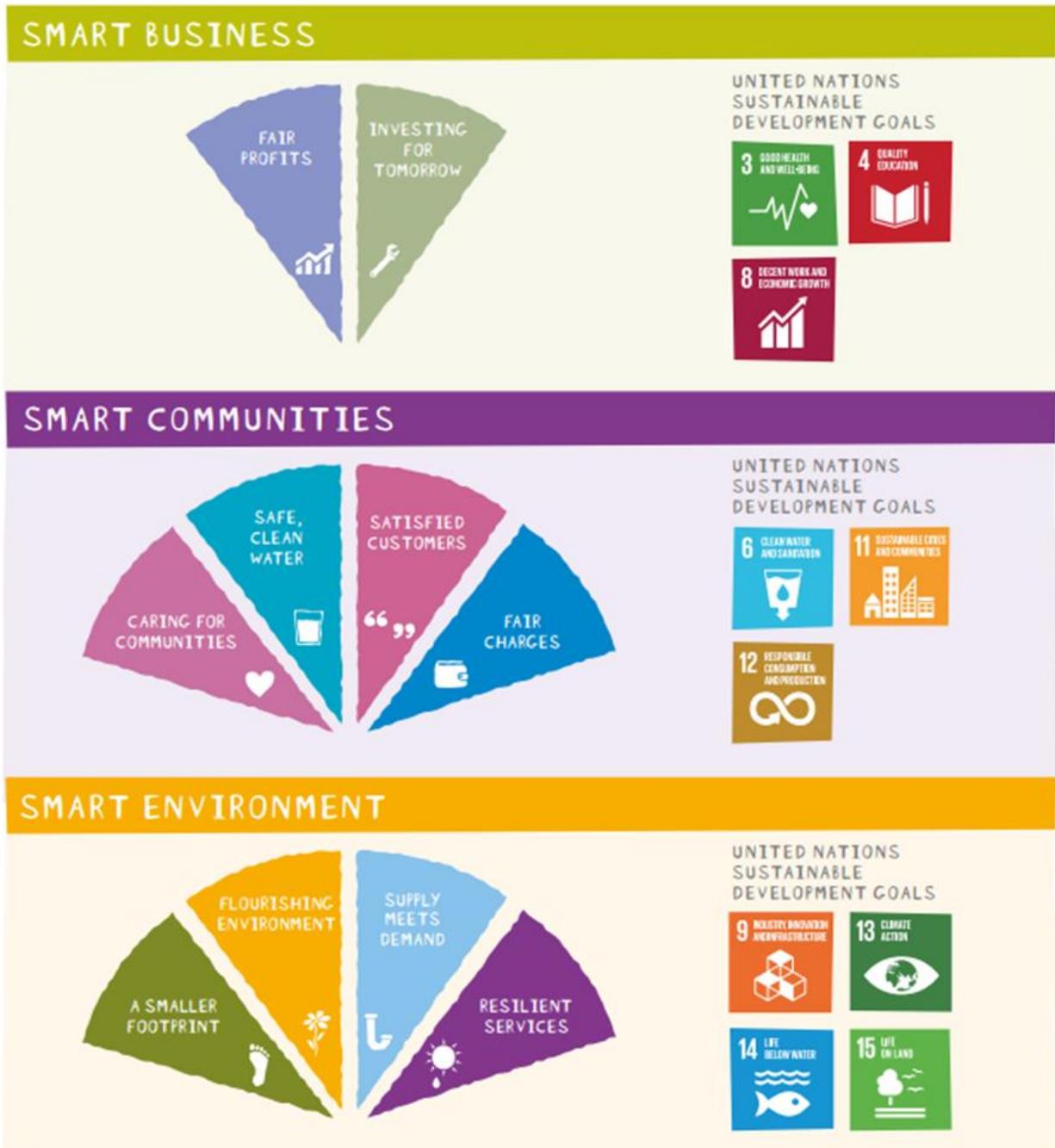
Impact Reporting

To monitor progress targets have been set for each of the 10 outcomes to say where Anglian Water is targeting to be by 2020. Performance is also measured against 32 Outcome Delivery Incentives and these are publically reported through the Annual Integrated Report and in 2017 will be available through a performance portal within the Anglian Water website. As an integrated report this is where the Company details its approach to sustainability and demonstrates how it is integrated and embedded alongside finances throughout the business. The Company also explains how its programmes are contributing to specific targets within many of the UN Sustainable Development Goals.

The global context

We live on a planet with finite resources and a growing population. The sustainability challenge continues to evolve: the United Nations adopted 17 Sustainable Development Goals (UN SDGs) as part of its 2030 Agenda for Sustainable Development. These goals came into effect on 1 January 2016 and demand action from governments, the private sector, civil society and

individuals. We have recognised the important role we can and should play in working towards meeting the goals and in setting an example for others. We have analysed which of our activities contribute to the Sustainable Development Goals. We will challenge ourselves to push for even more stretching outcomes in the future. The figure below shows how our outcomes fit with the UN SDGs.



Anglian Water may report on a range of environmental and social impacts of the investments and expenditures funded with the Green Bonds proceeds in these formats in the future. They cover all aspects of the Company's service and examples include:

- Improving customer service and satisfaction
- Maintaining the highest quality drinking water and reducing interruptions to supply
- Reducing leakage within the network
- Helping customers with water efficiency
- Protecting and improving the quality of coastal bathing waters.
- Delivering favourable condition for Sites of Special Scientific Interest
- Operational and capital carbon performance
- Renewable energy generation
- Reducing the number of properties affected by sewer flooding
- Reducing the potential for pollution incidents
- Maintaining our assets such as water treatment works, sewers and pumps
- Delivering sustainable drainage systems
- ICMA Green Bond Principles suggested impact reporting metrics for water (June 2017)

In addition Anglian water separately publishes an annual GHG emissions report, available at <http://www.anglianwater.co.uk/environment/why-we-care/carbon-management.aspx> The Company has chosen 'kg of CO2e per mega litre' for water supply and water recycling treated as these are common business metrics for the industry sector.

The carbon data has been externally verified as part of the regulatory reporting requirements. Since 2010, Anglian Water has met the requirements of the CEMARS (Certified Emissions Measurement and Reduction Scheme), having measured greenhouse gas emissions in compliance with ISO 14064-1:2006.

The Anglian Water Green Bond Framework has been reviewed by DNV GL who has issued a Second Party Opinion. The Second Party Opinion as well as the Green Bond Framework will be made publically available on Anglian Water's web site.

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GRAFHAM & WING STANDBY GENERATION

CATEGORY

Enhance Service Level

PROJECT DESCRIPTION

In order to mitigate the risk of power supply interruptions at our two largest water treatment works, both of which are currently supplied by external power only, we are installing standby generation. A resilience planning exercise has been carried out to improve our understanding of the current and future risk to our electricity supplies. In doing this Anglian Water has worked with the Distribution Network Operator and estimated that the current probability of a loss in supply of a few hours to a few days is 1-in-122 for Grafham and 1-in-24 for Wing. Furthermore, Ofgem has published a report stating that probability of a 5-hour power interruption resulting from a shortfall in the supply-demand balance is 1-in-12 in 2015-16.

EXPENDITURE

FBP

2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
£k	£k	£k	£k	£k	£k	£k
6	235	1,187	13,292	258		14,978

Solution

2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
£k						
5	175	883	9,889	192	0	11,144
						Variance
						-26%

CARBON

	Capital Carbon (CO ₂ eT)	Operational Carbon Energy (CO ₂ eT)	Operational Carbon Non-Energy (CO ₂ eT)
FBP	2,682	219	0
Solution	919	217	0
Variance	-66%	-1%	-

TIMELINE

Obligation Date	Project Start Date	Construction Start Date	Project End Date
31/03/2018	19/09/2016	09/05/2017	31/03/2018



Grafham Resilience

The latest example of our continual innovation in the building of ever more resilient systems to meet challenges of growth and climate change.

- £28million scheme to make supplies to more than 600,000 people more secure.
- State-of-the-art storage reservoir and pumping station integral to the solution.
- Pioneering use of existing infrastructure to reverse flows in main linking Grafham and Wing WTWs.
- Final scheme came in £32m cheaper and saved 62% of embodied carbon of the original design.
- Designed to accommodate growth in one of the fastest growing regions in the country.
- The largest pre-cast service reservoir in Europe: 40 megalitres, or 16 Olympic swimming pools.



Initial design

£60 million
43,648

Final design

£28 million
16,803 tonnes
Saving 26,845 tonnes (62%)

KINGS LYNN STC CAKE RECEPTION

CATEGORY

Capital Maintenance

PROJECT DESCRIPTION

In order to achieve our strategic goal of treating all sludge to enhanced standard at Kings Lynn we need remove current hydraulic headroom limitations by installing cake reception. The move from importing liquid sludge to dry cake solids will not only allow us to treat more sludge to enhanced standard but also greatly reduce the impact of sludge transportation.

EXPENDITURE

FBP

2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
<i>£k</i>						
0	1,950	3,765	0	0	0	5,715

Solution

2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
<i>£k</i>						
155	4,637	27	0	0	0	4,819
						Variance
						-16%

CARBON

	Capital Carbon (CO2 eT)	Operational Carbon Energy (CO2 eT)	Operational Carbon Non-Energy (CO2 eT)
FBP	726	-	-
Solution	440	-	-
Variance	-39%	-	-

TIMELINE

Obligation Date	Project Start Date	Construction Start Date	Project End Date
-	14/09/2015	23/0/16	27/03/2017



NORWICH SUSTAINABILITY

CATEGORY

Growth (Supply Demand)

PROJECT DESCRIPTION

Following the Habitats Directive Review of Consents the EA has identified where reductions in licensed abstractions are required. Anglian Water is forecasting deficits in deployable output from Heigham WTW (Norwich) due to the abstraction reductions at Costessey imposed by the EA's Restoring Sustainable Abstractions programme. In order to meet demand, a membrane plant is required to treat larger volumes of the lower quality water at Heigham.

EXPENDITURE

FBP	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
	£k						
	19	588	2,226	25,776	7,965	207	36,780
Solution							
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
	£k						
	15	456	2,576	19,961	6,558	0	29,566
							Variance
							-20%

CARBON

	Capital Carbon (CO2 eT)	Operational Carbon Energy (CO2 eT)	Operational Carbon Non-Energy (CO2 eT)
FBP	6,910	-	-
Solution	3,857	-	-
Variance	-44%	-	-

TIMELINE

Obligation Date	Project Start Date	Construction Start Date	Project End Date
31/03/2019	06/09/2016	18/07/2017	15/12/2018



Optimisation of existing pump configuration to remove need for new assets

Use of wheelite tanks instead of reinforced concrete

Smaller footprint technology, requiring smaller concrete pad

Semer

CATEGORY

Quality

PROJECT DESCRIPTION

One of the boreholes which supplies Semer WTW has a rising nickel concentration which could lead to customers receiving water with nickel concentrations above the internal target and PCV level as the existing treatment process is not capable of removing the nickel to acceptable levels. In order to do this, we have reinstated an alternative borehole and constructed a new WTW to treat blended water from the two boreholes to the required level.



EXPENDITURE

FBP						
2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
£k	£k	£k	£k	£k	£k	£k
2,311	4,439					6,750
Solution						
2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
£k	£k	£k	£k	£k	£k	£k
1,052	3,429	695	-	-	-	5,176
						Variance
						-23%

Reinstatement of an existing borehole rather than a new drill



CARBON

	Capital Carbon (CO2 eT)	Operational Carbon Energy (CO2 eT)	Operational Carbon Non-Energy (CO2 eT)
FBP	1,772	180	4
Solution	874	319	0
Variance	-51%	77%	-100%

Utilisation of existing assets



TIMELINE

Obligation Date	Project Start Date	Construction Start Date	Project End Date
30/06/2018	22/12/2014	29/09/2015	28/06/2016



