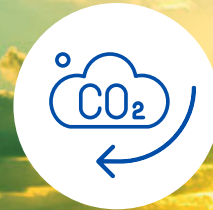


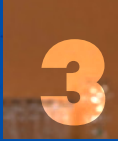
# OUR PROMISE TO THE PLANET

CARBON-BUSTING NET ZERO PLAN



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# OUR CARBON-BUSTING NET ZERO PLAN

**The world is facing a genuine climate emergency. 2010-2019 was the warmest decade on record. Urgent action is needed now to tackle the challenge of climate change and protect our planet.**

At South West Water, we have ambitious plans to transform how we produce and use energy. Our mission? To bust our operational carbon emissions and hit Net Zero by 2030.

Reaching this target is about reducing energy use, becoming more energy efficient and decarbonising our operations. We want to go greener by championing renewables and using 100% renewable electricity.

We also have an opportunity to lead the way in natural carbon sequestration through peatland restoration and planting even more trees.

## **Bringing water to life**

Our approach to Net Zero is aligned to our purpose and values as a responsible business: Bringing water to life 'supporting the lives of people and the places they love for generations to come.'

We recognise that a healthy environment is vital for the long-term sustainability of our planet.

We are passionate about our water and its health benefits. Pure water is vital to life; we are tireless in making it safe and enjoyable to drink. We value water, we hate to see it wasted, and we always promote it. As champions of the environment, we care about people's health and the environment so we will treat wastewater responsibly and safely.

We know the economy and wellbeing of our region is reliant on the environment we live in. We will support and stand shoulder-to-shoulder with our community and other organisations in the South West to protect the environment and deliver our Net Zero plan.

## **Net Zero**

Our journey to reduce our carbon emissions began more than 40 years ago with the use of anaerobic digestion processes in our wastewater treatment works. Our pledge now is to hit Net Zero operational carbon emissions by 2030.

We want to achieve this goal in the most sustainable and economic way for customers, shareholders and the environment.

So, how will we deliver this? Here, we outline our route map to 2030 and beyond.

**Susan Davy**  
CEO — South West Water



**“ We will support and stand shoulder-to-shoulder with our community and other organisations in the South West to protect the environment. ”**

# OUR PLEDGES

**As part of a world first sector-wide commitment of its kind, our goal is to achieve Net Zero carbon by 2030.**

We are also proud to be an official sponsor of Race to Zero, the UN's global campaign to rally leadership and support from businesses, cities, regions and investors for a healthy, resilient, zero carbon recovery. Our Race to Zero pledge will extend the boundary of our Net Zero activities towards a 2045 target.

We have pledged to achieve:

- Net Zero carbon operational emissions by 2030
- Net Zero by 2045 for all other carbon emissions, including from suppliers and construction activities

## The power of three

Our strategy is driven by: changing operational practices, focusing on self-generation, and reversing carbon emissions. Put simply, we are focused on how we create and use energy in the most efficient way and how we can innovatively use our local environment to reverse carbon emissions for decades to come.

The activities are founded around 'three pillars' which under-pin our Net Zero to 2030 approach:



## 1. Sustainable Living

- Reducing emissions through changes to operational practices, increasing energy efficiency, and switching to lower carbon fuel sources
- Meeting our commitments to reduce leaks and help customers to use less water - protecting the environment and saving carbon

## 2. Championing Renewables

- Maximising self-generation from renewables at our sites across the South West - working with partnerships and utilising our expertise
- Where we cannot generate enough ourselves to meet all our needs, 100% of the electricity we purchase will be from renewable sources

## 3. Reversing Carbon Emissions

- Reversing carbon emissions from our core activities
- Working in partnership to ensure our core activities reverse carbon emissions through solutions such as peatland restoration
- Supporting the development of innovative solutions to develop low carbon footprint processes through research and development



# OUR GREEN RECOVERY INITIATIVE

In addition, OFWAT approved £82 million of additional environmental investment for South West Water's Green Recovery Initiative, over the period to 2025, with no impact on customer bills during that period.

Our initiative has been strongly supported by our customers with an acceptance rating of 81%.

Many of the initiatives support the achievement of our ambitious Net Zero carbon commitment set out in this roadmap. Those initiatives include extensive peatland restoration in the South West, the development of our low carbon water treatment works, and helping customers to reduce their environmental impact.

Our Green Recovery Initiative will also create up to 500 new jobs, support the wider supply chain and help the region's economy recover from the challenges of the global pandemic.

Let's take a look at each of our three Net Zero pillars in more detail...

**£82<sub>m</sub>**

additional environmental  
investment

**81%**

of our customers  
support our initiative

Up to  
**500**

new jobs

# 1.

## SUSTAINABLE LIVING

Our 'Sustainable Living' pillar is all about the pro-active actions we are taking to reduce energy use and decarbonise our own operations.

This pillar focuses on two key deliverables:

1.

**Reducing emissions through changes to our operational practices, increasing energy efficiency, and switching to lower carbon fuel sources**

Activity in this area includes:

- Increasing our **energy efficiency programme**, including pump optimisation, and waste and water treatment processes. Here, we are investing in energy efficiency, ensuring our pumps and pumping equipment are kept in good condition and optimised for efficient use
- Our **pump optimisation** plans include a programme of extensive monitoring of our assets, collecting more performance data than ever before. This data enables us to select the most efficient combination of pumps to meet the desired flows

Switching to an  
**100%**  
electric car and  
van fleet by 2030

- **Decarbonising our fleet.** We are proactively working with our fleet provider to support the transition to an 100% electric car and van fleet by 2030, with pilots beginning in 2022. But our activity doesn't stop there. We are also ensuring our contractors do the same by 2030
- **Fossil fuels substitution.** Our 2030 milestone involves switching from fossil fuels to lower carbon alternatives. In 2022, we are planning to trial replacing diesel with biofuel to power standby generators



### Algae in action

- Our mission is to find new, innovative low carbon solutions to ensure our operations are sustainable. An example of this in action is the installation of technology to remove phosphorous at our wastewater treatment works
- The scheme at Broadwindsor Sewage Treatment Works uses I-Phyc technology to remove phosphorus, ammonia and other trace contaminants from wastewater. Algae locks away carbon, and early analysis suggests this could be a promising process to help achieve our Net Zero ambitions




2.

**Reducing leaks and helping customers to use less water – protecting the environment and saving carbon**

### Reducing leaks

We've halved water leakage levels and have one of the lowest levels in the industry. Despite living in challenging times, we know there's more work to do to hit our targets, which is why we're aiming for a further 15% reduction in leakage by 2025.

With over 18,400km of pipework, detecting and repairing leaks can be a challenge. Our people work incredibly hard, 24 hours a day, 365 days a year, pinpointing and fixing leaks as quickly as possible.



**Reducing demand**

leaves more water in the environment



Targeting a further

**15%**

reduction in leakage by 2025

### Supporting customers in being water smart

Working with customers to support demand reductions means less pressure on water resources, leaving more in the environment, supporting wildlife and natural habitats.

Reducing demand also means we treat and transport less water and wastewater, reducing our energy consumption and fugitive emissions from wastewater processes.



THE **5 LITRES CHALLENGE!**  
Could you save 5 litres of water a day?

### Saving the good stuff

This summer we launched our '5 litres challenge'

- Promoted across social media channels and in the media, we urged customers to save 5 litres of tap water a day
- Every drop counts. If each of our customers saved 5 litres of tap water a day, this would save nearly 10 million litres, c800 tonnes of CO<sub>2</sub> equivalent per year
- Customers were encouraged to share their top tip on saving water using #Save5Litres to be in with a chance of winning a £500 donation to a South West charity of their choice, and a £50 shopping voucher

# 2.

## CHAMPIONING RENEWABLES

**We are committed to using 100% renewable electricity.**

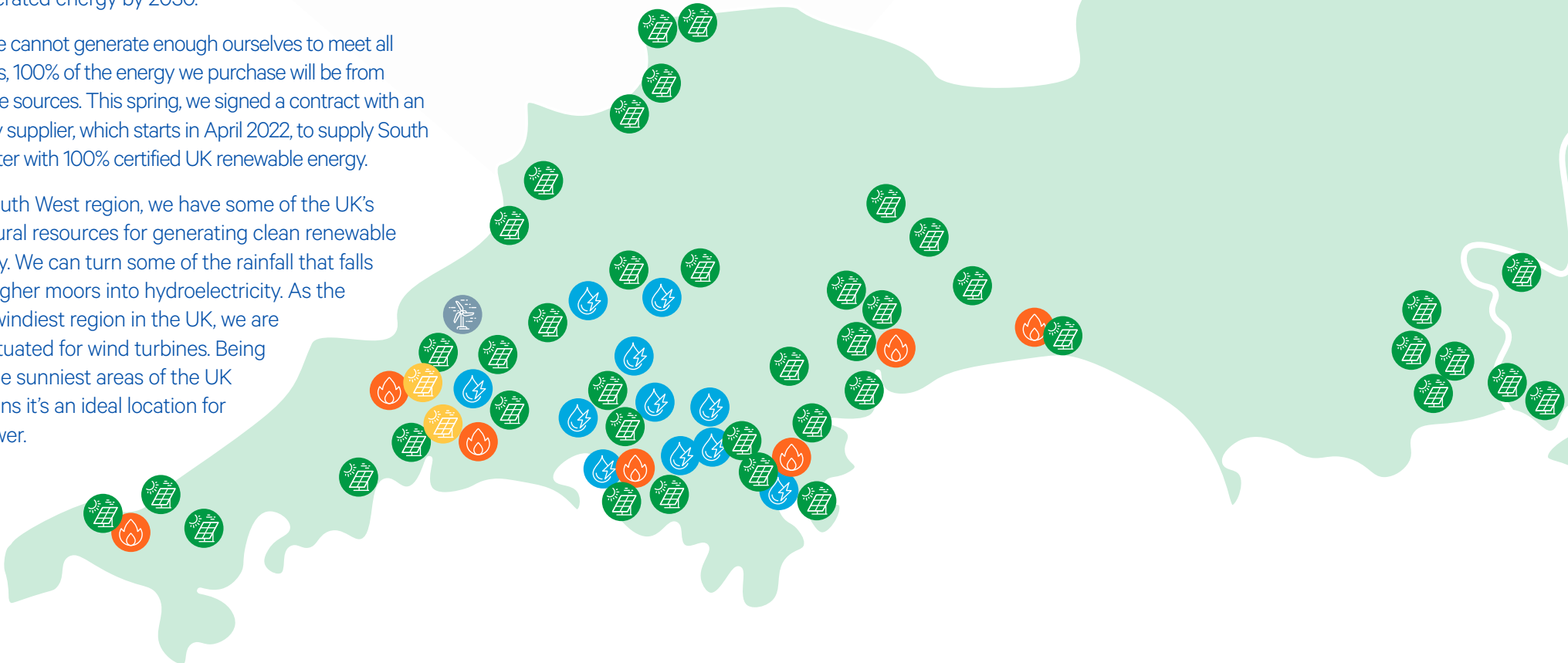
A cornerstone of our journey to 2030 and beyond is how we maximise self-generation from renewables at our sites across the South West - working with partnerships and using our expertise. We are aiming to achieve up to 50% self-generated energy by 2030.

Where we cannot generate enough ourselves to meet all our needs, 100% of the energy we purchase will be from renewable sources. This spring, we signed a contract with an electricity supplier, which starts in April 2022, to supply South West Water with 100% certified UK renewable energy.

In the South West region, we have some of the UK's best natural resources for generating clean renewable electricity. We can turn some of the rainfall that falls on the higher moors into hydroelectricity. As the second windiest region in the UK, we are ideally situated for wind turbines. Being one of the sunniest areas of the UK also means it's an ideal location for solar power.

### Our current renewables sites

-  HYDRO
-  CHP
-  WIND
-  SOLAR PV
-  3<sup>rd</sup> PARTY PRIVATE WIRE SOLAR PV







## CHAMPIONING RENEWABLES

**Currently, c21GWh of our electricity comes from renewable sources and we are on track to increase this yearly. We already operate more than 60 renewable energy installations – a mixture of hydroelectric power, wind, solar, and biogas schemes.**

We have more than 2,000 sites that use electricity. As 400 sites account for around 90% of the electricity consumed, these sites are being prioritised based on consumption to identify the most viable options for renewables. We're developing an investment programme that is considering a range of technologies (solar, hydro, wind, sludge to biogas). We are already on track for a further 13 solar sites.

As well as making use of available natural renewable energy resources, we also recover energy from the wastewater sludge that arrives at our works. We use anaerobic digestion, where microorganisms break down sewage sludge in the absence of oxygen, to produce a methane-rich biogas. We then use this gas in engines that produce both electricity and heat, helping to offset the amount of energy that we need to purchase from outside sources.



### **Green pioneers: Mary Tavy Hydroelectric Power Station, Dartmoor**

We have been the custodians of this pioneering historic industrial site, built in the 1930s, for 25 years and have added it to our portfolio of renewable energy plants.

England's first and still operational hydro-power generator, Mary Tavy Power Station has harnessed the power of Dartmoor's water for the past 90 years and generates enough energy to power 1,700 homes.

Mary Tavy and Morwellham power stations harness the forces of nature to generate 3.5 megawatts of green energy for South West Water - enough to power a small town like Tavistock.

Renewable energy comes from sustainable sources: the water that is naturally flowing from higher ground to sea level provides the mechanical power that is converted by the hydro process into electricity. It is 100% renewable and recyclable by our natural weather patterns and is one of the most efficient sustainable energy resources we have today.



# 3.

## REVERSING **CARBON EMISSIONS**

**Well-managed woodlands and healthy peatlands play a critical role in helping us to reach Net Zero.**

Our journey to 2030 and beyond involves working in partnership to deliver natural carbon sequestration through activities such as peatland restoration and tree planting. These activities have environmental and societal benefits beyond carbon, such as biodiversity, flood protection, and improved water quality. We will reverse more carbon emissions than we generate by 2030.

Given our geographical position and work in our regional catchments, we have a great opportunity to build natural carbon sequestration through our moorland restoration work and reverse carbon emissions. It's a differentiator for our business and the South West.

### **Peatland restoration**

Peat bogs should be considered as "carbon sinks", as they draw in carbon dioxide through plant growth peat accumulation, helping to reduce the effect that these greenhouse gases are having on the planet.

Large areas of the UK's peatlands are in decline. Historically, peatlands were often drained for agriculture or forestry, which leaves them in poor condition.

As a damaged and drained peat bog dries out, the peat oxidises and loses its ability to hold greenhouse gases. So, rather than acting as a carbon store, peatlands in poor condition actually release carbon dioxide into the atmosphere.

We are working as part of the South West Peatland Partnership to restore damaged peatland on Bodmin Moor, Dartmoor and Exmoor, allowing the peat bogs to gain the water they need to recover and once again become carbon sinks.



Our target is to restore an additional **1,000 hectares** of peatland across the South West by the end of **2025**





# REVERSING CARBON EMISSIONS

## Upstream Thinking

The peatland restoration work is part of the wider Upstream Thinking project - a multi-award-winning catchment management scheme which applies natural landscape-scale solutions to improve water quality and supply.

The project is delivered through partnerships with Westcountry Rivers Trust and Devon and Cornwall Wildlife Trusts, government agencies, environmental experts, landowners and tenant farmers. The evaluation of the change in water quality at catchment scale is supported by the University of Exeter.

What is Upstream Thinking? Before you turn on the tap and have a drink, enjoy a relaxing bath or shower, the water has travelled across high grounds, through farmland, rivers and streams, has been stored in reservoirs and then processed. Human impact on the land has an inevitable effect on our rivers. Peat bogs, wetlands, hedgerows, fields and woodlands have all altered dramatically over time. Farmyard manure, artificial fertilisers, herbicides and pesticides are released onto land and into rivers as a result of the way landscapes of the South West are managed.

Since 2015, South West Water has worked to reduce run-off and improve water quality on 85,100 hectares of land. We have also restored 2,312 hectares of moorland, culm grass and other habitats during this time.

## Tree planting

Back in 2019, we announced ambitious plans to plant at least 100,000 trees by 2025.

Achieving that goal early, we planted 100,860 trees by June 2021.

Trees help combat climate change, improve water quality, reduce flooding, enhance biodiversity and add to the natural beauty of our region.

We have been working with key partners to plant trees on land identified by partners such as the Wildlife Trusts, as well as on our own land. The Woodland Trust has provided thousands of native trees ready to be planted.

## Other land-based options and blue carbon

Our Net Zero route map activities include offsetting emissions from soil carbon and grassland management.

Achieving Net Zero may also include offsetting emissions using sea grass, salt marshes and kelp restoration. We will be investigating innovative options and implementing effective solutions to offset these emissions.



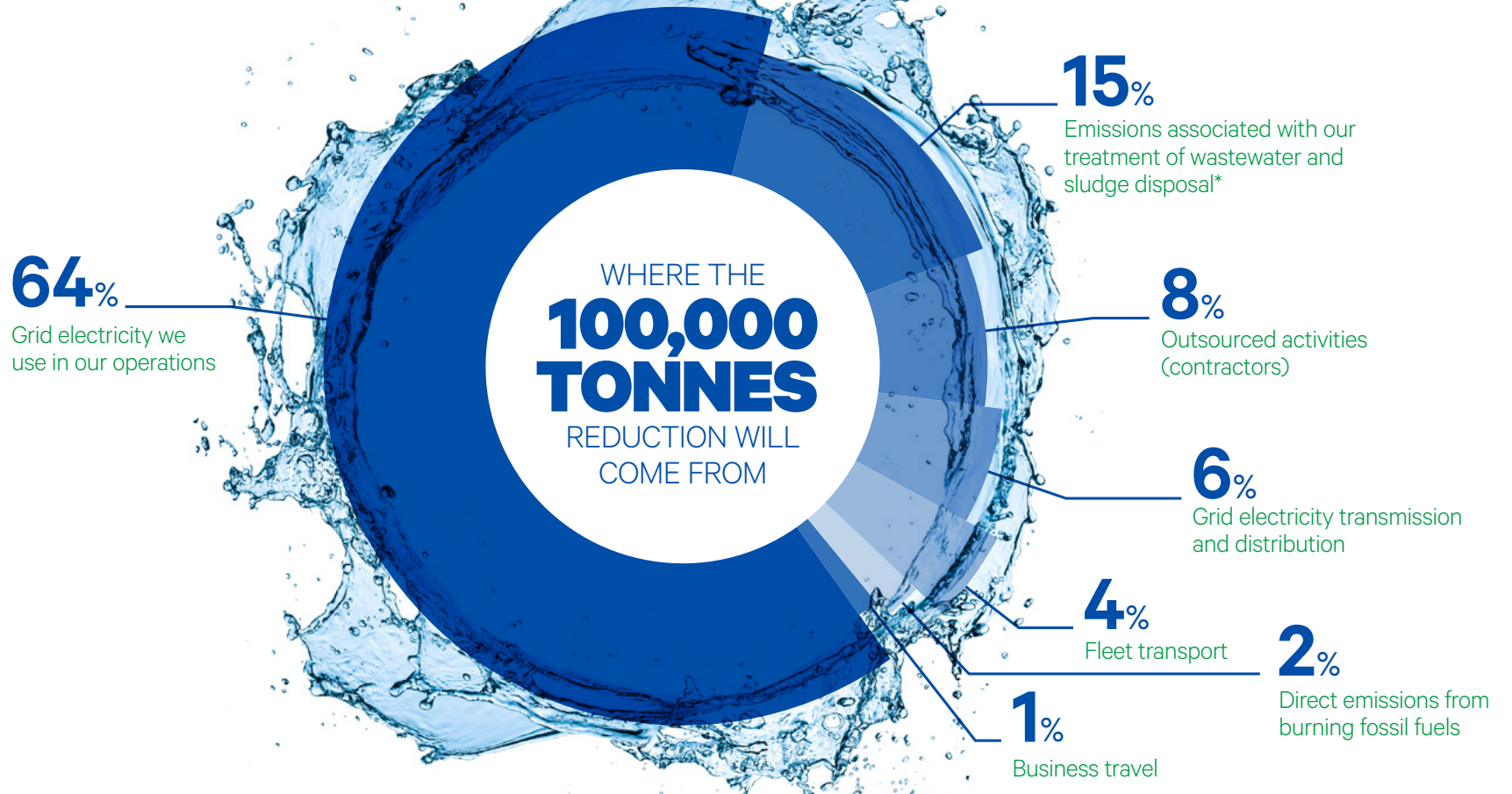
# HOW OUR CARBON SAVINGS STACK UP

## So, how does this all add up and what does Net Zero mean in numbers?

For us, it means cutting 100,000 tonnes in carbon emissions.

Here's a chart showing the breakdown of the areas where the 100,000 tonnes reduction will come from. It's based on our current 2020/21 carbon emissions.

As we make progress on our road to Net Zero, the percentage numbers for each of these areas will alter as the reductions are made.



\* = Also includes a small amount of emissions from air conditioning and refrigeration equipment



HOW WE'LL GET THERE:

# OUR ROUTE TO NET ZERO

TARGETS ALREADY SET

Area of Action

2020

2025

2030



## Sustainable Living

Fuel Switching

Explore and trial alternative fuels

100% switch from fossil fuels to lower carbon alternatives by 2030

Transport Fleet

Electric vehicle trials

100% transition to electric car and van fleet. Roll-out of alternative fuels for HGVs by 2030



## Championing Renewables

Green Energy Purchase

Contract negotiations

Purchase 100% zero carbon electricity from suppliers

Renewable Generation

Aiming to be up to 50% self-generated by 2030



## Reversing Carbon Emissions

Peatland Restoration

Continue peatland restoration 'Upstream Thinking' programme, additional 1,000 hectares by 2025

Tree Planting

Continue tree planting, over 100,000 planted to date, 250,000 by 2025

HOW WE'LL GET THERE:

# OUR ROUTE TO NET ZERO

AT PLANNING STAGE



## Sustainable Living

Area of Action	2020	2025	2030
Energy Efficiency	Improve efficiency of energy-using systems and assets		
Treatment Processes	Review impact of methane and nitrous oxide emissions	Reduce methane and nitrous oxide emissions by improved process control	
Business Travel	Review ways of working and business travel, establishing new ground rules for removing unnecessary business travel		
Supply Chain	Work with supply chain partners to provide lower carbon contracted services		
Managing Demand	Reduce overall water consumption and encourage customers to use less		



## Championing Renewables

Onsite Renewables	Feasibility and project development	Deployment of additional embedded renewable energy – Solar PV, Hydro, Wind	
Offsite Renewables	Feasibility and project development	Deployment and contracting for additional third-party renewable energy supply	
Bioresources	Review bioresources strategy	Implement the best options for using biomethane from wastewater treatment	
Heat Recovery	Review options for heat recovery	Implement ways to distribute recovered heat to others	



## Reversing Carbon Emissions

Other Land Based Options	Implement solutions to offset emissions from soil carbon and grassland management		
Blue Carbon	Implement solutions to offset emissions from sea grass, salt marshes and kelp restoration		





## WORKING **TOGETHER**

**Our colleagues will be actively involved in developing and delivering on our Net Zero ambitions through a number of initiatives. One of them is the creation of a team of colleague 'Net Zero Pioneers'. They will actively support our Net Zero team in shaping and delivering our plan and will help to galvanise our colleagues in our contribution to Net Zero.**

Of course, collaboration extends beyond our business. We will support and stand shoulder-to-shoulder with our community and other organisations in the South West to protect the environment.

To achieve Net Zero we will need support from our communities, regulators and stakeholders. For example, we will continue to collaborate with local authorities and regional energy and carbon community groups such as Devon Climate Emergency on emerging technologies and the roll-out of renewables. And we will partner with educational establishments such as University of Exeter in research and innovation.







## LOOKING **AHEAD**

**As new tools, technologies and eco solutions develop, we will adapt our climate plans accordingly.**

These ambitious plans don't stop at Net Zero by 2030. We're committed to going beyond this – reducing greenhouse gas emissions associated with purchased goods and services ('embodied' carbon) and those associated with waste generated by 2045. We'll share more detail on our 2045 goals as those plans mature.

Our customers support our plans; they will help the UK government hit its targets. It's the right thing to do.

This Net Zero route map was produced in July 2021. We consider this to be a living document which will evolve and be regularly updated.

We will transparently report our progress towards our Net Zero targets, both in terms of our overall footprint and our wider contribution to positive climate action – for example, in our Annual Report and sustainability strategy.

We will reveal more details about our plans to a range of stakeholders at a Climate Summit we will be hosting this autumn.

