












The Planet Mark™ Certification Report Petroc

1st April 2017 to 31st March 2018

PETROC™



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About The Planet Mark™

The Planet Mark™ is a certification programme recognising commitment to continuous improvement in sustainability.

HOW IT WORKS

Our 3-step process is as simple as 1, 2, 3

1. MEASURE



We measure your carbon footprint and environmental performance

2. ENGAGE



We help you engage your employees and suppliers to drive improvements

3. COMMUNICATE



We provide marketing channels and materials to promote your achievements

The Planet Mark™ Certificate

The Planet Mark™ Certificate recognises your commitment to continuous improvement in sustainability and to measuring and reducing your carbon footprint on an annual basis. Display it publicly to promote your achievements.




Supporting the Eden Project and Cool Earth

A donation has been made on your behalf to the Eden Project and Cool Earth to support education on climate change and to protect an acre of endangered rainforest.

Along with The Planet Mark™ Certificate you will receive The Planet Mark™ Acre of Rainforest Certificate and free tickets to visit the Eden Project.





THE PLANET MARK™ ACRE OF RAINFOREST CERTIFICATE

CONGRATULATIONS! THIS CERTIFICATE RECOGNISES PETROC'S COMMITMENT TO SUSTAINABLE IMPROVEMENT THROUGH THE PLANET MARK™ BY PROTECTING AN ACRE OF THE WORLD'S MOST ENDANGERED RAINFOREST WITH THE AWARD-

WINNING CHARITY COOL EARTH



PROJECT
ASHÁNNINKA
LOCATION
NORTHERN PERU

[VIEW YOUR ACRE](#)



240
TREES PROTECTED



245
TYPES OF ANIMAL SHELTERED



260 TONNES
OF CO₂ STORED




2,960
PEOPLE SUPPORTED



22
ENDANGERED SPECIES PROTECTED



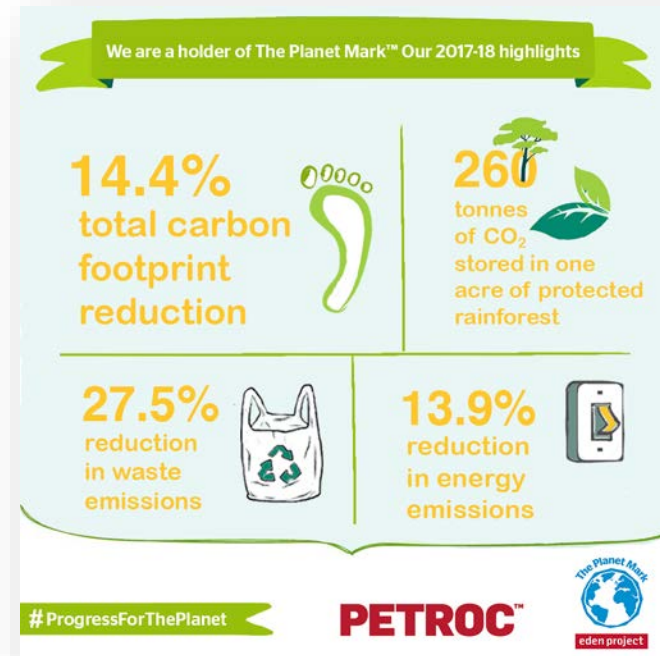
76,000 LITRES
OF WATER PRODUCED ANNUALLY



COOL EARTH IS THE CHARITY THAT WORKS ALONGSIDE INDIGENOUS VILLAGES TO HALT RAINFOREST DESTRUCTION

The Planet Mark™ Communications materials

Communication is key to getting the most from your sustainability programme. Use the assets in your certification email to help promote your achievements.



To discuss the creation of bespoke marketing materials in line with your brand guidelines, contact: George.Catchpole@PlanetFirst.co.uk

Executive summary

Petroc™ is Devon's leading college, providing a range of courses including apprenticeships, higher education, part time and adult evening classes. It has three campuses: Barnstaple, Tiverton, and Brannams.

This is Petroc's second year of business carbon footprint reporting. Petroc first calculated the carbon footprint of its college wide operations for the year ending March 2017 and set a target to reduce emissions by 5% annually. This year's footprint includes emissions from energy use in the building (natural gas and purchased electricity), from fleet, from waste disposal, water usage and from the production of paper used in the offices.

The relative carbon footprint in year ending March 2018 was 0.10 tCO₂e per staff and student, a decrease of 14.4% compared to 2017. Petroc's total carbon footprint was 1,695 tCO₂e, a decrease of 14.4% from 2017.

The reduction in electricity related emissions (down 18%) is partly attributed to the updated 2017 Defra emission conversion factors which reflect the greening of the UK National grid for electricity. Actual electricity consumption reduced by 4% after a number of sustainability initiatives were introduced by the business in 2018 such as:

- Roll out programme of replacing suspended ceiling grid lights with new LED panels
- Installation of solar PV's to existing buildings and plans to expand this to new buildings
- Installation of A rated condensing boilers which have improved efficiencies across the campus

To meet its sustainability commitments going forward, Petroc should:

- Continue to carry on with 'energy audits' to identify where most energy is being used and potential wastage from equipment, lights and heat loss.
- Set a policy to make its fleet and business travel more energy efficient
- Commit to switching to recycled paper for all office uses and continue recycling efforts

This year's highlights

Petroc has achieved certification to The Planet Mark™ by showing good practice in sustainability including:

Investment to the **Eden Project** to support education on climate change

1,695 tCO₂e
measured carbon included electricity, natural gas, water, waste, travel and paper

14.4%
total carbon footprint reduction

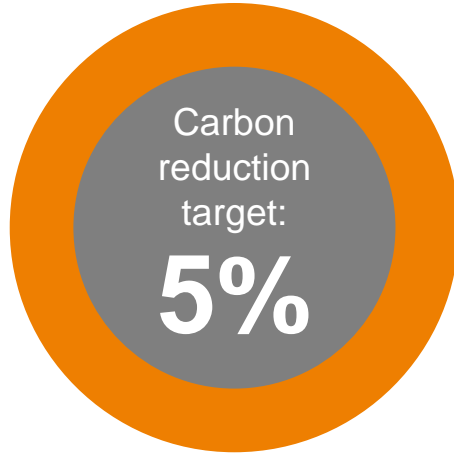
260 tCO₂
stored in one acre of protected rainforest

Commitment to engage employees and suppliers to drive improvement

13.9%
reduction in energy emissions

Plans for next year

TARGETS



Recommendations

- Continue to carry on with 'energy audits' to identify where most energy is being used and potential wastage from equipment, lights and heat loss.
- Set a policy to make its fleet and business travel more energy efficient
- Commit to switching to recycled paper for all office uses
- Implement its waste segregation programme and aim to zero landfill waste.



Total carbon footprint overview

Petroc

Reporting year ending 2018 / Highlights

Carbon footprint (tCO ₂ e)	1,695
Per staff and student (tCO ₂ e)	0.10
Carbon footprint comparison	14.4%
Comparison per staff and student	-14.4%
Next reduction target	5%
Data quality score	13 out of 20

Used	2,434,140	kWh of electricity
Used	4,127,774	kWh of natural gas
Used	10,022	m ³ of water
Produced	147.7	tonnes of waste
Procured	12	tonnes of paper
Travelled	101,684	Km travelled

Boundary: College wide operations
(Barnstaple, Brannams, and Tiverton campuses)

Emissions measured:

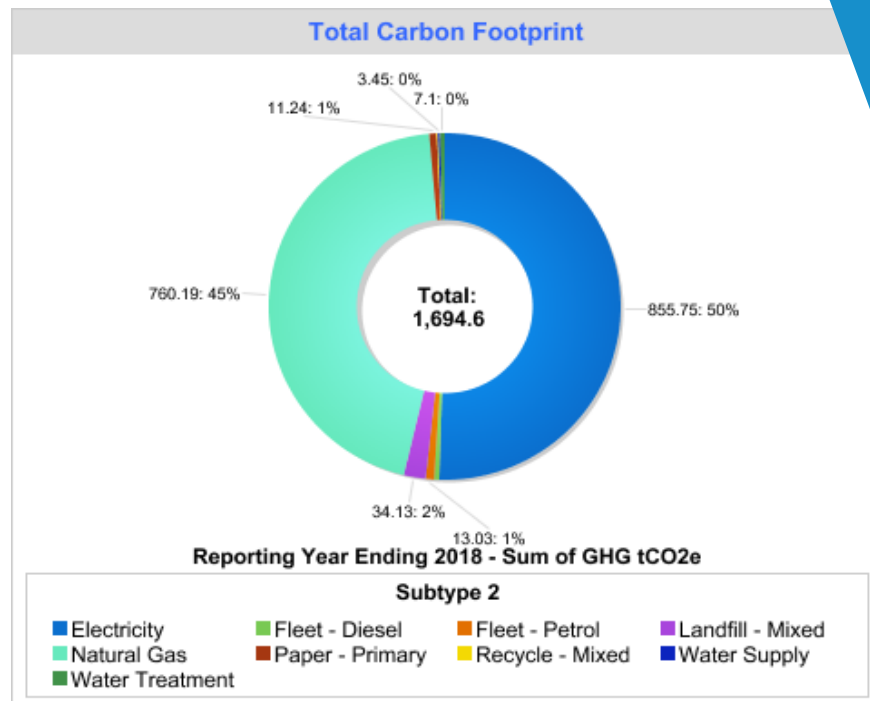


FIG 1- Total carbon footprint by emission source for reporting year ending 2018



Total carbon footprint by scope

tCO ₂ e	2017	2018	% change
Scope 1: natural gas, fleet	865.9	781.0	-9.8%
Scope 2: electricity	1,039.8	855.7	-17.7%
Scope 3: waste, water, paper use	73.1	57.9	-20.8%
Total	1,978.7	1,694.6	-14.4%

Highlights

- Total carbon emissions are **1,695 tCO₂e**
- **Scope 1** (direct emissions- natural gas, fleet) accounts for **46%** of total emission, **down 9.8%** from 2017
- **Scope 2** (imported emissions- electricity) accounts for **50%** of total emissions, **down 17.7%** from 2017
- **Scope 3** (indirect emissions- waste, water, paper use) accounts for **3%** of total emissions, **down 20.8%** from 2017

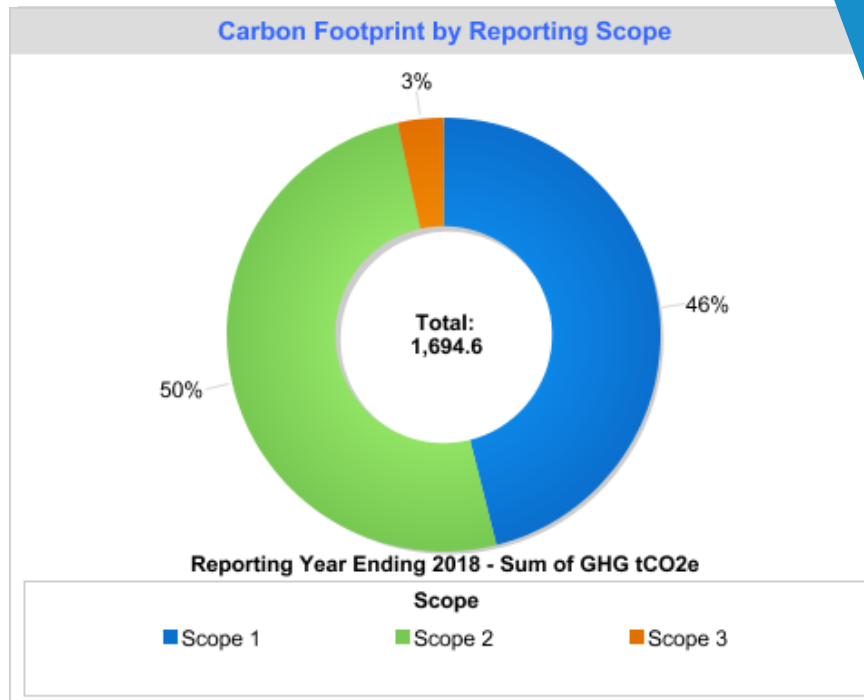


FIG 2- Total carbon footprint by scope for reporting year ending 2018



Total carbon footprint – year-on-year comparison

Source	Scope	Unit	1st April 2016 to 31st March 2017		current 1st April 2017 to 31st March 2018		% Change in tCO2e from previous year	% total carbon footprint	% Change in Amounts from previous year
			Amount	tCO2e	Amount	tCO2e			
Building									
Electricity	2	kWh	2,523,385	1,039.8	2,434,140	855.7	-18%	50.5%	-4%
Natural Gas	1	kWh	4,549,557	837.1	4,127,774	760.2	-9%	44.9%	-9%
Waste									
Landfill	3	tonnes	114.4	48.2	58.0	34.1	-29%	2.0%	-49%
Recycled	3	tonnes	75.1	1.6	89.8	2	24%	0.1%	19%
Water									
Water Supply	3	m³	12,486.0	4.3	10,022	3.4	-20%	0.2%	-20%
Water Treatment	3	m³	12,486.0	8.8	10,022	7.1	-20%	0.4%	-20%
Travel									
Vehicle - Fleet - Diesel	1	km	47,030.0	11.4	30,625	7.8	-32%	0.5%	-35%
Vehicle - Fleet - Petrol	1	km	92,451.0	17.4	71,059	13	-25%	0.8%	-23%
Procurement									
Paper - Primary Content	3	tonnes	10.9	10.2	12.1	11.2	10%	0.7%	11%
Total		tCO2e		1,978.7		1,695	-14.4%		
No. of staff and students		Number	17,126		17,126				
Total per staff and student		tCO2e	0.12		0.10		-14.4%		
Total floor space		m²	44,466		46,466				
Building emissions per m²		tCO2e	0.04		0.03		-17.6%		

Highlights

Most notable increase: **paper** related emissions **up 10%** from previous year

Most notable reduction: **vehicle-fleet-diesel** emissions **down 32%** and **landfill** emissions down **29%** from previous year.

(Note- electricity reductions are partially attributed to updated 2017 Defra emission conversion factors that reflect the greening of the UK National grid for electricity)



Total carbon footprint – year-on-year comparison

tCO ₂ e	2017	2018	% change
Building	1,876.9	1,615.9	-13.9%
Waste	49.7	36.1	-27.5%
Travel	28.8	20.8	-27.7%
Water	13.1	10.5	-19.7%
Procurement	10.2	11.2	10.1%
Total	1,978.7	1,694.6	-14.4%

Highlights

- Total carbon footprint **decreased by 14.4%**
- Total carbon footprint per staff and student **decreased by 14.4%**

Congratulations!

We are delighted to certify you with

The Planet Mark™

based on your absolute carbon footprint reduction

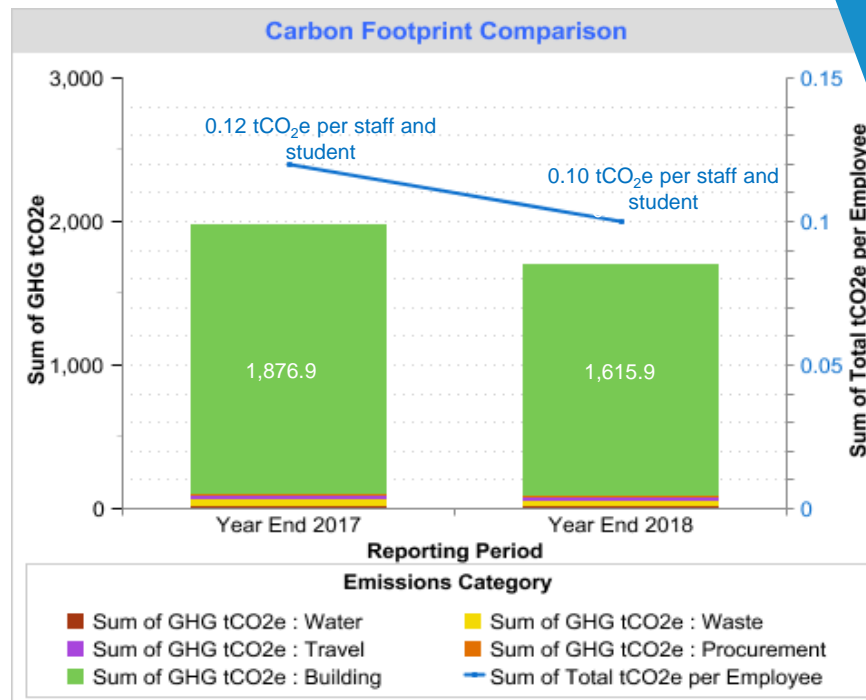


FIG 3- Total carbon footprint by emission category for the two reporting years, 2017, 2018



Breakdown – building

Building emissions

Highlights

- **95.4%** of total emissions
- **1,615.9** tCO₂e
- **0.03** tCO₂e per m²
- **13.9%** decrease from the previous year
- **Electricity** accounts for **53%** of the building emissions, followed by **natural gas** which accounts for **47%**

ACTION! Measure actual consumption

Did you know? By installing energy efficient lighting you can save 20% of electricity

Used enough
electricity
to power
587
UK homes

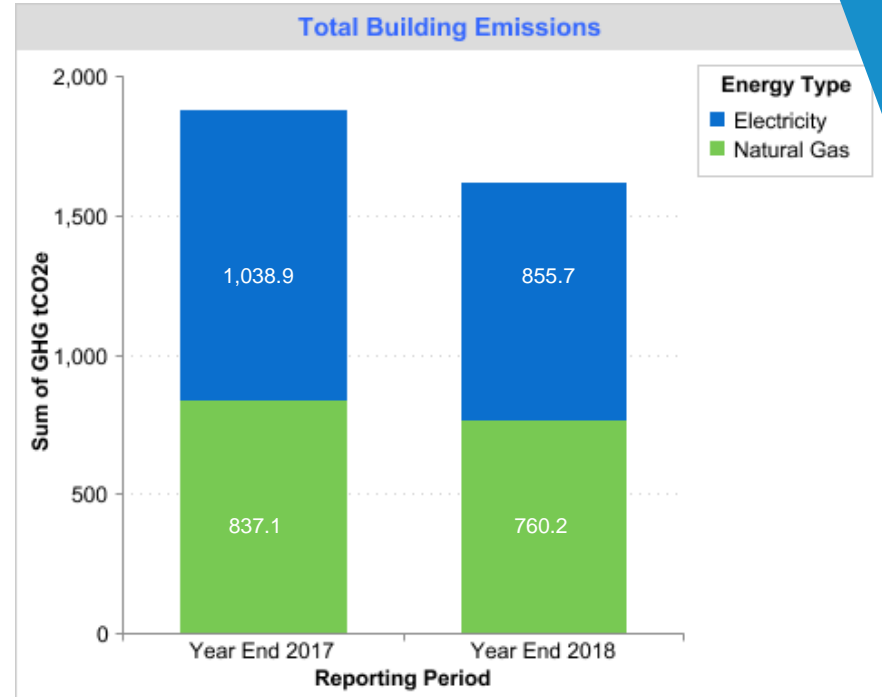


FIG 4- Breakdown of building emissions by energy type for reporting years ending 2017 and 2018



Breakdown – waste

Waste emissions

Highlights

- **2.1%** of total emissions
- **36.1** tCO₂e
- **27.5% reduction** from the previous year
- **60%** of waste was recycled this year compared to only **40%** the previous year

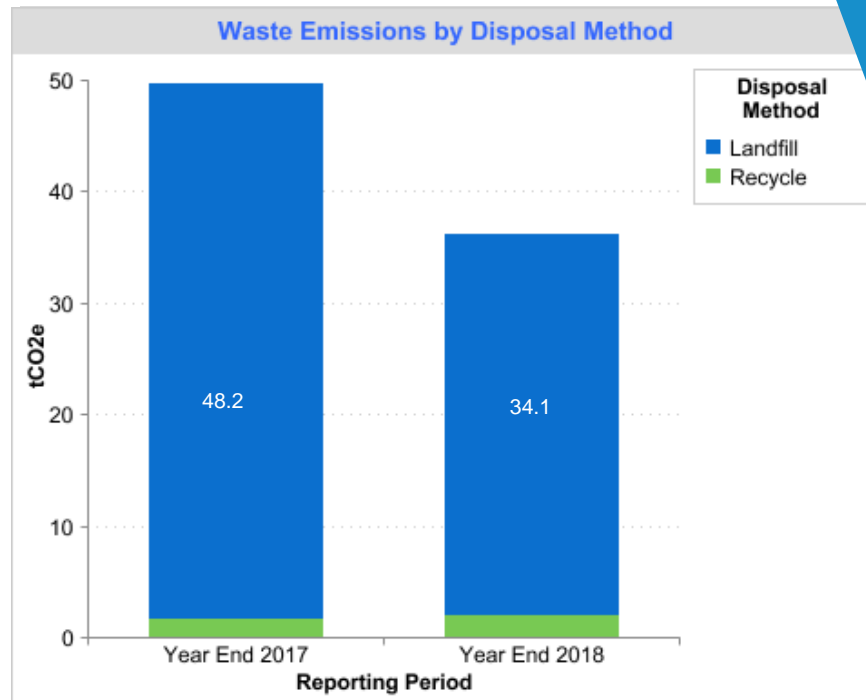


FIG 5- Breakdown of waste emissions for reporting years ending 2017 and 2018



Breakdown – fleet

Fleet travel emissions

Highlights

- **1.2%** of total emissions
- **20.8 tCO₂e**
- **27.7% decrease** from the previous year
- **Petrol** accounts for **63%** of the fleet emissions
- YE2018 fleet comprises of the following vehicles:
 - 3 large vans (diesel)
 - 1 large car (diesel)
 - 2 medium cars (petrol)
 - 2 small cars (petrol)

Note: Fleet travel refers to company owned vehicles

ACTION! Refer to the travel toolkit for ways to manage fleet travel emissions.

101,684
km
travelled in
2018

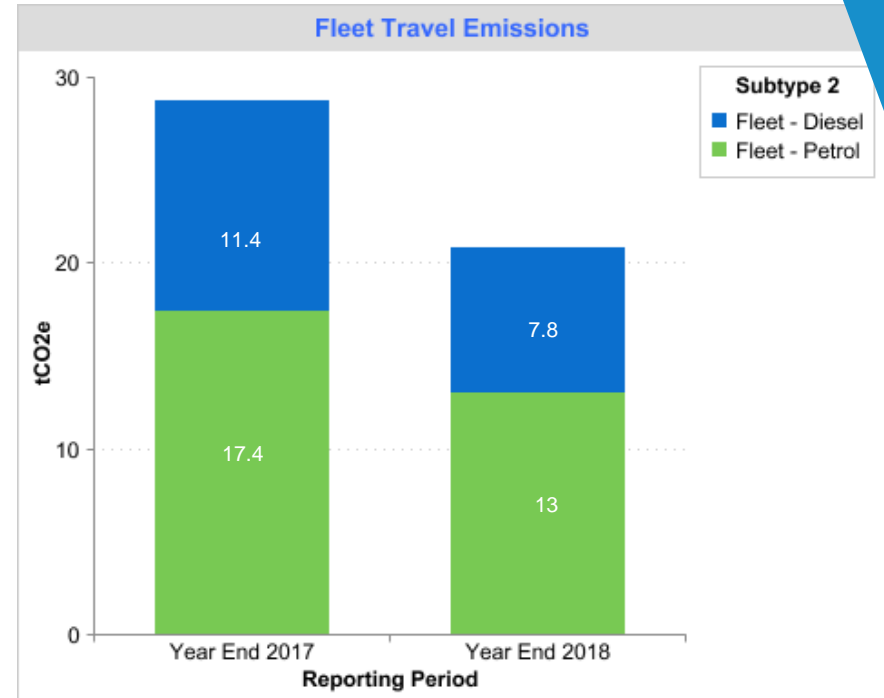


FIG 6- Breakdown of fleet emissions by fuel type for reporting years ending 2017 and 2018



Breakdown – paper procurement

Paper use emissions

Highlights

- **0.7%** of total emissions
- **11.2** tCO₂e
- **10% increase** from the previous year
- All procured paper was from primary sources

ACTION! Paper use can be reduced by encouraging staff to work and meet in a paperless way. Opt for digital subscriptions to magazines and newsletters, encourage staff to read on screen rather than print documents and reuse printed material wherever possible. Increase paper recycling in the office by communicating what is recyclable and how waste should be correctly disposed.

Did you know? By using recycled content paper, carbon emissions from paper use are reduced by 30%

120

Sheets of
paper used
per staff and
student

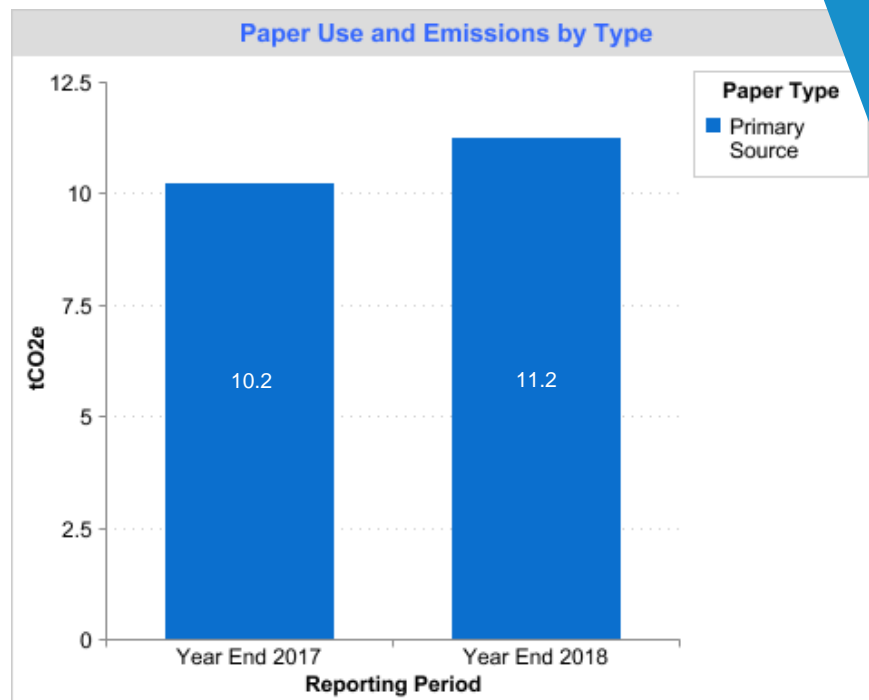


FIG 7- Breakdown of paper procurement emissions for reporting years ending 2017 and 2018

Weight (tonnes)

PETROC™





Breakdown – water

Water emissions

Highlights

- **0.6%** of total emissions
- **10.5** tCO₂e from water supply and treatment
- **19.7% decrease** from the previous year
- **10,022** m³ of water was used
- Water supply emissions are **3.4** tCO₂e
- Water treatment emissions are **7.1** tCO₂e

ACTION! Introduce a water use awareness campaign in communal kitchen areas

2.7

Litres per
staff and
student per
day

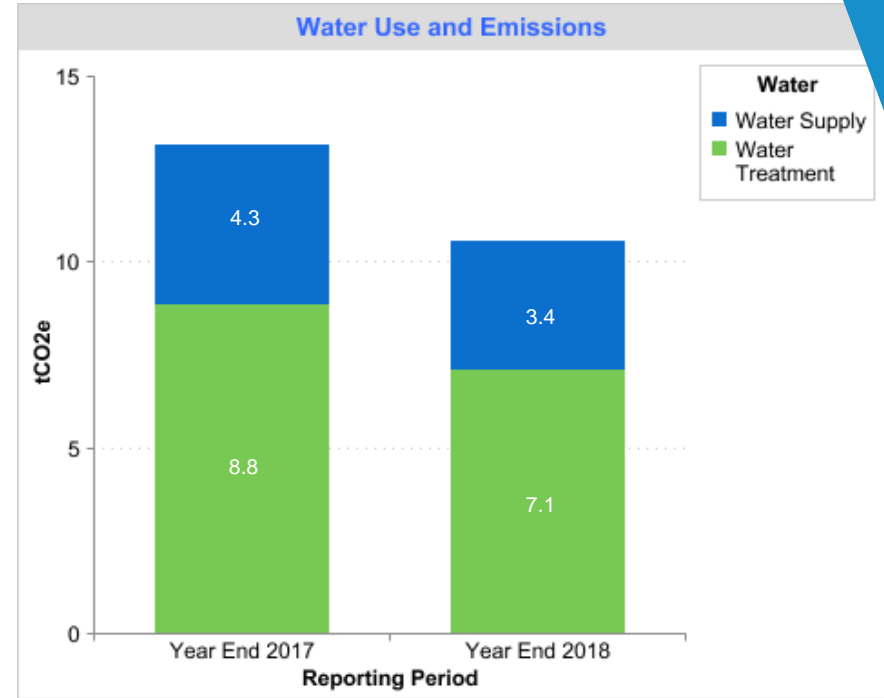


FIG 8- Breakdown of water emissions category by type for reporting years ending 2017 and 2018



Cost analysis

The following shows net costs related to activities reported in the carbon footprint, where available.

Potential future cost savings when reducing consumption and or usage by 5% over the coming year

By reducing electricity by 5% you could save:	£15,548.70
By reducing natural gas by 5% you could save:	£5,639.64
By reducing water use by 5% you could save:	£2,672.22
By reducing fleet travel by 5% you could save:	£416.00
By reducing paper use by 5% you could save:	£897.73
Total potential cost saving:	£25,174.29

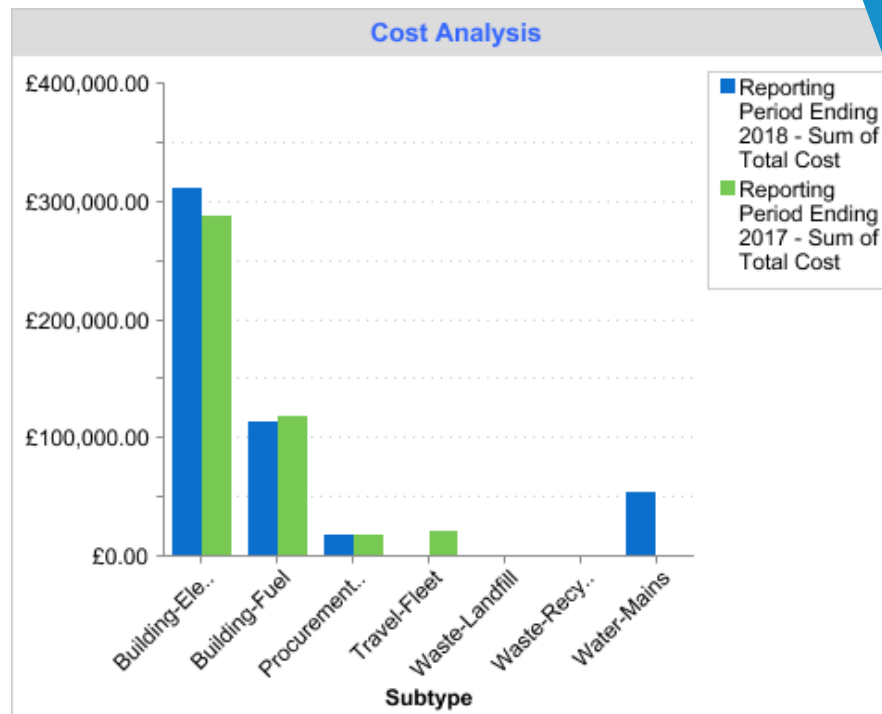


FIG 9- Annual cost per emission category for reporting years ending 2017 and 2018





Carbon reduction target

The Planet Mark™ toolkits provide advice and resources to support you towards achieving your carbon reduction target. You can access all our resources through The Planet Mark™ website using your unique login. Please contact your Planet Mark Account Manager if you require a login account.

Follow link to access toolkits: <http://www.theplanetmark.com/members/login/>

Carbon
reduction
target:

5%

Total target
reduction:

84.73
tCO₂e

Target
reduction per
employee:

0.005
tCO₂e

Topic	Toolkits
Sustainability Strategy	Sustainability policy template Carbon savings calculator Carbon reduction strategy template Carbon reduction plan template Data collection
Energy	Energy toolkit
Waste	Waste toolkit
Water	Water toolkit
Travel	Travel toolkit
Engagement	Setting up a sustainability champions programme Sustainability engagement toolkit The Planet Mark™ case study template
Communication	The Planet Mark™ first digital stickers The Planet Mark™ logo Certification press release



About this report – data quality

The data quality score is based on the 'Data Quality Matrix' in The Planet Mark™ Code of Practice and provides an indication of data assurance when using information in this report in your business.

	1st April 2016 to 31st March 2017	1st April 2017 to 31st March 2018	Definition
Relevance of boundary	3	4	Boundary accurately reflects the entire business carbon footprint for the studied period.
Data completeness	4	3	12 months of data provided and all GHG emission sources within the boundary accounted for, no disclosure of exclusions.
Transparency	2	2	Data collection procedure insufficiently disclosed, no disclosure of assumptions.
Data accuracy	2	2	Qualified estimate, few efforts to reduce uncertainties. Some estimated meter readings and sampled/estimated data.
Consistency	n/a	2	Largely consistent or improved boundary and data completeness with no documentation of changes made.
TOTAL SCORE	11 out of 16	13 out of 20	

Target data
quality
improvement
2 points

Priorities

Implement data and evidence collection and storage internal system to ensure actual data is provided, this will minimize the need for data estimation (extrapolation/ interpolation) and avoid under or over reporting the business carbon footprint



About this report – general info

Company Name	Petroc
Sector	Higher education
Reporting Period	1st April 2017 to 31st March 2018
Year Of Certification	2nd
Reporting Boundary	College wide operations (Barnstaple, Brannams and Tiverton campuses)
Emission sources included	Electricity, natural gas, water, waste, paper, fleet
Total staff and students	17,126
Total Internal Floorspace (m ²)	46,466
Data Collection Lead	Steve Haines, Tiverton Campus Manager (steve.haines@petro.ac.uk)
Significant Reporting Changes	None
Baseline Conversion Factor	DEFRA 2016
Current Conversion Factor	DEFRA 2017
Methodology	We follow the GHG Protocol for Corporate Emission Reporting. Refer to The Planet Mark™ Code of Practice for detailed information on the methodology and standards used in the preparation of this report
Community Project	Contributions to the Eden Project and to Cool Earth's Asháninka community rainforest project have been made as part of The Planet Mark™ Certification
Prepared by:	Flavia Tavares, Sustainability Consultant, Planet First
Checked by:	Nadia Karagianni, Sustainability Consultant, Planet First
Date:	12 July 2018



About this report – caveats

Operational Boundary	Scope	Unit	Data Collection	Data Accuracy	Evidence Submitted	Omissions, estimates or extrapolations
Electricity	2	kWh	Primary source - invoices and meter readings	Actual and estimated	Sample invoice and meter reading	None
Natural Gas	1	kWh	Primary source - invoices and meter readings	Actual and estimated	Sample invoice and meter reading	Please refer to omissions and estimations slide for data interpolation and or extrapolation details
Landfill	3	tonnes	Primary source - supplier report	Actual	Waste transfer report	None
Recycled	3	tonnes	Primary source - supplier report	Actual	Waste transfer report	None
Water supply and treatment	3	m³	Primary source - invoices and meter readings	Actual and estimated	Sample invoice and meter reading	None
Vehicle - Fleet - Diesel	1	km	Secondary source - data submission form	Actual source data (copy of expense claims) not provided for verification, data added to submission form by Petroc	None	None
Vehicle - Fleet - Petrol	1	km	Secondary source - data submission form	Actual source data (copy of expense claims) not provided for verification, data added to submission form by Petroc	None	None
Paper	3	tonnes	Secondary source - data submission form	Actual source data (copy of invoices) not provided for verification, data added to submission form by Petroc	None	None
Overall data verification	Underlying data used to compile the data submitted for certification was verified on a reasonable level. Reasonable verification is restricted to desktop review of supporting evidence sampling which are reconciled back to its source data. It is assumed that a data review is carried out by Petroc's data managers prior to being collated to the submission form provided for certification.					



About this report caveats; omissions and estimations

Data for the periods shown below has been interpolated or extrapolated as indicated in the table

Source	Office/Site	Copied from invoice			Adjusted to match reporting period			Extrapolated or interpolated
		Date from	Date to	No. Days	Date from	Date to	No. Days	
Natural Gas	Brannams	24/03/2017	24/04/2017	31	01/04/2017	24/04/2017	23	interpolated
Natural Gas	Brannams	24/03/2017	24/04/2017	31	27/02/2018	31/03/2018	32	extrapolated



The Sustainable Development Goals

The Sustainable Development Goals (SDGs), also known as the Global Goals, are a collection of 17 interrelated goals set by the United Nations. They cover a broad range of social and economic development issues. These include poverty, hunger, health, education, climate change, gender, equality, water, sanitation, energy.

With 193 governments agreeing to deliver 17 goals tackling major world issues by 2030, change lies ahead for businesses, not only to ensure their strategies align with the Goals, but also to assess and evidence their impact.

To help businesses assess their impact, The Planet Mark™ has developed a diagnostic table to gauge contributions to the SDGs and to illustrate the international influence of your commitment to sustainability.



71%
of businesses say they are already planning how to engage with the SDGs

41%
of businesses say they will embed SDGs into their strategy within five years

90%
of citizens say it's important for business to sign up to the SDGs



PETROC™

eden project



The Sustainable Development Goals

By achieving The Planet Mark™ you can directly and measurably contribute to

7 Sustainable Development Goals. Congratulations! You are contributing to all 7 goals!!



PETROC™



eden project

The Planet Mark™

in partnership with
The Eden Project

www.ThePlanetMark.com

Info@planetfirst.co.uk

[@ThePlanetMark](https://www.instagram.com/ThePlanetMark)



Planet First.

eden project

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