

change  
is in the air



# Sustainability Report 2018

virgin atlantic 

 **HOLIDAYS**



# INTRODUCTION



Welcome to our 2018 annual 'Change is in the Air' Sustainability Report which provides an overview of our programme and describes our key sustainability results.

Here you can find the low down on our sustainability performance, including our carbon footprint, aircraft carbon and fuel metrics, as well as a host of other data on water, waste and noise, and how we work with suppliers and communities around the world to make changes for good.

If you'd like to learn more about the activities and initiatives that help us deliver these results, you can visit our **website** where we have a collection of stories from across the business.

If you're short on time, you can also get the highlights **here**. And for updates and news throughout the year, make sure you keep checking back to **[virginatlantic.com/changeisintheair](http://virginatlantic.com/changeisintheair)**.

## Contents:

Introduction	2
A message from Craig	3
Our sustainability programme, in brief	4
Our carbon footprint	5
What our footprint means	6
Environment	7
Design and buying	11
Improving lives	14
Appendix	19



# A message from Craig



Doing business for good is in our DNA.

At Virgin Atlantic and Virgin Holidays, we love being able to bring people together, delivering incredible experiences and supporting globally connected economies. We know this also comes with environmental responsibilities. Reducing our carbon emissions is not only the right thing to do for the environment, society and generations to come, with aircraft fuel being our largest single cost, it also makes perfect business sense.

For this reason, along with enhancing our customers' experience, we have undertaken a massive fleet renewal programme to replace our entire fleet over a ten year period, switching from four-engine aircraft to much more efficient two-engine aircraft. This year we took delivery of another 787-9, while preparations for 12 new A350-1000s also got underway in earnest. We're proud to say that with changes like these, we reduced our aircraft carbon emissions by another 2.5% in 2017, and a by a total of 23.7% since launching our Change is in the Air sustainability programme in 2007.

We also know that the next big opportunity to reduce aircraft carbon emissions will come from breakthroughs in sustainable aviation fuels (SAF). We've been working with cleantech company LanzaTech since 2011, actively supporting the scale up of their process to convert industrial waste gases and other plentiful wastestreams into low carbon jet fuel.

I'm delighted this work was once again publicly recognised at the beginning of 2017 when we won an edie Sustainability Leaders Award in Sustainable Transport and Travel.

Ultimately, doing business for good is part of our brand values and our culture, and we know that our reputation in this area is something that appeals to both our customers and our people. Across the world, I am proud of the commitment all our people have to living our values. It is evident in how we do business every day, with partners and suppliers, such as working with our onboard caterers to improve the people, environment and animal welfare standards of our inflight food and drink programme.

This commitment to our values was also clear when our teams stepped up and worked shoulder to shoulder with our Delta partners to support customers and communities in the aftermath of Hurricane Irma. And it isn't just

about addressing short-term emergencies. For a long time we have been making a positive and lasting difference to communities in the destinations we serve. Virgin Atlantic Foundation's support for WE and Virgin Holidays' support for the Branson Centre of Entrepreneurship in Jamaica are our ways of trying to do just that.

**Craig Kreeger**  
Chief Executive, Virgin Atlantic

virgin atlantic 

 **HOLIDAYS**



# Our sustainability programme, in brief

## We call our sustainability programme **Change is in the Air**.

That's because for us, sustainability means changing things for the better by working to improve the lives of people around the world. Our programme primarily focuses on our environmental and supply chain activities and our non profit partnerships. We naturally focus on our biggest environmental and social priorities, as well as the things that are most important to our customers and people. You can watch an overview of the programme themes [here](#).

While our Leadership Team is ultimately responsible for driving our Change is in the Air programme, it is not simply a top down strategy. Our people love to make a difference. From making key business decisions that reduce carbon emissions, to working with suppliers on responsible supply chain practices, and stepping up to help a community directly; an ethos of trying to do the right thing flows through our whole business – with our brand values sitting at the heart.

Our top environmental priority is around aircraft fuel and carbon reductions, but also includes aircraft waste and noise, our combined ground operations (for the airline and holiday company) and our supply chain work.

And as well as environmental practices, our sustainable design and buying programme focuses on improving the people and animal welfare credentials of the products and services we design, contract for and buy.



Our programme also includes a number of much loved, non profit partnerships. For example, through its community investment programme, Virgin Atlantic's<sup>1</sup> main charity partner WE engages our teams and supports young people in the UK and US, as well as communities in some of our destinations past and present.

In 2017, Virgin Holidays continued its partnership with the Branson Centre for Entrepreneurship in Jamaica to support new businesses, jobs and economic development in the Caribbean.

<sup>1</sup>Through the Virgin Atlantic Foundation.

<sup>2</sup>CDP, formerly the Carbon Disclosure Project – [www.cdp.net](http://www.cdp.net)

## How we work

We're clear that to be most effective, our sustainability activities need to be owned and delivered by our people across the business, from engineers to cabin crew to resort managers. This means teams take on the responsibility of delivering actions in their own areas, and a number of these have roles embedded within functions, such as within our fuel efficiency, facilities, procurement, inflight services and communications teams. The Sustainability Team drives the overall strategy, advises and coordinates all this great work, while also incubating and delivering a number of key projects.

Our programme encourages all our people to get involved and it's clear they love to make a difference. In 2017 we established Change is in the Air pages on our new, internal social media platform 'Workplace' and this has quickly demonstrated how people throughout our business are willing to share ideas and really get stuck into addressing key people, environmental and animal welfare issues.

In 2017, our combined efforts were recognised by being shortlisted for four industry sustainability awards: Carbon Management, and Employee Engagement and Behaviour Change, at the edie Sustainability Leaders Awards; Best Corporate Social Responsibility Programme at the Business Travel Awards; and the World Travel and Tourism Council's Tourism for Tomorrow's Award for our sustainable onboard food and drink programme.

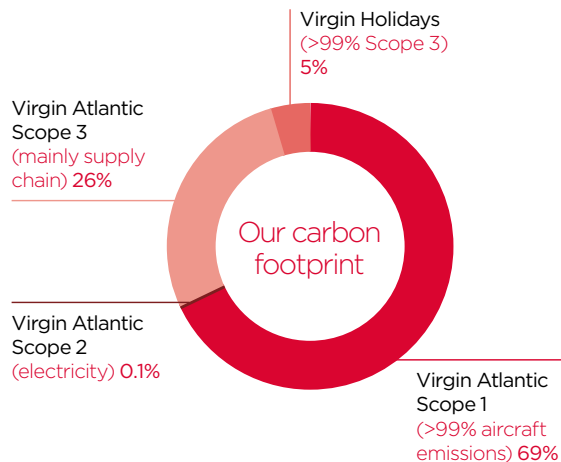
We were also delighted to achieve an A- (A minus) score in the 2017 CDP<sup>2</sup> Climate Change assessment for our leadership in environmental performance.



# Our carbon footprint

Our total carbon footprint in 2017 was **5.8m tonnes of CO<sub>2</sub>e\***. This is made up of **5,496,907 tonnes** from Virgin Atlantic, and **291,454 tonnes** from Virgin Holidays.

Aircraft emissions remain by far the largest part of our footprint, being responsible for 68.7% of our combined company emissions and more than 99% of our Scope 1 emissions. Indirect emissions from our suppliers, customers and some staff activities (like commuting) are responsible for the next biggest portion at 31.1% (referred to as Scope 3) and emissions from our electricity use in our ground operations (Scope 2) accounts for 0.1%.



We measure our carbon footprint using the **Greenhouse Gas Protocol Corporate Standard guidelines** and the UK government's latest annual greenhouse gas **conversion factors**. Our carbon footprint is externally verified against ISO 16064-3. You can see **BSI's** verification statement in our Appendix, and the tables opposite show what was included.

## Methodology

In line with the Greenhouse Gas Protocol, we compile our carbon footprint by 'Scope'. This enables us to calculate and understand the sources of our direct and indirect emissions, and to identify our most important carbon impacts. Our Scope 1 emissions cover those from aircraft fuel use, and on the ground, our natural gas consumption, fuel use by company owned cars and vans, refrigerants and all other fuels consumed (such as maintenance generators). Scope 2 emissions arise from ground electricity consumption only, while Scope 3 emissions are for indirect emissions from sources such as the products and services we buy, business travel, employee commuting and waste generation.

Where possible, we use actual data, and each year we aim to improve our data collection process in terms of both accuracy and coverage. The only estimations in this year's calculations for Scope 1 and Scope 2 emissions are natural gas consumption at our airport lounges (such as our Heathrow and Gatwick Clubhouses) as these are not metered; a small uplift for ground vehicle fuel use where the actual mileage was unknown; and some estimations of diesel volumes purchased for our maintenance generators. As our emissions from these sources combined are only 0.06% of our total carbon footprint, the effect of these estimations will be tiny in terms of the overall picture. Scope 3 emission calculations rely on some modelling techniques using financial data, as well as actual data.

\*CO<sub>2</sub>e, or carbon dioxide equivalent, is a standard unit for measuring carbon footprints. The idea is to express the impact of each different greenhouse gas in terms of the amount of CO<sub>2</sub> that would create the same amount of warming.

## Virgin Atlantic's carbon footprint

Type of emissions	Activity	Emissions (tCO <sub>2</sub> e)	% of total	Verified
Direct (Scope 1)	Aircraft fuel	3,978,874	72.38%	✓
	Natural gas	2,531	0.05%	✓
	Ground vehicles	334	0.01%	✓
	Refrigerant	255	0.00%	✓
	Other fuels	556	0.01%	✓
	<b>Subtotal</b>		<b>3,982,550</b>	<b>72.5%</b>
Indirect energy (Scope 2)	Purchased electricity	4,820	0.09%	✓
	<b>Subtotal</b>	<b>4,820</b>	<b>0.1%</b>	
Indirect other (Scope 3)	Category 1 - Purchased goods and services	413,574	7.52%	Unverified
	Category 2 - Capital goods	106,463	1.94%	Unverified
	Category 3 - Fuel and energy-related, well to tank (WTT)	826,112	15.03%	✓
	Category 4 - 13 <sup>2</sup>	163,388	2.97%	Unverified
	<b>Subtotal</b>	<b>1,509,537</b>	<b>27.5%</b>	
<b>Total emissions (tCO<sub>2</sub>e)</b>		<b>5,496,907</b>		

<sup>1</sup>Actual percentage for Scope 1 Refrigerant is 0.005.

<sup>2</sup>Category 4-13 includes things like business travel, commuting, onwards travel of our customers, waste and how our sold products are used and disposed of.

## Virgin Holidays' carbon footprint

Type of emissions	Activity	Emissions (tCO <sub>2</sub> e)	% of total	Verified
Direct (Scope 1)	Natural gas	6	0.00%	✓
	Ground vehicles	75	0.03%	✓
	<b>Subtotal</b>	<b>81</b>	<b>0.0%</b>	
Indirect energy (Scope 2)	Purchased electricity	370	0.13%	✓
	<b>Subtotal</b>	<b>370</b>	<b>0.1%</b>	
Indirect other (Scope 3)	Category 2 - Capital goods	4,376	1.50%	Unverified
	Category 3 - Fuel and energy related (WTT)	118	0.04%	✓
	Category 5 - Waste generated in operations	1	0.00% <sup>3</sup>	Unverified
	Category 11 - Use of sold products <sup>4</sup>	286,508	98.30%	Unverified
	<b>Subtotal</b>	<b>291,003</b>	<b>99.8%</b>	
<b>Total emissions (tCO<sub>2</sub>e)</b>		<b>291,454</b>		

<sup>3</sup>Actual percentage for category 5 is 0.0003%.

<sup>4</sup>Category 11 Use of sold products does not include Virgin Atlantic flights, as these are captured under Virgin Atlantic Scope 1 emissions.

# What our footprint means

## Footprint scope

First, we report emissions that we have 'operational control' over. This means any sources of emissions for which we have the power to implement initiatives that would reduce them. For example, that includes the aircraft fuel we use, as well as gas and electricity consumption in properties that we're billed directly for, and our ground vehicles.

Considering our properties in 2017, we have included The VHQ (our new headquarters for both Virgin Atlantic and Virgin Holidays), The Base (additional office space and our main training centre), Gatwick and Heathrow Clubhouses and hangars, Swansea contact centre, other airport buildings and 12 Virgin Holidays' stores around the country that are metered. We have also included some buildings we left during the year, including our old headquarters (The Office).

We don't include emissions from sources that are outside of our control. For example, some UK and international airside properties where heating and cooling are controlled by airports, and similar situations where Virgin Holidays run small retail outlets within other stores. In these cases, we have a small presence in terms of the overall building infrastructure, and as we have little influence over energy saving procedures or how much energy is being consumed, this falls outside of our reporting boundary.

## Scope 1 emissions

Within the airline, the largest proportion of our emissions comes from fuel use (72.4% of our overall footprint). Our total carbon emissions from aircraft fuel consumption have fallen from 4,081,920 tonnes of CO<sub>2</sub>e in 2016 to 3,978,874 tonnes of CO<sub>2</sub>e in 2017, which is a 2.5% decrease.



This is due to a slight reduction in our flying programme, and another, more efficient 787-9 coming into service to replace an older aircraft. In fact, due to ongoing fleet and operational improvements, we've seen a total decrease of 23.7% since 2007.

Virgin Holidays' Scope 1 emissions reduced by 55% from 180 to 81 tonnes of CO<sub>2</sub>e. This mainly comes from reductions in natural gas usage, as the majority of Virgin Holidays staff are now based at our new headquarters - The VHQ, which has air source heat pumps instead of gas.

## Scope 2 emissions

Our combined emissions from electricity consumption are 5,190 tonnes of CO<sub>2</sub>e, and account for 0.1% of our total carbon footprint. Both Virgin Atlantic and Virgin Holidays recorded a large decrease in Scope 2 emissions in 2017, of 28% and 38% respectively. This is due to efficiency

improvements in our main office buildings (The VHQ and The Base), as well as changes in the 2017 UK emission factor for electricity. We explore this more in the **Environment** section.

## Scope 3 emissions

Scope 3 is generally the most difficult part of a footprint to calculate, so we are continually working on capturing these emissions more accurately. As you can see from the Virgin Atlantic table, the largest part of our Scope 3 emissions is category 3 (fuel and energy related, well to tank - WWT). These are emissions associated with our fuel use, and represent emissions from the extraction, processing and transport of the fuel - rather than its direct use, which is accounted for under Scope 1. When our Scope 1 and Scope 3 aircraft fuel related emissions are considered together, they are responsible for 87% of Virgin Atlantic's carbon footprint (and 83% of our combined airline and holidays' footprint).

Virgin Holidays' carbon footprint is dominated by Scope 3 emissions, which represent over 99% of the full footprint. Category 11 'Use of sold products' is the one we focus on, as it represents

the emissions associated with the holidays we arrange for our customers. Modelling for this category showed that hotels accounted for 56% of these emissions. Other major contributors were flights on airlines other than Virgin Atlantic (17%) and ground transport (10% for transfers and car hire).

## Overall footprint

For Virgin Atlantic, we've documented a decrease in total emissions during 2017 of 2.7% corresponding to 150,526 tonnes of CO<sub>2</sub>e (you can see how our footprint has changed over the last 6 years in Table 1 in the Appendix). The biggest contributor to this decrease in 2017 is the reduction of 2.5% in aircraft fuel consumption.

For Virgin Holidays, there is an increase of 5,876 tonnes of CO<sub>2</sub>e in 2017, which represents a 2.1% increase in emissions. However, this is due to an increase in the Scope 3 emissions from category 11, use of sold product, which is based on modelled data.

The combined footprint for both businesses gives an overall reduction in emissions of 144,650 tonnes of CO<sub>2</sub>e, or a 2.4% decrease.



# ENVIRONMENT



## Aircraft carbon and fuel

For our airline operations, carbon and fuel efficiency is clearly the number one environmental priority.

Aircraft fuel use accounts for more than 99% of our operational (Scope 1 and 2) carbon emissions. If we consider indirect Scope 3 emissions too (mainly supply chain), aircraft fuel still accounts for 87% of our carbon footprint. It's also the single biggest cost to our business, so it's a clear win all round to address it.

The biggest difference we can make right now is through the aircraft themselves. We've continued to upgrade our fleet – bringing new, more efficient aircraft into service and retiring older less efficient ones. In 2017, we brought another Boeing 787-9 into service, taking our total to 14. Continuing this fleet replacement over the next four years, when three more 787-9s and 12 A350-1000s will be phased into our fleet. Through a combination of aircraft and engine efficiencies and network planning to

optimise passenger numbers and cargo loads, each aircraft is around 30% more fuel efficient per trip than the aircraft they are replacing.

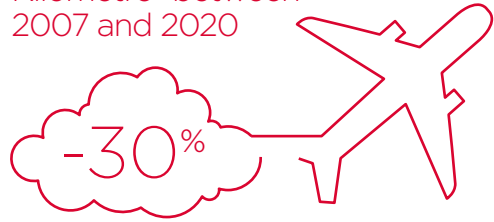
Our focus on fuel doesn't stop there. For years we've been watching our onboard weight, optimising aircraft cleaning and maintenance, and advising our pilots how to fly more efficiently. All of these things can reduce the fuel we use on each flight. And we're looking to the future of fuels too. In pursuit of a truly low carbon jet fuel solution, we've been working with cleantech company LanzaTech since 2011, on their process to convert industrial waste gases and other plentiful wastestreams into low carbon jet fuel. We're pleased to have made significant progress together and you can find out more about that [here](#).

You can learn about all these exciting initiatives, and many more, on our [website](#). And read on to learn about the progress we have made in reducing our carbon emissions in 2017.



## Target

To reduce aircraft CO<sub>2</sub> emissions by 30% per Revenue Tonne Kilometre\* between 2007 and 2020

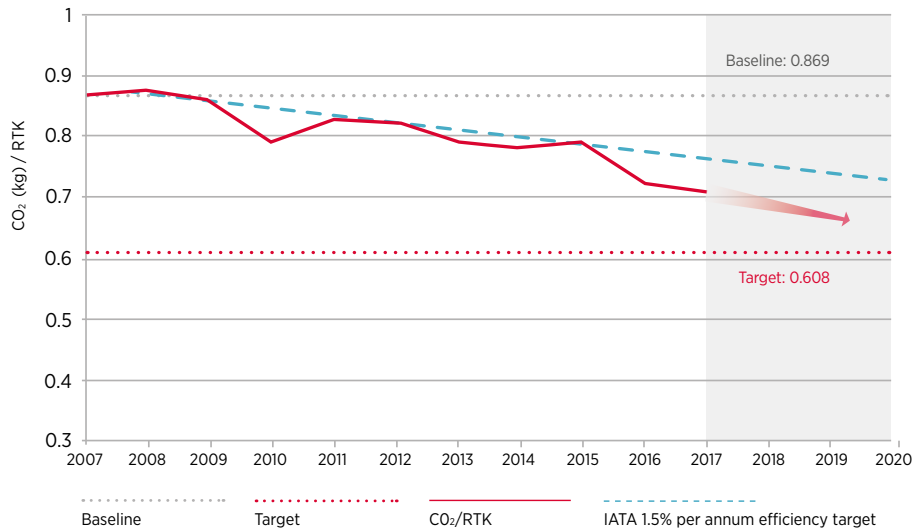


## Progress

CO<sub>2</sub> per Revenue Tonne Kilometre (RTK) is an efficiency measure that means that we account for the amount of CO<sub>2</sub> emitted in relation to the people, luggage and cargo we carry.

**Chart 1** shows that we've reduced our CO<sub>2</sub> per RTK by 18.2% since 2007 to 0.711 kg, and a decrease of 1.8% compared to last year. The introduction of our 787-9s over the last four years has been transforming our fleet and our emissions. The aircraft are more fuel efficient than the A340-600s they're replacing, and we're continuing to see their positive impact on our carbon results.

**Chart 1: CO<sub>2</sub> per Revenue Tonne Kilometre**



Read more about our carbon accounting methodology for these metrics in the Appendix



Industry agreed targets

2009

1.5% p/a fuel efficiency

Working towards carbon neutral growth

2020

Carbon neutral growth

Implementation of global sectoral approach

2050

-50% CO<sub>2</sub>

Half the net aviation CO<sub>2</sub> of 2005

We can also compare our target and performance with the International Air Transport Association (IATA) targets for aviation\*. In 2009, IATA agreed to the world's first set of sector specific climate change targets, focusing on aviation CO<sub>2</sub> emissions.

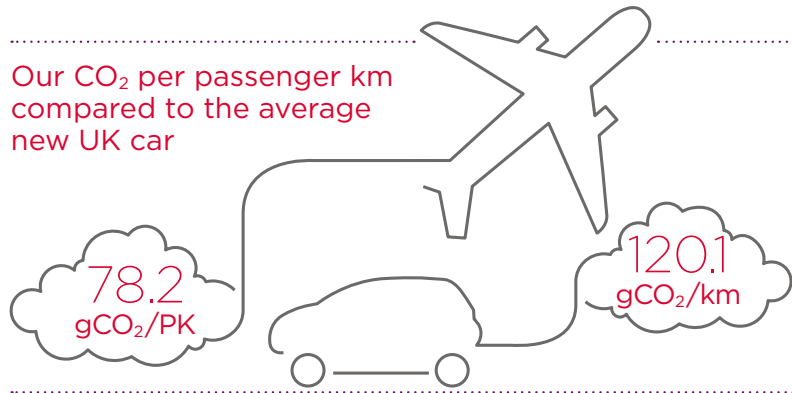
The first IATA target from 2009 to 2020 is an average improvement in fuel efficiency of 1.5% per year. Fuel use and carbon emissions are directly related, so we've plotted how that would look

for us in **Chart 1** (blue dashed line). This shows the ambition in our target set in 2007, which far exceeds the industry targets agreed later by IATA in 2009. With more efficient aircraft still to join our fleet, we expect our fuel and carbon efficiency to keep improving, although at this stage we're not sure how close we'll get to our 2020 target. At the same time, we're pleased to be exceeding the industry agreed IATA target for 2020.

\* Learn more about IATA's climate change targets on their [website](#).



Our CO<sub>2</sub> per passenger km compared to the average new UK car



**Chart 2** shows our total aircraft CO<sub>2</sub>e emissions at 3,938,874 tonnes, dipping below 4 million tonnes for the first time since we started reporting in 2007. That's a reduction of 23.7% since 2007, and 2.5% between 2016 and 2017. Side by side, we've also plotted our total aircraft CO<sub>2</sub> emissions (and in Table 2 in the Appendix).

In 2017 we started to prepare for the new UN-agreed Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which will come into full effect in 2021. CORSIA addresses the second of the IATA targets illustrated on the previous page – carbon neutral growth. CORSIA is the world's first global sectoral carbon offsetting scheme, and between 2021-2035 will raise billions of dollars for high quality carbon reduction projects around the world.

You can learn more about this market based measure for aviation [here](#). CORSIA will be based on CO<sub>2</sub> emissions, but we've shown both CO<sub>2</sub> and CO<sub>2</sub>e in **Chart 2**, for full transparency and comparison with our previous years' reporting.

**Chart 3** shows our CO<sub>2</sub> emissions per passenger kilometre (PK). In 2017, Virgin Atlantic's CO<sub>2</sub> per PK was 78.2g. That's a 22.4% reduction since 2007 and a 0.9% reduction on last year.

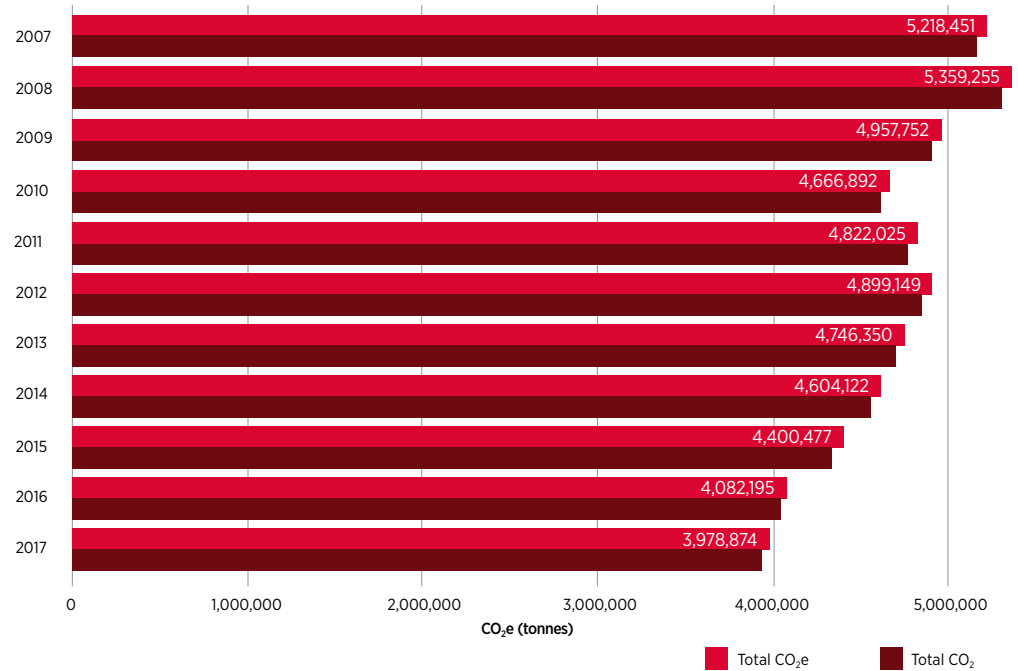
CO<sub>2</sub> per PK can be compared to the performance of a single occupancy car, since all cars sold in the EU and US provide CO<sub>2</sub> emissions information in gCO<sub>2</sub>/km. In the UK, 2016's average new car emissions were 120.1gCO<sub>2</sub>/km\*.

\*Source: The Society of Motor Manufacturers and traders Ltd (SMMT) New Car CO<sub>2</sub> Report 2017

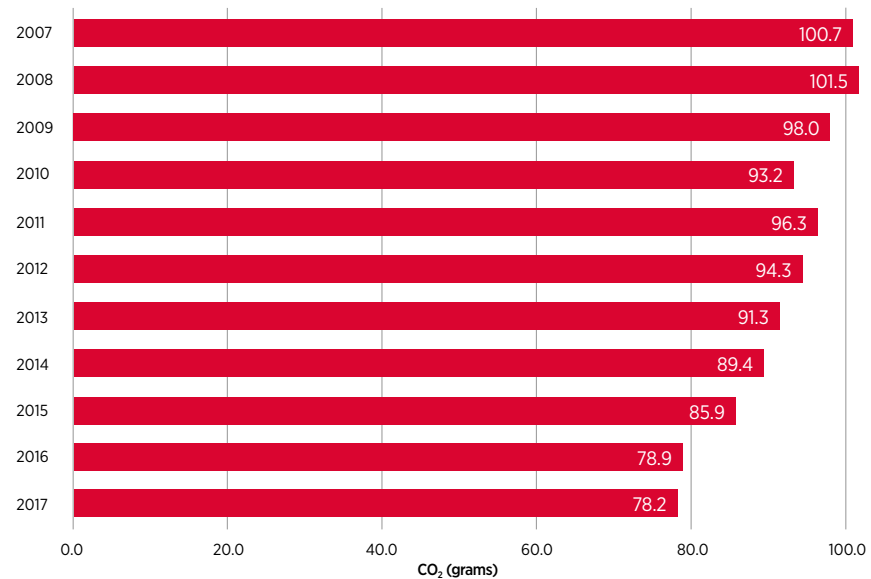
### What is the difference between CO<sub>2</sub>e and CO<sub>2</sub>?

Climate is affected by both CO<sub>2</sub> and non CO<sub>2</sub> emissions. Calculating CO<sub>2</sub>e takes into account the effect of non CO<sub>2</sub> emissions as well as CO<sub>2</sub>. For aviation, this includes water vapour, nitrogen oxides, sulphur oxides, hydrocarbons, and black carbon (or soot) particles. While the climate impacts of CO<sub>2</sub> emissions are well documented, there is still scientific debate over the non CO<sub>2</sub> climate effects of air travel, which are variable over space and time. For this reason, international and UK government policy frameworks exclude these additional non CO<sub>2</sub> effects from their calculations of aviation emissions.

**Chart 2: Total CO<sub>2</sub> and CO<sub>2</sub>e emissions from aircraft operations**



**Chart 3: CO<sub>2</sub> per passenger kilometre**



# UK Ground Operations

The emissions from our ground operations include the energy use in our buildings (electricity and gas), and the vehicles in our ground fleet. Because of the nature of our business, our ground operations account for just 0.2% of our total carbon footprint.

## Energy

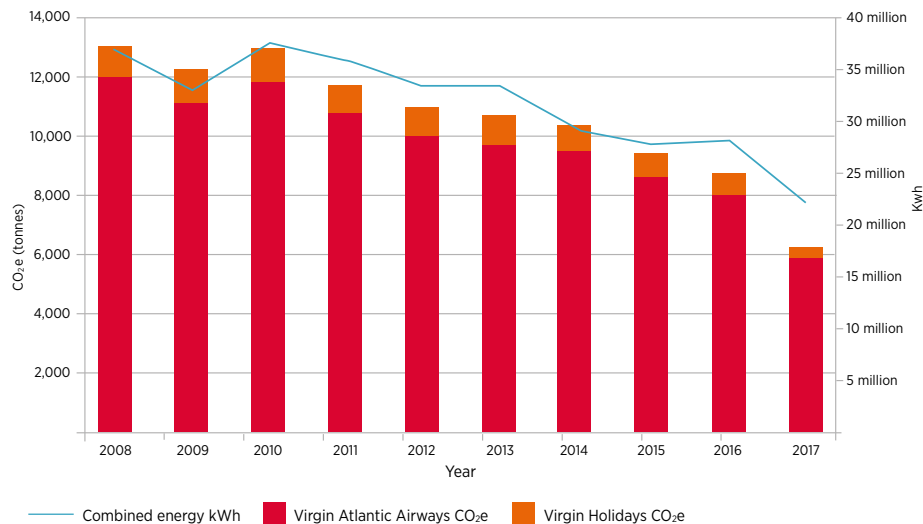
For reporting our building energy emissions in 2017, we have included The VHQ (headquarters for both Virgin Atlantic and Virgin Holidays), The Base (additional office space and our main training centre), Gatwick and Heathrow hangars, Swansea contact centre, and 12 Virgin Holidays' stores around the country that are metered. We have also included some buildings we left during the year, including our old headquarters (The Office).

**Chart 4** shows our energy use (electricity and gas, in kilowatt hours, kWh) and CO<sub>2</sub>e emissions trend since 2008. This data is also presented for our main office buildings individually in Table 3 of the Appendix.

Since 2008, we've reduced our ground energy use by 40% and our CO<sub>2</sub>e emissions by 52%. In 2017 alone, our CO<sub>2</sub>e emissions from our buildings portfolio decreased by an impressive 28%. This is a combination of the excellent construction and operation of our new office, The VHQ; energy efficiency improvements made at The Base; and changes in the UK emission factor for electricity\* (accounting for roughly a third of the observed reduction).

You can learn more about some of our projects to reduce ground energy use on our [website](#).

**Chart 4: UK ground energy performance**



\*In 2017, the emission factor for UK grid electricity reduced by 15% as UK power stations moved from coal to gas, and the amount of energy generated from renewable sources also increased.

## Transport

We have a fleet of around 200 vehicles made up of pool cars, sales cars, airport cars and light commercial vehicles (vans), with roughly a 50:50 split between cars and vans. Overall, our total number of vehicles has been fairly static since 2009, varying by about 10% over that period. As of 2016, we have included Virgin Holidays' vehicles in our fleet reporting too. In 2017, we began moving to a fully hybrid and electric car fleet. We're 47% through this replacement programme with 44 petrol-electric hybrids and two fully electric cars.

Our carbon footprint calculations show that our total emissions from our ground vehicles were 409 tonnes of CO<sub>2</sub>e in 2017, a 12% reduction on the previous year. This is a combination of the changes we have made to our car fleet, and fewer business miles being recorded for 2017. **Chart 5** shows how our ground vehicle fleet's average fuel efficiency has increased and CO<sub>2</sub> emissions rating has decreased, a clear improvement overall.

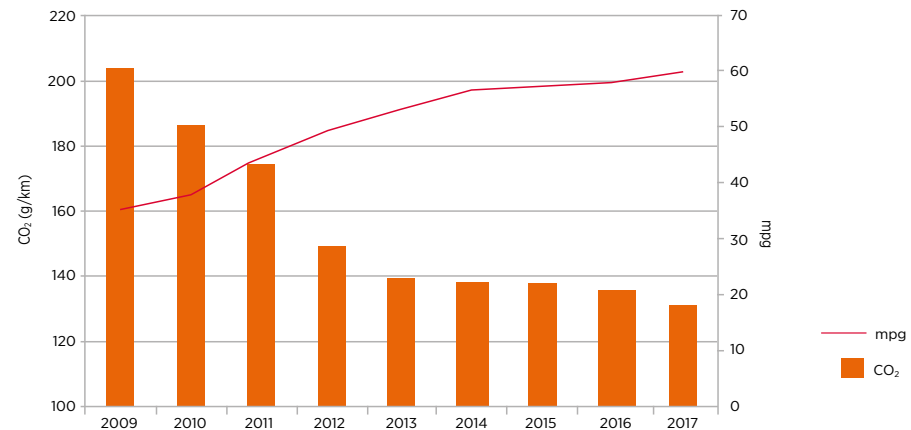
On average, the fuel efficiency of our vehicles is 60 miles per gallon (mpg), an efficiency improvement of 71% since 2009. The average CO<sub>2</sub> emission across all our vehicles is 131 grams per kilometre, a reduction of 36% since 2009.

See Table 4 in the Appendix for the average mpg and CO<sub>2</sub> ratings of our cars and light commercial vehicles shown independently.

## Other environmental measures

Of course, carbon emissions are not the only environmental considerations for our business. We also measure and report on waste, water and noise for both our aircraft and ground operations, and you can see those results in the Appendix. You can also learn more about how we tackle some of these areas on our [website](#).

**Chart 5: The average fuel efficiency and CO<sub>2</sub> emissions ratings of our ground vehicles.**



From 2016, the data above also includes Virgin Holidays' vehicles (9 in 2016, and 27 in 2017). All previous years are Virgin Atlantic only.



# DESIGN AND BUYING

Design and buying is the name we give to our supply chain programme.

On the airline side of things, our two biggest purchases are aircraft and fuel. And as you can tell from the previous section, for some time now we've been improving fuel and carbon efficiency.

But in order to serve our 5.3 million customers a year, we have to do a lot more than fly aircraft. As well as transporting our customers around the world, we carry cargo, serve millions of meals and buy a huge array of things, from the large (like aircraft and fuel) to the small – such as headsets and napkins.

Purchasing is also central to Virgin Holidays' sustainability programme, as Scope 3 supply chain emissions are 99% of the Virgin Holidays' carbon footprint. This shows how important Category 11 'use of sold product' is within

this part of our business, because arranging memorable holidays and experiences for our customers *is* our business. From boutique hotels to all inclusive resorts, the cornerstone of a holiday is where you stay. This is the biggest part of the Virgin Holidays' supply chain, and it's where we're focusing our efforts.

Together, Virgin Atlantic and Virgin Holidays work with thousands of suppliers worldwide. Our goal is to collaborate with them to improve the people, environmental and animal welfare profile of the products and services we design

and buy. It's a big task, and a continually evolving one. Here we describe some of our policies and practices.

You can also learn more about our approaches and initiatives on our **website**, such as how we work with our onboard caterers to improve the credentials of our inflight food and drink, and the sustainability story behind our iconic uniforms.



# Our policies and practices

## Responsible Supplier Policy

Our joint **Responsible Supplier Policy** emphasises to our suppliers that we're focused on sourcing goods and services in a way that treats the people we work with (directly and indirectly) with respect and dignity, and that minimises damage to the environment and natural resources, as well as improving animal welfare standards where this is relevant.

Our policy is based on international standards of basic human rights, such as the International Labour Convention and the UN Convention on Human Rights, as well as the UK Modern Slavery Act.

Supply chain management is an important part of the Modern Slavery Act. It sets out a range of measures on how modern slavery and human trafficking can be dealt with in the UK, as well as seeking transparency from companies on the actions they have taken to tackle these issues within their supply chains. We publish an annual modern slavery statement, and you can read the latest statement on our **website**.



## Ethical Carriage of Cargo Policy

We also have a robust Ethical Carriage of Cargo Policy that addresses what our aircraft carry as freight. As required in UK law, we don't carry live animals or commodities without a valid import/export or CITES\* (Convention on International Trade in Endangered Species of Wild Fauna and Flora) licence. In addition, we refuse to carry a number of otherwise legal commodities, such as shark fins, ivory, hunting trophies and fur products, because they compromise our business values and commitments.



\*CITES is an international agreement between governments that aims to make sure the international trade of wild animals and plants does not threaten their survival.



# Our approach

Our procurement and sustainability teams collaborate to develop training and resources to make sure our people understand our responsible supply chain goals and are given practical ways to fulfil them. For example, to embed sustainable design and buying practices, we hosted a series of workshops for our senior managers in design, buying and contracting, and our overseas regional managers, across Virgin Atlantic and Virgin Holidays. We used these workshops to highlight key human rights, environmental and animal welfare issues, and to work together on improving our principles, processes and practices. Our people showed a high level of engagement, and it was a great forum to share ideas from across the business. We'll be working with key departments to develop further tools, training and resources in 2018.

We continued our membership of *Sedex* (the Supplier Ethical Data Exchange), where suppliers provide information on employee working conditions and audits into a central resource, which they can share with potential buyers like us. And we are also exploring how we can work with industry bodies like IATA on

sector wide initiatives, to engage many of our suppliers within the aviation community and work collaboratively to improve information sharing and practices.

In 2005 Virgin Holidays started working with holiday company trade association ABTA (Association of British Travel Agents) to help develop and establish the **Travelife** sustainability system. This scheme encourages hotels to improve their social, economic and environmental performance and audit them against a wide range of sustainability criteria. The Travelife scheme is not well known across all Virgin Holidays' destinations, so our Responsible Supplier Policy encourages hotels to work with any similar sustainability certification scheme recognised by the **Global Sustainable Tourism Council**. In 2017, we've been raising awareness of these schemes among suppliers with whom we do most of our business, delivering workshops to our Virgin Holidays' product, commercial overseas teams to raise awareness of the key issues, and developing detailed plans to work more actively with our hotels to encourage better practices across the board.



# Our position on cetaceans

Animal welfare is an important issue for our customers. At Virgin Holidays, we've changed the way we work with tourist attractions that feature captive whales and dolphins. You can read our new position on captive cetaceans [here](#). In short, we're keen to provide more choice to our customers by supporting options that better meet the needs of these intelligent, sociable animals.



First, to support customer choice and encourage responsible wild whale and dolphin watching, Virgin Holidays sponsored The World Whale Conference, which took place in Durban, South Africa in June 2017. Here, we agreed a set of guidelines that we'll be promoting to our suppliers in 2018. In 2017 we also spent time consulting with experts in the field on sanctuary based options for cetaceans currently in captivity. It's a complex area, in which we're keen to do justice, and we hope to have more to report on this soon.



At the same time we're keen to support change sensitively, humanely, and at the right pace to make sure the needs of animals currently in captivity continue to be met. This means that we're also working to encourage improvements in existing facilities.

In 2017, we collaborated with industry colleagues on the auditing of captive whale and dolphin facilities under the ABTA Global Guidelines on Animal Welfare, which is allowing us to monitor standards and promote improvements together. Finally, we have actively discouraged the building of new facilities and won't take on or promote any new captive cetacean experiences.



# IMPROVING LIVES

Our business is truly international, touching lives around the world.

Through our business operations, we already work with a wide variety of stakeholders to try to improve people, animal and environmental practices and have a positive impact on people's lives around the world. This means working collaboratively with colleagues from our own industry as well as suppliers, governments, scientists, environmentalists and other non profit organisations to make positive change where we can. In fact, we have two types of non profit partnerships: those we develop to support our core business activities, and our charitable, community investment work.

virgin atlantic 

In partnership with



In 2003, Virgin Atlantic set up the Virgin Atlantic Foundation (a UK registered charity) to distribute funds raised through our community investment programme to charities supporting children and young people. Through the Virgin Atlantic Foundation, we now primarily support our long standing charity partner WE. This much loved and supported partnership has inspired Virgin Atlantic people, their partners and our customers to raise millions of pounds for projects in the UK and some of our worldwide destinations past and present. Funds are mostly raised onboard through our Change for Children appeal and staff fundraising.

 **HOLIDAYS**

In partnership with



**dreams come true** 

For more than a decade, £1 per adult and 50p per child has been set aside from every holiday sold per year by Virgin Holidays to support our non profit partnerships. With these funds we've helped empower young Caribbean entrepreneurs to grow their businesses by supporting the Branson Centre for Entrepreneurship, as well as supporting other important causes. In addition, through the Pennies Foundation, our customers have the option to routinely make small donations to Dreams Come True when booking online.





virgin atlantic 

In 2017, Virgin Atlantic and the Virgin Atlantic Foundation distributed the equivalent of

£1,234,926

in donations, our people's time and other things. This was made up of:

'Change for Children' onboard customer donations

£659,635

Our customers generously donate their spare change and foreign currency onboard for our appeal. These funds are primarily in support of our charity partner WE, however we also gave funds to Save The Children and the British Red Cross in 2017.

Staff fundraising

£169,849

Our people ran marathons, climbed mountains, organised bake sales and so much more to support our 'Raise Up' campaign for our charity partner WE, as well as sometimes supporting other causes by splitting their fundraising with another charity of their choice (through our '50:50' fundraising model).

Volunteer staff time

£80,550

Our people gave their time to volunteer, supporting annual events with WE such as WE Day and visiting WE communities, as well as with local charities. For example, groups from our Finance team worked with Active Prospects, cleaning, painting and gardening at local care homes.

Flights and other items

£324,891

We donated 116 pairs of flight tickets to be auctioned and raffled to raise valuable funds for a range of children's charities, as well as 10 additional pairs for charities nominated by our people. We also gave complimentary and discounted tickets to children requiring life saving and life changing medical treatment. We supported WE by selling their Me To WE products in our onboard magazine, and providing resources to support charity fundraising.



In 2010, we began our partnership with WE. This was the first time the Virgin Atlantic Foundation had chosen to work with a single charity partner over a long term period, and we've not looked back.

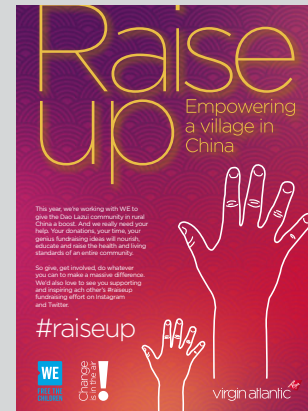
Through this partnership, we have supported two main programmes. In the UK, we fund the 'Be The Change' WE Schools programme, which provides free educational resources and support to students aged 7 to 18 years, enhancing the curriculum and empowering students to discover, and take action on, the causes they care about. We also support WE Villages (WE's international development programme), which focuses on delivering long term change to communities in poor, remote and rural areas. By addressing the five primary

causes of poverty – lack of access to water, education, food, healthcare, and economic opportunity – in tandem, these communities are empowered to become self sustaining in the long term, and rely less on foreign aid.

From 2016 to 2020, our focus for international WE communities is to build on our initial five year programme by introducing renewable energy solutions. This means installing solar power in schools, health clinics, greenhouses and family homes. For example in 2017, after constructing computer labs for two schools in India (Verdara Secondary School and Kalthana Primary School), with our help, WE installed solar panelling to power the computers, fans and lights, and provided teacher training on how to use the computers and work the solar power system. As well as saving money on fuel, from now on, the children will be working in a more comfortable environment and gaining valuable computer skills for their futures.



## What we did in 2017



Every year, our airline teams raise thousands to support our staff fundraising campaign. In 2017, through our campaign 'Raise Up', we were able to donate an additional

£126,212 to WE. 'Raise Up' is all about supporting a community in rural China, giving teachers, school children and their families a boost. Over £90,000 of the money raised will be used to implement a school meal programme, build a playground, and install smokeless chimneys in community households. The remaining funds will be used for other WE projects.



From our 2017 Change for Children donations, £580,365 supported our WE partnership. These funds will be used to support a number of projects with WE including: the WE Schools programme in the UK and USA; the annual Virgin Atlantic Scholarship Trip to India; the Change is in the Air School Sustainability Award; and a clean tech project in India implementing renewable energy in WE communities. For more information and stories, please visit [virginatlantic.com/changeisintheair](http://virginatlantic.com/changeisintheair).

### Humanitarian response

As well as our ongoing work with WE, during times of humanitarian crisis, we work with international partner Save The Children. In 2017, we ran two emergency Change for Children onboard appeals for them. For example, in September, we raised £23,114 in just one week with an emergency appeal after Hurricane Irma ripped through the Caribbean, causing unprecedented damage to a number of islands, including Virgin Atlantic and Virgin Holidays' destinations. As well as raising funds for Save the Children, we contributed to the relief efforts by arranging relief flights to deliver more than eight tonnes of building materials, blankets, bottled water and other aid, as well as providing essential transport for aid workers.

We also raised funds for the British Red Cross Solidarity Fund in response to the terror attacks in London and Manchester. Our generous customers gave £69,268 to support the victims and their families and help them deal with short term financial difficulties.







In 2017, Virgin Holidays distributed the equivalent of

£327,500

in donations, our people's time, and other things. This was made up of:

Non profit partnerships

£293,000

We supported a range of activities: the Branson Centre for Entrepreneurship, the Travel Foundation, the Caribbean Hotel and Tourism Education Foundation, and The World Whale Conference.

Volunteer time

£9,375

Our people volunteered their time to local and national charities, such as Springboard (who support young people to develop skills for the tourism industry), and in local hospices such as Chestnut Tree House.

Staff fundraising

£6,386

Our people arranged fundraising events including bake sales, bike rides and Christmas present wrapping in support of Dreams Come True and other local charities.

Local community causes

£18,739

The Virgin Holidays Staff Charity Committee supported many different charities with Virgin Holidays Vouchers, Love2Shop Vouchers and other charitable donations. Vouchers were used to buy equipment and prizes, or as part of auctions and raffles to raise funds.



In 2011, Virgin Holidays and Virgin Unite helped to establish the Branson Centre for Entrepreneurship in Jamaica and we have continued as the major funder ever since.

By offering networking, training and mentoring, the Centre empowers young entrepreneurs in the region to develop and scale their businesses and create jobs. On average each entrepreneur who has passed through the programme has created four new jobs, supported three existing roles, and grown their revenue by 132%.

In 2017, we once again donated £200,000 to the Branson Centre, to fund their continued work in Jamaica and supported their plans to expand



to other islands by helping facilitate the Centre's move from Montego Bay to Jamaica's business hub of Kingston. Virgin Holidays also donated US\$30,000 to the Caribbean Hotel and Tourism Education Foundation to support tourism education and career development in the region.

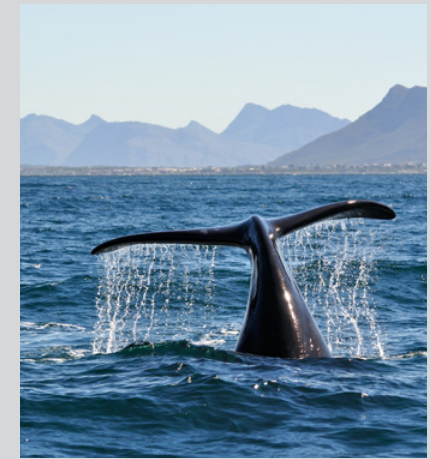


After a partnership for over 10 years with The Travel Foundation, where we have donated over £1 million, in 2017 we made our final contribution of £48,000. The Travel Foundation is an independent charity working to make sure tourism benefits people and their local environment.

We are now looking for partners for 2018 to support new projects in development, and will report on these next year.

## What we did in 2017

Our Virgin Holidays' teams have continued to support our UK partner, Dreams Come True – a national children's charity, whose mission is to enrich the lives of children and young people living with serious medical conditions by fulfilling their dreams and wishes. We have keenly supported them for a number of years through staff fundraising, and our people have just voted to continue and expand this support into 2018. In 2017, we also established a relationship with the 'Pennies' scheme to give our customers the opportunity of making a 50p donation to Dreams Come True when booking their holiday online.



To support the growth of responsible wild whale and dolphin watching, Virgin Holidays sponsored The World Whale Conference, which took place in Durban, South Africa in June 2017. A key outcome of this conference was the agreement of a set of guidelines which we will be introducing to our suppliers in 2018.

At Virgin Holidays, we believe that 'everyone can take on the world'. Tolerance and inclusivity is important to us and we're proud to have supported a range of activities. We entered a float at Brighton Pride, which was well attended by our staff, and continued our annual sponsorship of the Attitude awards to celebrate success in the LGBT+ community. To encourage tolerance in the destinations we feature, we worked with the Caribbean Hotel and Tourism Association to host an event at their annual conference in Miami to highlight the value and importance of the LGBT+ market.



# APPENDIX

## Rounding up

We hope you've enjoyed this year's Change is in the Air Sustainability Report. We'd love to hear what you think. If you have any feedback or suggestions please let us know, at [environment@fly.virgin.com](mailto:environment@fly.virgin.com) or [community.investment@fly.virgin.com](mailto:community.investment@fly.virgin.com).

There's lots more online from our Change is in the Air sustainability programme. Watch our highlights videos, download past and present summaries and full sustainability reports, read case studies from across the business, and see our latest news, all at [virginatlantic.com/changeisintheair](http://virginatlantic.com/changeisintheair).

Before you go, here are some more details about our results and methodology.

### Our carbon accounting methodology

Each year, the UK government updates its guidance for measuring and reporting greenhouse gas (GHG) emissions, including methodologies and conversion factors. We use the latest methods to keep up with best practice. If everyone does this, it's easier to compare our own performance to others. When methodologies change significantly, we recalculate previous published figures so that all years are comparable.

### Emission conversion factors

In order to report the greenhouse gas emissions associated with our activities, we must convert 'activity data' such as distance travelled, litres of fuel used, or tonnes of waste disposed of into carbon emissions. Emission conversion factors are used for this purpose, and each year we use the published DEFRA\* emission factors for that year. Click [here](#) for more details.

\*Department for Environment, Food and Rural Affairs.

For 2017, our key emission conversion factors are:

	2017 kg CO <sub>2</sub> e conversion factor	2017 kg CO <sub>2</sub> conversion factor
Aviation turbine fuel (tonnes)*	3181.2	3149.7
Natural gas (kWh)	0.18416	
Electricity (kWh)	0.35156	

Other emission conversion factors, such as for vehicles and refrigerants, can be viewed on the DEFRA guidance pages [here](#).

Table 1: Virgin Atlantic and Virgin Holidays' carbon footprints

Virgin Atlantic	2012	2013	2014	2015	2016	2017	% change 2016-2017
Scope 1: CO <sub>2</sub> e (tonnes)	4,879,219	4,774,683	4,606,309	4,437,411	4,086,192	3,982,550	-2.5%
Scope 2: CO <sub>2</sub> e (tonnes)	8,547	6,655	7,133	7,341	6,724	4,820	-28.3%
Scope 3: CO <sub>2</sub> e (tonnes)	1,017,147	1,875,011 <sup>1</sup>	1,620,632 <sup>2</sup>	2,293,463 <sup>3</sup>	1,554,199	1,509,537	-2.9%
<b>Total: CO<sub>2</sub>e (tonnes)</b>	<b>5,904,913</b>	<b>6,656,349</b>	<b>6,234,074</b>	<b>6,738,215</b>	<b>5,647,115</b>	<b>5,496,907</b>	<b>-2.7%</b>
Virgin Holidays	2012	2013	2014	2015	2016	2017	% change 2016-2017
Scope 1: CO <sub>2</sub> e (tonnes)	—	—	—	246	180	81	-55.0%
Scope 2: CO <sub>2</sub> e (tonnes)	—	—	—	589	596	370	-37.9%
Scope 3: CO <sub>2</sub> e (tonnes)	—	—	—	183	284,80 <sup>4</sup>	291,003	2.2%
<b>Total: CO<sub>2</sub>e (tonnes)</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1,018</b>	<b>285,578</b>	<b>291,454</b>	<b>2.1%</b>

**Notes**

• We have had our carbon footprint verified since 2015 – focusing on the verification of Scope 1, Scope 2 and Scope 3 (category 3) emissions, as described in the Environment section. You can see this year's verification opinion statement at the back of this Appendix. Statements from previous years are available on our [website](#).

<sup>1</sup> In 2013, Virgin Atlantic's Scope 3 was expanded to include more categories. This value has been updated to accurately reflect emissions from capital goods.

<sup>2</sup> This is the value calculated and reported to the CDP for 2014, and has been updated here to improve transparency of our historic emissions.

<sup>3</sup> In 2015, aircraft purchased led to a large increase in Scope 3 category 2 - capital goods.

<sup>4</sup> In 2016, Virgin Holidays' Scope 3 was expanded to include more categories.



Table 2: Virgin Atlantic's aircraft carbon emissions<sup>1</sup>

Virgin Atlantic	Base year: 2007	2013	2014	2015	2016	2017	% change from base year
CO <sub>2</sub> (kg) per revenue tonne kilometre	0.869	0.793	0.783	0.791	0.724	0.711	-18.2%
CO <sub>2</sub> (g) per passenger kilometre	100.7	91.3	89.4	85.9	78.9	78.2	-22.4%
Total CO <sub>2</sub> emissions (tonnes) from aircraft operations	5,164,993	4,697,728	4,557,026	4,389,779	4,041,476	3,939,407	-23.7%
Total CO <sub>2</sub> e emissions (tonnes) from aircraft operations	5,218,451	4,746,350	4,604,122	4,433,713	4,081,920	3,978,874	-23.8%

<sup>1</sup> Table 2 shows data for our 2007 base year, and the last five years. The full data set from 2007 – 2016 is available in our 2017 Sustainability Report.

## Our aircraft carbon metrics

For our three main metrics, we used the latest guidance and following methodology:

- Total CO<sub>2</sub>/CO<sub>2</sub>e emissions: Calculated using the aviation turbine fuel CO<sub>2</sub> or CO<sub>2</sub>e conversion factor, multiplied by the amount of fuel used from all flights. There's a direct relationship between aircraft fuel and CO<sub>2</sub> emissions, whereby 1 tonne of fuel used leads to 3.149 tonnes of CO<sub>2</sub> emitted.
- CO<sub>2</sub>/RTK. As above, CO<sub>2</sub> is calculated using the aviation turbine fuel CO<sub>2</sub> conversion factor, multiplied by the amount of fuel used. RTK is calculated from all revenue (paying) passengers and freight (cargo) flown, multiplied by the total number of kilometres flown. The airport to airport distance is calculated using the Great Circle Distances (the shortest distance between two points on a sphere). This is then increased by 8% to

allow for 'real world' distances flown, for example including sub optimal routing and queueing to land at airports during periods of heavy congestion.

- CO<sub>2</sub>/PK. As above, CO<sub>2</sub> is calculated using the aviation turbine fuel CO<sub>2</sub> conversion factor, multiplied by the amount of fuel used. PK is calculated from all passengers flown, multiplied by the total number of kilometres flown (Great Circle Distance + 8%). A passenger to freight weighting is also applied, so that emissions can be allocated between passengers (this takes into account luggage, seats, galleys etc) and exclude the emissions associated with transporting freight. We've used the recommended allocation methodology for long haul flights of 81.49% to passengers and 18.51% to freight.

Table 3: Virgin Atlantic and Virgin Holidays' UK ground energy performance<sup>1</sup>

Electricity and gas	Base year: 2008	2013	2014	2015	2016	2017	% change from 2008-2017
The Office, (kWh)	11,702,721	9,317,874	9,517,581	9,165,627	8,718,890	3,951,510	n/a
The Base, (kWh)	8,546,811	6,318,495	6,020,469	6,483,777	6,112,936	7,105,577	-17%
The VHQ, (kWh)	—	—	—	10,300	997,841	2,133,905	n/a
All sites, (kWh)	36,707,798	33,385,536	29,008,287	27,741,032	28,111,395	22,152,161	-40%
All sites, (tonnes) CO <sub>2</sub> e	12,966	10,570	10,323	9,367	8,799	6,265	-52%

### Notes

- Data is provided by our energy providers based on meter readings.
- 'All sites' varies each year to reflect our buildings portfolio. We include all major buildings and smaller properties where the utility is under our operational control. For energy usage in 2017, this includes our offices - The VHQ, The Base, and The Office (vacated 23 June 2017), as well as our hangars at Heathrow and Gatwick, our contact (sales) centre in Swansea, and a number of Virgin Holidays' stores.

<sup>1</sup> Table 3 shows data for our 2008 base year, and the last five years. The full data set from 2008 – 2016 is available in our 2017 Sustainability Report.

Table 4: Virgin Atlantic and Virgin Holidays' UK ground transport fleet performance<sup>1</sup>

	2009	2013	2014	2015	2016	2017	% change from base year
Average CO <sub>2</sub> emissions for cars (g CO <sub>2</sub> /km)	160	106	105	103	103	94	-41%
Average CO <sub>2</sub> emissions for light commercial vehicles (g CO <sub>2</sub> /km)	248	173	172	173	173	173	-30%
Average CO <sub>2</sub> for all vehicles (g CO <sub>2</sub> /km)	204	140	139	138	136	131	-36%
Average mpg for cars	43	68	70	72	72	75	74%
Average mpg for light commercial vehicles	28	39	43	43	43	43	54%
Average mpg for all vehicles	35	53	57	57	58	60	71%
Number of vehicles	220	201	195	186	206	210	-5%

### Notes

- Virgin Holidays' vehicles have been included in the figures from 2016 onwards (9 in 2016 and 27 in 2017).
- There is an approximate 50:50 split between cars and light commercial vehicles.

<sup>1</sup> Table 4 shows data for our 2009 base year, and the last five years. The full data set from 2009 – 2016 is available in our 2017 Sustainability Report.

Table 5: Virgin Atlantic's average aircraft noise

		Base year: 2012	2013	2014	2015	2016	2017
Aircraft fleet - number of aircraft	A320-200		4	3			
	A330-300	10	10	10	10	10	10
	A340-300	4	4	2			
	A340-600	16	13	13	11	8	7
	B747-400	13	12	12	10	8	8
	B787-9			2	9	13	14
Average noise (decibels)		97.60	95.80	95.44	95.41	95.26	95.04
% of 6dB reduction target		-	-30%	-36%	-36%	-39%	-43%

**Notes**

- Average noise is modelled using the number of flights performed by each aircraft type, multiplied by the aircraft noise specifications for takeoff, lateral and approach respectively. We then create an average across all aircraft by dividing by the total number of flights performed in the year.
- Our target is to reduce our average noise by 6dB by 2020. The new aircraft we are introducing into our fleet are quieter, as well as more fuel efficient, than the aircraft they are replacing. You can read the Virgin Atlantic Aircraft Noise Management Strategy [here](#).

Table 6: Virgin Atlantic and Virgin Holidays' UK water use

	Base year: 2012	2013	2014	2015	2016	2017	% change from 2012-2017
The Office, (m <sup>3</sup> )	19,091	17,656	16,649	17,062	18,953	5,898	n/a
The Base, (m <sup>3</sup> )	7,314	6,846	6,811	7,133	6,328	9,117	24.7%
The VHQ, (m <sup>3</sup> )	—	—	—	34	3,268	5,118	n/a
All sites, (m <sup>3</sup> )	70,233	61,026	56,452	57,144	59,379	51,841	-26.2%

**Notes**

- Data is provided by our water supplier based on meter readings.
- 'All sites' varies each year to reflect our buildings portfolio. We include all major buildings and smaller properties where the utility is under our operational control. For water usage in 2017, this includes our offices The VHQ, The Base, and The Office (vacated 23 June 2017), as well as our hangars at Heathrow and Gatwick, our contact (sales) centre in Swansea, and a number of Virgin Holidays' stores.

Table 7: Virgin Atlantic and Virgin Holidays' UK ground waste<sup>1</sup>

	Base year: 2008	2013	2014	2015	2016	2017		% change from 2008 - 2017 (2010-2017 for composting and incineration) <sup>2</sup>
						Tonnes	% of waste stream	
Total recycled, (tonnes)	422.0	536.5	587.1	453.5	494.4	693.7	75.6%	64%
Total composted, (tonnes)	0	9.8	19.9	12.6	12.4	18.2	2.0%	276%
Total incinerated (energy from waste) (tonnes)	0	127.8	145.9	163.0	195.6	176.5	19.2%	1260%
Total anaerobic digestion (energy from waste) (tonnes)	0	18.7	65.1	46.2	0	0	0%	0%
Total sent to landfill (tonnes)	616.1	142.8	63.4	24.2	27.6	29.0	3.2%	-95%
Grand total waste, (tonnes)	1038.1	835.6	881.4	699.5	730.0	917.4	100.0%	-12%

**Notes**

- Data is provided by our waste contractor based on a mixture of actual weighed bins and industry averages. Since changing contractor in November 2012, our actual weighed bins have increased. We have also started checking the weight of different waste stream bins on our sites once a year to improve our calculations.
- 'All sites' varies each year to reflect our buildings portfolio. We include all major buildings and smaller properties where the utility is under our operational control. For ground waste in 2017, this includes our offices The VHQ, The Base, and The Office (vacated 23 June 2017), as well as our hangars at Heathrow and Gatwick, our contact (sales) centre in Swansea, and a number of Virgin Holidays' stores.
- Our overall waste increased in 2017, mainly due to vacating The Office. However, we recycled over 75% of this waste and only 3% was sent to landfill, which is similar to our waste distribution in previous years.

<sup>1</sup> Table 7 shows data for our 2008 base year, and the last five years. The full data set from 2008 - 2016 is available in our 2017 Sustainability Report.

<sup>2</sup> 2010 base year values for composting and incineration are 4.8 and 13.0 tonnes respectively.



Table 8: Aircraft cabin waste (by MNH Sustainable Cabin Services)<sup>1</sup>

	Base year: 2008	2013	2014	2015	2016	2017	% of total waste
Headsets and amenity kits recycled (tonnes)	682.6	368.1	366.9	363.6	356.3	333.9	80%
Other items recycled (tonnes) (eg. plastics, cardboard, paper, fabric and textiles including pillows and cases etc)	108.7	78.5	84.8	86.7	81.9	74.3	18%
Residual waste sent to landfill, (tonnes)	9.3	0.0	0.0	0.0	0.0	0.0	All diverted from landfill
Residual waste incinerated (energy from waste), (tonnes)	0.0	8.7	9.6	30.8	15.2	10.5	3%
Total MNH cabin waste diverted from landfill, (tonnes)	791.3	455.3	461.2	481.0	453.4	418.7	100%

**Notes**

- Data provided by MNH Sustainable Cabin Services. Relates to specific cabin waste items collected and returned to MNH for recycling.
- To learn about how we manage our aircraft waste streams, please visit [virginatlantic.com/changeisintheair](http://virginatlantic.com/changeisintheair).

<sup>1</sup> Table 8 shows data for our 2008 base year, and the last five years. The full data set from 2008 – 2016 is available in our 2017 Sustainability Report.

Table 9: UK aircraft catering waste<sup>1</sup>

	Base year: 2009	2013	2014	2015	2016	2017	2017 % of total	% change from 2009-2017 (2010-2017 for incineration) <sup>2</sup>
Total re-used/recycled (tonnes)	343	275	231	242	326	482	17%	40.4%
Total incinerated (energy from waste) (tonnes)	0	2,572	2,224	2,057	2,116	2,085	72%	54.2%
Total sent to landfill (tonnes)	2,593	221	140	276	366	338	12%	-87.0%
Grand total catering waste, (tonnes)	2,936	3,068	2,595	2,575	2,807	2,904	100%	-1.1%

**Notes**

- Our caterers Gate Gourmet provide this data based on our services at UK airports, and it includes waste generated during meal preparation at Gate Gourmet’s facilities, as well as catering waste returned from the aircraft. Gate Gourmet service multiple airlines, so they estimate our waste based on the proportion of meals provided to all airlines. This means that although the data gives us a good idea, it’s an estimate and depends on what other airlines using the same caterer are doing too.
- Cat 1 waste. By law, anything that touches meat or other animal products (like dairy), which arrives in the UK from outside the European Union, is classified as Cat 1 waste and has to be completely isolated and destroyed. This applies to much of our onboard catering waste, which needs to be incinerated or deep landfilled. Learn more about how we manage our onboard waste streams at [virginatlantic.com/changeisintheair](http://virginatlantic.com/changeisintheair).
- Reused/recycled waste shown in Table 9 originates from the meal preparation at Gate Gourmet’s facilities. As described above, aircraft catering waste is incinerated or deep landfilled due to the Cat 1 legal restrictions.

<sup>1</sup> Table 9 shows data for our 2009 base year, and the last five years. The full data set from 2009 – 2016 is available in our 2017 Sustainability Report.

<sup>2</sup> 2010 base year value for incineration is 1,352 tonnes.



Table 10: WE's UK Be The Change Schools' Programme

Activity	2013 results Sept '12 - July '13	2014 results Sept '13 - July '14	2015 results Sept '14 - July '15	2016 results Sept '15 - July '16	2017 results Sept '16 - July '17
Schools signed up for Be The Change school programme (Target 65)	76 ☺	88 ☺ (8 repeat visits, 80 new schools)	80 ☺ (29 repeat visits, 51 new schools)	70 ☺ (7 repeat visits, 63 new schools)	65 ☺ (7 repeat visits, 58 new schools)
Schools signed up for Global Be The Change school programme (Target 45)					44 (5 Connecticut, 6 New Jersey, 33 New York)
Students who received whole school motivational speech <sup>1</sup> (Target 16,000)	18,000 ☺	18,750 ☺	18,683 ☺	9,238	4,590 <sup>2</sup>
Students who participated in student leader workshops <sup>3</sup> (Target 1,200)	2,160 ☺	2,250 ☺	3,264 ☺	2,642 ☺	1,950 ☺
Number of schools that chose to take on a meaningful action <sup>4</sup> (Target 50%)	59 schools 78% ☺	61 schools 69% ☺	62 schools 78% ☺	39 schools 56% ☺	27 schools 42%
30 international scholarships allocated per year	30 ☺ from 242 applications	30 ☺ from 506 applications	30 ☺ from 257 applications	27 from 339 applications <sup>5</sup>	30 ☺ from 233 applications







Notes

- <sup>1</sup> 2013 and 2014 numbers based on an assumed assembly size of 250 students and the number of schools visited throughout the year. During 2015, we moved to taking the exact number of students as established by the speaker conducting each school visit, to ensure accurate reporting. This resulted in the apparent reduction in 2016.
- <sup>2</sup> New facilitation and delivery approaches were introduced in 2017, including youth summits (with a number of schools together, but fewer pupils from each school) and increasing work with SEND (Special Educational Needs and Disabilities) and PRU (Pupil Referral Unit). These schools generally have fewer student numbers.
- <sup>3</sup> 2013 and 2014 based on an average number of 30 students participating per school visited. During 2015, we moved to taking the exact number of students attending.
- <sup>4</sup> Meaningful action defined as engaging with a WE-specific campaign. All schools have access to WE online resources and a WE Schools programme manager. Many schools choose to take action on behalf of other charitable organisations.
- <sup>5</sup> 30 applications were awarded but three students had to drop out before the trip took place due to personal or logistical reasons.

☺ Target achieved

Table 11: WE Villages Clean Energy Projects

The Virgin Atlantic Foundation board of trustees decides which projects to support the following year from WE's suggested solar energy projects across different countries. In selecting projects, they also consider WE's five pillars for sustained community growth: education, water, health, food and opportunity.

Year	Project(s)	Pillar	No. solar panels	Community impact	Annual fuel saving <sup>1</sup>	Annual CO <sub>2</sub> saving (kg) <sup>2</sup>
2016 - Kenya	Sikirar borehole		19	990 community members have access to the borehole. This borehole previously relied on fuel and is now entirely run by solar.	£2,918	10,291
	Oleleshwa Farm borehole	  	32	Before the solar installation, high power costs meant that water could only be pumped once a day. Now water is available throughout the day.  The farm includes 200 acres of land and 12 greenhouses. It supports over 12,500 students across WE primary schools in Narok County, Kenya and over 1,900 community group members across WE partner communities.	£9,576	33,768
2017 - India	Verdara Secondary School computer lab		30	Solar panels have been installed which will power 25 computers.  89 students from Grades 9 and 10 will have access to these computers when the new school year starts in July 2018. Total school population is 392.	To be determined (TBD)	TBD
	Kalthana Primary School computer lab		20	Solar panels have been installed which will power 24 computers.  53 students from Grades 3 to 5 will have access to these computers when the new school year starts in July 2018. Total school population is 94.	TBD	TBD

Notes

- <sup>1</sup> Fuel savings are calculated using the volume (litres) of fuel previously required to power the borehole, multiplied by the cost of fuel (£0.76 per litre).
- <sup>2</sup> CO<sub>2</sub> savings are calculated using the volume (litres) of fuel previously required to power the borehole, multiplied by the 2016 DEFRA conversion factor for 100% mineral oil diesel (2.68kg CO<sub>2</sub> per litre).

 Water     Opportunity     Food     Education     Health





Table 12: Kalthana, India Performance Results.  
Project started in 2013 and was completed in 2017

Kalthana is a very small village in the Rajsamand District of Rajasthan. As of 2015, it had a total population of 1,445. The total adult and children populations are unknown, as for many rural communities including Kalthana, the government has not yet collected detailed population data. For more detailed descriptions of our projects there, please see our **2016 sustainability report**.

	Target by end of 2017	Year 1: 2013	Year 2: 2014	Year 3: 2015	Year 4: 2016	Year 5: 2017
<b>EDUCATION<sup>1</sup></b>						
Students regularly attending school	N/A	N/A	80	160 (65 girls and 95 boys)	130 (67 girls, 63 boys)	141 (75 girls, 66 boys)
Classrooms constructed, furnished and outfitted	1	Construction started on one brand new classroom	☺	☺	☺	☺
Classrooms rehabilitated and outfitted	6	Rehabilitation of existing classroom block has been initiated	-	-	- <sup>2</sup>	- <sup>3</sup>
School kits distributed <sup>4</sup>	75	-	-	105 ☺	☺	☺
<b>CLEAN WATER AND SANITATION</b>						
Hand pumps and water storage tanks rehabilitated	2 of each	-	-	Latrines, water system, and hand pump rehabilitation completed at the first primary school	-	Latrine work in progress in Badra (second primary school).
Water sanitation workshops held for students	Ongoing	Household workshops on water and sanitation were held and received positively	-	20 workshops held for students	5 workshops <sup>5</sup>	10 workshops
<b>HEALTHCARE</b>						
Health centre rehabilitated and outfitted	1	1 ☺	☺	☺	☺	☺
Pre- and post-natal health sessions held	Ongoing	52 women received pre- and post-natal health care	-	48 women received pre- and post-natal health care	36 women received pre- and post-natal health care	10 health workshops held, where pre and post natal care was included
Health training sessions for adolescent females held	Ongoing		-	74 girls attended health training sessions	0 <sup>6</sup>	0
Deworming sessions provided for students <sup>7</sup>	Held twice a year	☺	☺	300 vaccinated, 101 children receiving nutritional supplements per month	492 vaccinated, 128 children received deworming and supplements	44 vaccinated, 239 children received deworming and supplements
<b>ALTERNATIVE INCOME AND LIVELIHOOD</b>						
Women's groups established	1	☺	☺	4 women's groups ☺	2 groups ☺	7 groups operating in total ☺
Number of direct beneficiaries of animal husbandry programme	15	5	5	20 ☺	20 households ☺	33 households ☺
Goat sheds constructed	1	1 ☺	5 ☺	13 ☺	2 ☺	29 in total ☺

**Notes**

- <sup>1</sup> The headmaster of the school, a key member of the community and partner of WE, suddenly passed away in 2016. As a result, the school was closed for some time which affected enrolment. In addition, the headmaster's wife who is also a key teacher at the school was not there for a very long time as she was in mourning.
- <sup>2</sup> Rehabilitation of classrooms was approved by the government in 2015 and construction was due to commence in 2016, but was delayed due to circumstances above.
- <sup>3</sup> Government engineers assessed the old classrooms and deemed them to be beyond rehabilitation. WE are now allocating funds to build new classrooms.
- <sup>4</sup> School kit includes: library books and periodicals, stationery items, art supplies, learning posters, sports equipment and board games.
- <sup>5</sup> The decrease is a result of many of the topics being covered initially and now there are fewer sessions required.
- <sup>6</sup> We have shifted away from working specifically with adolescent girls. According to our team on the ground, adolescent girls are encouraged to approach the health centre workers informally for advice, counselling, etc. as they are shy in the open workshops and tend not to speak openly. The health workers are familiar with the issues and concerns as they participated in our workshops and other programmes. This approach is more sustainable and viable over the long term in a culturally conservative village setting.
- <sup>7</sup> Vaccinations include BCG (Bacillus Calmette Guerin), DPT (Diphtheria, Pertussis and Tetanus Toxoid), Pentavalent vaccine, OPV (Oral Polio Vaccine), IPV (Inactivated Polio Vaccine), Hepatitis B vaccine, Measles, TT (Tetanus Toxoid).

☺ Target achieved



# Carbon Footprint Verification Statement



## Verification Statement

In relation to: Virgin Atlantic Limited

The VHQ  
Fleming Way  
Crawley  
RH10 9DF  
United Kingdom

**Scope:**

The direct, indirect electricity and scope 3 category 3 - Fuel-and energy-related WTT emissions of carbon dioxide

**Boundary:**

Operational Control has been used to calculate the emissions

**Criteria:**

ISO14064-1 2012

**Level of Assurance:**

Reasonable

**Materiality Level:**

5%

**Period:**

1/1/17-31/12/17

**Carbon Footprint:**

4,814,052t CO2e

Breakdown:	
<b>Virgin Atlantic Airways</b>	
Direct (Scope 1)	3,982,550
Indirect Energy (Scope 2)	4,820
Category 3 - Fuel-and energy-related (WTT)	826,112
<b>Virgin Holidays</b>	
Direct (Scope 1)	81
Indirect Energy (Scope 2)	370
Category 3 - Fuel-and energy-related (WTT)	118

Page 1 of 2

...making excellence a habit.™

**Information and Contact:** BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP Tel: +44 (0)845 080 9000  
BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL UK. A member of the BSI Group of Companies



The data on which the footprint is based has been provided by the company in the document Virgin Atlantic Carbon Footprint Report 2018 and Virgin Atlantic Carbon Footprint - Governance Documentation 2018. The calculations used to determine the footprint are deemed to be reasonable, sound and based on currently available best practice. The quantification and reporting of the carbon footprint has been independently verified by BSI against the specifications defined in ISO 14064-1:2012. The verification activity has been carried out in accordance with ISO 14064-3:2012 and the principles of ISO 14065:2013

There are no exceptions to the above are but the verifier would like to clarify the following in relation to boundary :

- 1) Virgin Atlantic Ltd have not reported the emissions from the use of natural gas for heating in the airport locations where they have no control over the heating, they have reported electricity for these locations.

**Lead Verifier:** Amanda Pakes

*Andrew Launn*  
**Signed:** Andrew Launn, EMEA Systems Certification Operations & Compliance Director

**Issue Date:** 19/04/2018

**NOTE:** BSI Assurance UK Ltd is independent to and has no financial interest in Virgin Atlantic Ltd. This Statement has been prepared for Virgin Atlantic Ltd only for the purposes of verifying its statements relating to its carbon emissions more particularly described in the scope above. It was not prepared for any other purpose. In making this Statement, BSI Assurance Limited has assumed that all information provided to it by Virgin Atlantic Limited is true, accurate and complete. BSI Assurance UK Limited accepts no liability to any third party who places reliance on this Statement.



Page 2 of 2

...making excellence a habit.™

**Information and Contact:** BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP Tel: +44 (0)845 080 9000  
BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL UK. A member of the BSI Group of Companies