

Responsible Business Report  
2016–17

**NATS**

Listening, considering,  
acting responsibly



**Manchester Airport**  
Latitude: 54.651906  
Longitude: -6.23899

# Our work never stops

Our Responsible Business report summarises the work we do in pursuit of our sustainability goals. We are proud of the work we have done in the air, on the ground and increasingly with local communities. Like our air traffic operation, this work never stops. It is helping to minimise the environmental impacts of air travel, deliver positive changes to our workplace, inspiring future generations and harnessing our business community to improve charitable giving. We have set ourselves ambitious goals and we will continue to work towards them to define ourselves as a truly responsible business.

**Martin Rolfe**  
CEO





Pictured from left to right: Chris Nutt, Andrew Burke, Dr Amanda Hardie, Aarti Parajia, Alex Culley, Ian Jopson, Dr Jarlath Molloy, Louise Cruickshank, Adele Miller, Daniel Scott, James Deeley, Nick Worricker, Hannah Abrook, Dr Holly Edwards.

# In the air

## Workable solutions to reduce noise impacts

At NATS we are very aware of the impact that aircraft noise has on those who live under flight paths.

**That's why we are working with airports, airlines and communities to help shape and inform options to better manage the effect of noise and minimise the impacts wherever possible.**



"Aircraft noise is the main issue raised with me by members of the public. NATS is seeking to work more closely and earlier with communities to understand how best to manage this issue. Factoring in public views is increasingly central to how we think about airspace changes."

**Robin Clarke**  
Community Relations Manager

## Continuous Descent – spreading the benefits of efficient approaches

Flying a smooth, continuous descent into an airport, instead of a series of steps, results in quieter, more fuel-efficient landings. But this requires extra coordination between pilots and air traffic controllers. We continue to support and refine continuous descent approaches into 14 airports across the UK and we are working with 22 airlines to make this operation more widespread.

Our Continuous Descent Campaign is reducing aircraft noise for many communities around airports – achieving an additional 32,070 quieter arrivals in 2016 over 2015.



Our efforts with the Continuous Descent Approach (CDA) Outreach Programme have been recognised, for the third year in a row, with a Responsible Business award by Business in the Community.

 32,070

additional flights achieved continuous descent operations at 14 UK airports in 2016.

## **Performance based navigation – NATS takes the lead**

NATS is leading a task force set up by the International Civil Aviation Organization (ICAO) – the United Nations civil aviation agency – to gather information and develop best practice guidance on how the introduction of performance based navigation (PBN) can reduce noise impacts. Using satellite and other new navigation technologies, PBN allows aircraft to fly very accurate flight paths to avoid built-up areas around airports.

This work includes a strong emphasis on effective methods for cross-industry collaboration and structured community engagement.



# Air traffic management and CO<sub>2</sub> emissions

## Cutting CO<sub>2</sub> emissions in our airspace

We are a pioneer of environmentally responsible ATM operations. In 2008 we became the first air navigation service provider in the world to set an airspace environmental improvement target. We are working to reduce ATM-related CO<sub>2</sub> emissions by 10% by 2020 and we're currently tracking at a 5.0% improvement over the baseline. But it will become increasingly difficult to meet our goals unless we can deliver further efficiencies by modernising UK airspace.



55,900

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tonnes of ATM related CO<sub>2</sub> emissions enabled last year for airlines, worth £6.2 million in fuel savings.



## Queue management reduces time in the stack

A package of projects and initiatives known as queue management is reducing airborne holding times – cutting fuel burn and CO<sub>2</sub> emissions – for aircraft approaching Heathrow airport. Working with controllers in other parts of Europe we are pioneering cross-border arrival management (XMAN) procedures which are helping reduce holding times by up to a minute per flight by dynamically managing aircraft trajectories 350 nautical miles away. Requesting an inbound aircraft to slightly reduce its speed while flying over neighbouring airspace allows us to space it apart from other aircraft in the queue – so when it arrives at Heathrow it is ready to be sequenced for landing and is less likely to spend time in the hold. Plans are underway to increase the Heathrow XMAN threshold to 500 nautical miles and extend the current 350 nautical mile initiative to Gatwick airport.

Another new delay reduction procedure pioneered by NATS is Time-Based Separation (TBS). This safely separates landing aircraft based on time rather than distance at Heathrow airport, giving greater resilience in headwind conditions. The result is fewer headwind related arrival delays, fewer spacing-related go-arounds and less time spent in arrival holds. The next phase of the programme is currently being planned to further optimise aircraft separations in 2018. Find out more on our website.



## Manchester controllers help to cut emissions

Airspace managers at Prestwick Air Traffic Control Centre have been working to reduce aircraft fuel burn in the lowest levels of the arrival holds at Manchester airport. During 2016 this work reduced CO<sub>2</sub> emissions by almost 3,500 tonnes in a single stack. A new trial is planned this year to further reduce CO<sub>2</sub> emissions in the holding stacks at the airport.



3,500

tonnes of CO<sub>2</sub> reduced in a single stack during 2016.

## Flexible use of airspace makes military airspace available to airlines

Many areas of UK airspace are reserved for military aircraft operations. But if civil airspace users could access some of this airspace when it is not needed by the military they could plan more direct routings, reducing fuel burn and emissions. NATS is working closely with the military to manage these operations, letting civil aircraft operators know when new airspace become available so they plan more efficient routes or take short cuts if aircraft are already en-route. We are currently developing tools to support FUA availability and measure its benefits.



## **Small airspace changes for a big difference in fuel burn**

Big airspace changes often grab the headlines but we also have a programme of continuous, smaller improvements to airspace, implemented on a regular basis through our Swanwick and Prestwick control centres. Air traffic controllers and airspace managers are constantly reviewing our airspace to identify small improvements in the 80 sectors we manage. We work with airlines and airports to identify hundreds of potential airspace improvements. In 2016/2017 we made 21 minor airspace improvements, saving over 55,000 tonnes of CO<sub>2</sub> emissions.

Find out more:

[www.nats.aero/discover/quiet-evolution](http://www.nats.aero/discover/quiet-evolution)

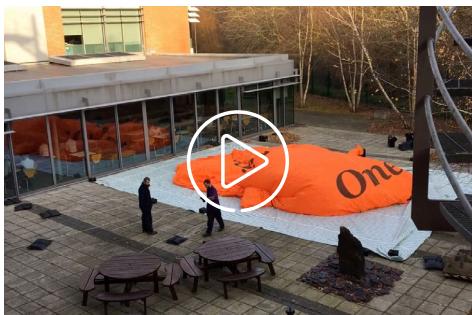


# Our 10 by 20 campaign encourages new green ideas

Over the last year we have run an internal "10 by 20 campaign" to build momentum behind our activities focused on improving airspace efficiency. This has included the launch of the "Your world, your legacy" campaign, encouraging employees to think about new ideas to support our drive to reduce CO<sub>2</sub> emissions and provide the best possible service to our customers. The appearance of an inflatable 10 metre red balloon in the courtyard of our head office at Whiteley provides a vivid demonstration of what a tonne of CO<sub>2</sub> looks like.

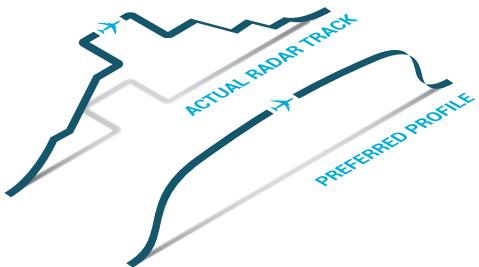
Watch the video:

[www.vimeo.com/218006637](http://www.vimeo.com/218006637)



# Airspace efficiency measurement sets the performance targets

In 2012, we agreed a way of measuring the efficiency of flights with the CAA, called 3Di. This remains a world first in air traffic management. In 2016, we performed within the CAA's target range for this measurement for the 5th year in a row.



"We are focussing on 3Di improvements using a data driven approach combining operational controller input and trend analysis. This shows in detail the areas of variation and contribution to the overall score, giving a more granular understanding of the drivers behind 3Di inefficiency. This information is then shared with senior unit operational management to highlight areas for improvement."

**Alex Culley**  
Head of Customer  
Operational Relationship



Find out more:  
[www.nats.aero/environment/3di](http://www.nats.aero/environment/3di)

# On the ground

## Environmental management system – a life cycle approach

Building on our original certification in 2013 at our head office in Whiteley, we have now transitioned to the updated ISO14001:2015 standard and developed a system which can be implemented across the company.

In early 2017 Glasgow and Manchester tower operations successfully received certification to the updated standard.

"We believe these are the first towers in the UK to receive this certification. This shows our dedication to good service levels and further demonstrates to our airport customers how we are supporting them in meeting their sustainability goals."

**Mike Stoller**  
Director of Airports



# ISO14001

achieved at Manchester and Glasgow airport towers.



Olympic swimming pools could be filled from the water we have saved compared to 2006.



# 2,800

family homes could be powered a year from the savings made on our estate compared to 2006.

## **Understanding biodiversity across our estate**

The nature reserve we created adjacent to our Swanwick control centre continues to be a valuable natural conservation site and resource for schools and nearby communities. We have also been working hard to understand how to improve biodiversity more broadly across our estate. We have identified key sites for this work to take place during 2017 and beyond while developing new biodiversity improvement action plans.



**1,612**

tonnes CO<sub>2</sub> captured by the woodland at Swanwick Lakes Nature Reserve since its development.

## **Sustainable travel – pedalling to work**

In 2016 NATS employees ordered their 1,000th low emissions car. We have developed a new travel survey to help capture our employees' commuting CO<sub>2</sub> emissions and provide feedback for further improvements.



**186**

new bikes purchased as part of our Cyclescheme in 2016.

# With communities

Now in its ninth year, our Footprint Fund has continued to support local charities and has made a long-lasting difference to the communities in which we work. Last year we awarded 57 grants to community improvement schemes and matched funding for numerous volunteer sponsored events for national charities.

Employees undertake a phenomenal amount of fundraising across the business, including payroll-giving and support for individual charities. Following a campaign early in 2017 we've raised employee charitable donations to over 10%, reaching the 'gold payroll giving mark'.



£151,000

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raised by 10% of staff from payroll charitable giving.

Matt Mills, Head of Digital Communications, applied to the Footprint Fund because he wanted to set up an all-girls, ages 6–8, football club. His daughter loved to play but the local girls club could not accommodate younger children. Matt decided to go on a coaching course to help Winchester City Flyers open a younger girls' team. He asked Footprint Fund to help him buy his first set of equipment for a team of eight girls. Two years later the single team of eight is now three teams, with a total of 48 girls. Matt is still a coach for the teams and reapplied this year for new goal posts and extra footballs to meet the growing demand.

More information:

[www.nats.aero/discover/footprint-fund](http://www.nats.aero/discover/footprint-fund)



£24,790

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donated to charity from NATS' Footprint Fund in 2016–17.

## **Charitable flights – happy to lend a helping hand**

Dreamflight offers young children who suffer from terminal illnesses the once-in-a-lifetime chance to travel to Orlando, Florida. Our partnership with Dreamflight, is now in its fifth year. We waive air traffic control fees for the flights and give them special treatment, allowing them to fly at lower altitude and offering them route flexibility to help avoid areas of turbulence.

## **New horizons for the next generation**

Engineers play a critical role in our operations. From the day-to-day responsibility of keeping all our complex systems in fully working order to delivering important innovations and improvements, engineering across the spectrum is a company-critical skill. Each year around 1,000 people apply for one of our direct entry graduate, apprenticeship or industrial placement positions and around 50 are successful. Many of these go on to careers within NATS.

During the week-long Scottish Air Show NATS employees gave students from across the west of Scotland an insight into the company's activities and how we use STEM (science, technology, engineering, and mathematics) skills as the backbone to maintaining safety and innovation in air traffic management. Students used virtual reality headsets to get an insight into the work of an air traffic controller and practiced our continuous descent game – flying a paper aeroplane through a series of decreasing hoops to illustrate how continuous descent operations work.



**274,000**

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visitors at two air shows organised by NATS controllers.

# Our people and partners

## Working with our suppliers

The nature of our company means we rely heavily on our suppliers, especially in areas such as software manufacturing, which is a business-critical function for us.

"In 2016/2017 we adopted a new supplier due-diligence system which is used across the aviation and defence sectors to track, among other things, environmental management, corporate social responsibility (CSR), policies to combat modern slavery and human trafficking and conformance to NATS Code of Ethics and Professional Behaviour within supplier organisations."

**Stephen Rose**

Head of Supply Chain Business  
& Knowledge Management



## Health and wellness to a gold standard

Over the past year NATS has been running its "Think Act Be SAFE" awareness campaign, which covers all facets of health and safety, staff wellbeing and security. For the third consecutive year NATS has achieved Gold in the Occupational Health and Safety Award scheme presented by the Royal Society for the Prevention of Accidents, as well as the NHS Scotland's "Healthy Working Lives" Gold award, also for the third time.

# Key environmental performance metrics

<b>Non-financial performance 2015–2016</b> (financial year unless stated otherwise)	<b>2016–17</b>	<b>2015–16</b>
Scope 1: Emissions from fuel used for heating and transportation and fugitive emissions from air conditioning (tonnes CO <sub>2</sub> equivalent)	3,502 <sup>^</sup>	3,183
Scope 2: Emissions from purchased electricity (tonnes CO <sub>2</sub> equivalent)	24,996 <sup>^</sup>	27,934
Scope 1 + 2 intensity metric (tonnes CO <sub>2</sub> equivalent per £m of revenue)	31.0 <sup>^</sup>	34.6
Energy consumption (MWh)	60,586	60,438*
Water consumption (m <sup>3</sup> )	48,630 <sup>^</sup>	49,645
3Di score (calendar year)	30.3	30.1
Progress against 10% enabled ATM related CO <sub>2</sub> emissions reduction target	5.0%	4.7%*
Modelled enabled ATM related CO <sub>2</sub> emission reduction (tonnes CO <sub>2</sub> )	55,904 <sup>^</sup>	157,156

PricewaterhouseCoopers has carried out a limited assurance engagement on selected 2016–17 metrics marked with an <sup>^</sup>. A copy of the assurance opinion is available at [www.nats.aero/environment/cr](http://www.nats.aero/environment/cr), as well as the basis of preparation for the selected airspace, energy and environmental performance metrics above.

\* restated

Our commitment to managing climate change was highlighted recently when we achieved a B performance ranking against the Carbon Disclosure Project (CDP) sustainability benchmark. We are the first air navigation service provider to report our greenhouse gas (GHG) emissions from our estate and airspace operations to CDP and achieved the B ranking in our first year of reporting.

# Our Future

Our enduring goal is to deliver a safe and efficient air traffic system that provides real value to its users and, above all, a system that operates effectively while limiting and where possible reducing its environmental impact.

We're proud of how far NATS has come; driving social and environmental responsibility through all aspects of our business. As we celebrate the successes we must also look to the future. We have asked our employees, customers, communities and NGO's for their views about our responsible business programme. We have listened. We have prioritised these issues and have developed a new responsible business policy and work is now underway to develop our strategy to deliver our ambitions. We will be meeting our challenges head on, providing environmental leadership and working for a more sustainable future for the aviation industry.

**Ian Jopson**  
Head of Environment  
and Community Affairs



## We hear you

Customer and stakeholder perspectives – including those from the general public – are very important to us. We aim to be responsive to your views in the services we provide. Please do get in touch as we welcome feedback.



Find out more on: [www.nats.aero/environment](http://www.nats.aero/environment)