

Reporting Criteria  
for Energy &  
Environmental  
Performance  
Data 2015-16

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# Introduction

This document specifies NATS' methodology for the preparation of energy & environmental performance data in the Annual Report & Accounts (AR&A) for the reporting period 1st April 2015 – 31st March 2016.

It is the responsibility of NATS' management to ensure that appropriate procedures are in place to prepare energy & environmental performance data in line with, in all material respects, the principles, criteria and methodologies set out in the following sections of this document.

Greenhouse gas (GHG) emissions data is prepared in accordance with the World Resources Institute's (WRI) Greenhouse Gas Protocol (GHG Protocol) Corporate Standard and reported in accordance with the Climate Disclosure Standards Board Framework for reporting environmental information & natural capital.

# NATS statement on energy & environmental data

The principles of relevance, completeness, consistency, transparency and accuracy have been applied to our energy & environmental data as follows:

› **Relevance:** Ensure data appropriately reflects NATS' performance and serves the decision-making needs of users – both internal and external to the company. Relevant information is identified as potentially necessary for inclusion in the mainstream report, for the purposes of communicating the extent to which NATS contributes to and is affected (now or in the future) by environmental impacts. GHG emissions shall be treated as material in all cases as a contributor to climate change.

› **Completeness:** Account for and report on all data sources and activities within the chosen inventory boundary, with disclosure and justification for any specific exclusion. Disclosures are complete if it includes all information that is necessary for an understanding of the matter that it purports to represent and does not leave out details that could cause information to be false or misleading to users.

› **Consistency:** Use consistent methodologies to allow for meaningful comparisons of performance over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series. Consistency refers to the use of the same standards, policies and procedures over time. Comparability greatly enhances the value of information to users; consistency is the means to achieving that objective.

› **Transparency:** Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.

› **Accuracy:** Ensure accurate and up-to-date records through the development and introduction of procedures to form a reporting framework aligned to the GHG Protocol, CDSB Framework and the requirements of ISAE 3000/3410 assurance. The quantification of

data shall systematically neither over nor under report actual performance, as far as can be judged, and uncertainties shall be reduced as far as practicable. Information shall be verifiable, i.e. characterised by supporting evidence that provides a clear and sufficient trail from monitored data to the presentation of energy & environmental information. The information shall be sufficiently accurate to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

Energy & environmental performance	2015-16	2014-15
Scope 1 emissions (tonnes CO <sub>2</sub> e)	3,183 <sup>^</sup>	3,189
Scope 2 emissions (tonnes CO <sub>2</sub> e) location based method	27,934 <sup>^</sup>	30,138
Intensity metric (tonnes CO <sub>2</sub> e per £m of revenue)	34.6 <sup>^</sup>	36.1
Water consumption (m <sup>3</sup> )	49,645 <sup>^</sup>	47,032

The data has been collected using the operational control approach and covers the UK sites of NATS Holdings Limited and its AQUILA joint venture, which is based at NATS' Corporate & Technical Centre. Data for 2014-15 has been restated following implementation of the GHG Protocol and additional internal verification procedures. Certain environmental performance metrics in the table above as at 31st March 2016 have been subject to external assurance by PricewaterhouseCoopers LLP ('PwC'). PwC have carried out a limited assurance engagement on selected 2015-16 metrics marked with an ^. A copy of the assurance opinion is available at <http://www.nats.aero/environment/cr>, as well as the basis of preparation for the selected environmental performance metrics above.

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# Organisational boundary for NATS' energy & environmental reporting

NATS applies the operational control method in order to consolidate its organisational boundary in each reporting year. This approach best reflects the company's influence over its environmental impact and goes beyond the minimum compliance requirements outlined above.

At the legal structure level, it is considered that the company has operational control over an operating entity if NATS or one of its subsidiaries has the full authority to introduce and implement its Environment Policy at the operating entity.

NATS is split into two main business units which provide two distinct services:

- › **NATS (En Route) plc (NERL)**  
– the regulated part of the business which provides air traffic management services to aircraft within the UK and part of the North Atlantic.
- › **NATS (Services) Ltd (NSL)**  
– the unregulated part of the business which provides air traffic control services at 15 of the UK's major airports. NSL Ltd also includes a number of subsidiary companies.

NATS Holdings Ltd has authority to implement its Environment Policy within NERL and NSL.

NATS also has joint ventures:

- › **AQUILA Air Traffic Management Services** where there is 50% ownership. Aquila is a joint venture between NATS and Thales to deliver Project Marshall, a programme initiated by the Ministry of Defence.
- › **FerroNATS** where there is 50% ownership. FerroNATS is a joint venture between NATS and Ferrovial Servicios to deliver air traffic navigation services to 9 airports across Spain.

NATS Holdings Ltd does not have authority to implement its Environment Policy within AQUILA and FerroNATS. However, AQUILA's office is co-located at NATS' Corporate & Technical Centre and is included in energy & environmental performance reporting.

# Operational Boundary for NATS' GHG Reporting

The same operational control approach at the legal structure level shall be applied at the facility level in order to define responsibility for energy & environmental performance within facilities. NATS is therefore responsible for reporting energy & environmental performance that occur within facilities over which NATS or one of its operations has the full authority to introduce and implement its Environment Policy.

NATS Holdings Limited's estate portfolio includes freehold title, rental, lease, service agreements or licences, which includes the provision of a contract service at a number of locations. All freehold sites are included in scope, unless they are sub-let, as well as leasehold sites where NATS has operational

control. The estate portfolio includes control centres, airports, offices and warehouses, as well various types of remote communication, navigation and surveillance sites – some of which are co-located.

Under the operational control approach, fuel combustion, process and fugitive emissions from all sites under our control should be categorised as Scope 1 and GHG emissions from consumption of purchased electricity is categorised as Scope 2. Exclusions are listed in the next section.

NATS owns vehicles (mainly for transport, logistics or engineering purposes) and leases vehicles (allocated & pool vehicles mainly for engineering purposes) using

providers such as Arval, Inchcape and Volkswagen. Under the operational control approach, fuel combustion for these vehicles are categorised as Scope 1. Additional benefit cars and those from the Zenith salary sacrifice car scheme are considered not under NATS control and are therefore not included.

Category	GHG Source
Scope 1 (Direct)	On site natural gas combustion (where NATS or one of the operating entities it is responsible for contracts directly with the energy supplier)
	Gas oil (including red & white diesel and heating oil) combustion (where NATS or one of the operating entities it is responsible for contracts directly with the energy supplier)
	Road fuel combustion (where NATS or one of the operating entities it is responsible for contracts directly with the vehicle supplier)
	Fugitive emissions (where NATS or one of the operating entities it is responsible for contracts directly with the refrigerant supplier)
Scope 2 (Energy indirect)	Electricity consumption (where NATS or one of the operating entities it is responsible for contracts directly with the energy supplier)

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# Methodology for calculating our GHG emissions

## Conversion factors

NATS follows the most common approach to calculating GHG emissions from emission sources, which is to take activity data (e.g. units of electricity consumed or distance travelled) and multiply it by an emission factor which gives an estimate of the GHG emissions figure.

$$tCO_2e = \text{Activity Data} \times \text{Emission Factor}$$

NATS uses the UK Government GHG Conversion Factors in order to convert activity data into tCO<sub>2</sub>e.

These are updated annually by Defra/DECC and are available online here:

### **UK Government GHG Conversion Factors** >

For the current reporting year (1st April 2015 – 31st March 2016) the 2015 Defra/DECC emission factors have been used.

## Materiality Threshold

NATS has adopted a 5% materiality threshold at the gross organisational level. This means that energy & environmental performance data reasonably estimated to not cumulatively equal more than 5% of the category figure (i.e. scope 1, scope 2 and water consumption) for NATS Holdings Ltd can be regarded as immaterial to intended users and excluded.

## Exclusions

NATS has chosen to adopt a complete and transparent approach that appropriately reflects the energy & environmental performance of the company, and serves the decision-making needs of users, both internal and external to NATS, and therefore a list and justification of specific exclusions are outlined below:

## Scope 1 GHG emissions

Natural gas supplied at the Corporate & Technical Centre is also used by the Joint Venture AQUILA ATMS, as it is co-located at this site. However it is not sub-metered. Therefore while Joint Ventures are out of scope, the proportion associated with AQUILA ATMS usage has not been removed from NATS Holdings Ltd scope 1 GHG emissions.

Fugitive emissions data is for the three main sites i.e. Corporate & Technical Centre, Prestwick control centre and Swanwick control centre. Other sites are considered *de minimis*, although we are actively engaged in improving our data collection, management and reporting processes as part of implementing the GHG Protocol.

## Scope 2 GHG emissions

Electricity supplied at the Corporate & Technical Centre is also used by the Joint Venture AQUILA ATMS, as it is co-located at this site. However it is not sub-metered. Therefore while Joint Ventures are out of scope, the proportion associated with AQUILA ATMS usage has not been removed from NATS Holdings Ltd scope 2 GHG emissions.

It shall be assumed that electricity generated at four sets of on-site photo voltaic panels is used to supplement NATS' energy usage and not exported to the grid.

NATS has contracted a third party to install a number of electric vehicle charging stations at its three main sites. The electricity supply to these stations is not sub metered. Some of this will be used in NATS' vehicles, while most will be used in employee vehicles and would normally be considered as scope 3 emissions, but has not been removed from NATS Holdings Ltd scope 2 GHG emissions.

## Estimations & Assumptions

NATS seeks to use primary data to calculate emissions wherever possible, however, in some cases data may not be available or of sufficient quality (e.g. due to lack of measurement capability, equipment replacements, equipment failures or billing issues) in which case secondary data, such as proxy data and extrapolation, will be used.

Estimation techniques are prioritised based on primary data and proxy data. For example, the vast majority of energy & environmental data is based on primary evidence, e.g. monthly invoices from utility providers. Depending on the utility provider's invoice scheduling and our third party verifier's checking, there may be periods towards the end of the financial year which accruals have to be estimated, for example if a water utility estimates usage and bills quarterly.

Where there is a full month gap in primary evidence, the equivalent period in the year previous will be used to estimate the accrual, or if not available, the equivalent period of the most recent actual data is used to estimate the accrual.

Where there is a partial month gap in primary evidence, an average of the previous 6 months actual data is used to replace that partial month data in its entirety. Where the previous 6 months includes unrepresentative data, e.g. due to missing data, a rebate, or some other identifiable material change above/below expected consumption, the months containing that unrepresentative consumption are excluded from the average used to fill the substantive partial month gap.

For new acquisitions, accruals are estimated based on a comparable building, where supplier estimates from previous tenants are unavailable.

## Errors & restatements

At the end of the financial year, accruals are estimated where invoices have not been received for each category of energy & environmental data. The accrual estimates are replaced by actuals as those invoices are received and processed after the year end figures have been verified and assured. If there is a material difference in activity data, the figures will be restated in the following year's mainstream report, still using the appropriate emission factors for the year which the restated data relates to. Similarly, if errors are discovered and are material, the data will be restated in the mainstream report.

# Detailed methodology for assured environmental performance metrics

The table below indicates the methodology for the calculation of environmental performance metrics subject to external assurance. For each metric we have provided an overview of the following:

- 1) Data Measurement and Recording      2) GHG Emissions Quantification

Category	Methodology
Scope 1 Natural Gas	<p><b>Data Measurement and Recording</b></p> <p>Natural gas combustion is measured through the natural gas meters included within NATS' operational boundary. NATS receives invoices from the suppliers based on actual meter reads or estimate reads.</p> <p>The invoice data is collected by TEAM (Energy Auditing Agency) Ltd on behalf of NATS using their proprietary billing validation system (TEAM Sigma). The kilowatt hours of natural gas used on site, as recorded on the invoices, are captured on the TEAM Sigma system.</p> <p>Manual meter readings are taken for some manned sites and are submitted to NATS FM Systems team via email. Manual meter reads are not used for greenhouse gas reporting but are used to query anomalous billing.</p> <p><b>GHG Emissions Quantification</b></p> <p>NATS uses the UK Government GHG Conversion Factors for the relevant reporting period (2015 emission factor) in order to convert activity data in kWh into tCO<sub>2</sub>e. Emissions from on-site natural gas combustion where NATS has operational control are classified as Scope 1 emissions.</p>
Scope 1 On-site fuel combustion	<p><b>Data Measurement and Recording</b></p> <p>Other fuel usage data such as gas oil or diesel used in machinery or in buildings is captured through invoices. It is assumed that all fuel that is delivered is combusted.</p> <p>This data is reported based upon the quantities and types of fuel delivered during the reporting period and it is assumed that all fuel that is delivered is combusted. It is assumed that electricity generated from oil usage is only used by NATS and not exported to the grid.</p> <p><b>GHG Emissions Quantification</b></p> <p>NATS uses the UK Government GHG Conversion Factors for the relevant reporting period (2015) in order to convert activity volume data into tCO<sub>2</sub>e.</p> <p>Emissions from fuel combustion on sites where NATS has operational control are classified as Scope 1 emissions.</p>
Scope 1 Road vehicle fuel combustion	<p><b>Data Measurement and Recording</b></p> <p>Liquid fuel combustion (diesel and petrol) within owned and leased company cars (both deemed to be 'controlled' by NATS) is measured and recorded using both the company expenses system and a fuel card system provided by Arval, as well as through EuropCar. Some data is recorded in miles and some data is recorded in litres of fuel.</p> <p><b>GHG Emissions Quantification</b></p> <p>NATS uses the UK Government GHG Conversion Factors for the relevant reporting period in order to convert activity data (miles or litres) into tCO<sub>2</sub>e. Where the car type and fuel type is known, a specific emission factor relating to these will be used. Where the car type and fuel type is unknown, an average car unknown fuel emission factor is used.</p> <p>Emissions from road vehicle fuel combustion in both owned and leased vehicles are classified as Scope 1 emissions.</p>

Category	GHG Source
Fugitive emissions	<p><b>Data Measurement and Recording</b></p> <p>Fugitive emissions data is collected for the three main sites i.e. Corporate &amp; Technical Centre, Prestwick control centre and Swanwick control centre. Other sites are considered <i>de minimis</i>, although we are actively engaged in improving our data collection, management and reporting processes as part of implementing the GHG Protocol.</p> <p>For the three main sites information about refrigerant gas top-ups is collected through the contractor. Refrigerant gas top up in the period is used as a proxy for refrigerant gas lost to the atmosphere in the period.</p> <p><b>GHG Emissions Quantification</b></p> <p>NATS uses the UK Government GHG Conversion Factors for the relevant reporting period (2015) in order to convert activity data (litres) into tCO<sub>2</sub>e. Specific emission factors are used for specific refrigerant gases.</p> <p>Fugitive emissions are categorised as Scope 1.</p>
Scope 2 Electricity consumption – Location based method	<p><b>Data Measurement and Recording</b></p> <p>Electricity consumption is measured through the electricity meters included within NATS’ operational boundary.</p> <p>NATS has partnered with Siemens Metering Services and now has automatic meter reader (AMR) technology installed across the majority of sites. Manual electricity meter reads for non-AMR sites are obtained when required and passed onto the supply company as required for billing.</p> <p>NATS receives invoices from the suppliers based on actual meter reads or estimate reads. The invoice data is collected by TEAM (Energy Auditing Agency) Ltd on behalf of NATS using their proprietary billing validation system (TEAM Sigma). The kilowatt hours of electricity used on site, as recorded on the invoices, are captured on the TEAM Sigma system.</p> <p>Manual meter readings are taken for some manned sites and are submitted to NATS FM Systems team via email. Manual meter reads are not used for greenhouse gas reporting but are used to query anomalous billing.</p> <p><b>GHG Emissions Quantification</b></p> <p>NATS uses the UK Government GHG Conversion Factors for the relevant reporting period (2015) in order to convert kWh activity data into tCO<sub>2</sub>e under the location based method.</p>
Scope 3 Water consumption	<p><b>Water Consumption</b></p> <p>Water data is collected through water meters included within NATS’ operational boundary. NATS receives invoices from the suppliers based on actual meter reads or estimate reads.</p> <p>The invoice data is collected by TEAM (Energy Auditing Agency) Ltd on behalf of NATS using their proprietary billing validation system (TEAM Sigma). The volume of water used on site, as recorded on the invoices, are captured on the TEAM Sigma system.</p> <p>Limited sites are billed on rateable value (RV) rather than metered consumption and are not included in scope but are considered <i>de minimis</i>.</p>

# Market based scope 2 reporting

The 2015 update to the Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard Scope 2 Guidance requires that NATS quantify and report Scope 2 emissions from purchased electricity consumption for our own use using two different methodologies - the location-based method and the market-based method - which is known as dual reporting.

Figure 1 shows our Scope 2 emissions from purchased electricity which have been calculated using the two different methodologies. The dual reporting of our emissions in this way demonstrates that NATS is making efforts to reduce our climate impact through the purchase of electricity generated from renewable sources.

Since October 2015 we have purchased 100% renewable energy from npower (backed by REGOs) covering 90% of our electricity consumption. For this reporting

period, we have accounted for electricity from these supplies from 1st October 2015 - 31st March 2016 using a 0 kWh/Kg CO<sub>2</sub> emission factor, instead of the standard npower factor of 0.418 kWh/Kg CO<sub>2</sub>.

In other sites where we know the supplier, but we do not purchase renewable energy, the suppliers have been unable to provide emission factors specifically relating to NATS' tariff. Therefore we have used the supplier specific emission factors published on suppliers' websites in compliance with The Electricity (Fuel Mix Disclosure) Regulations 2005.

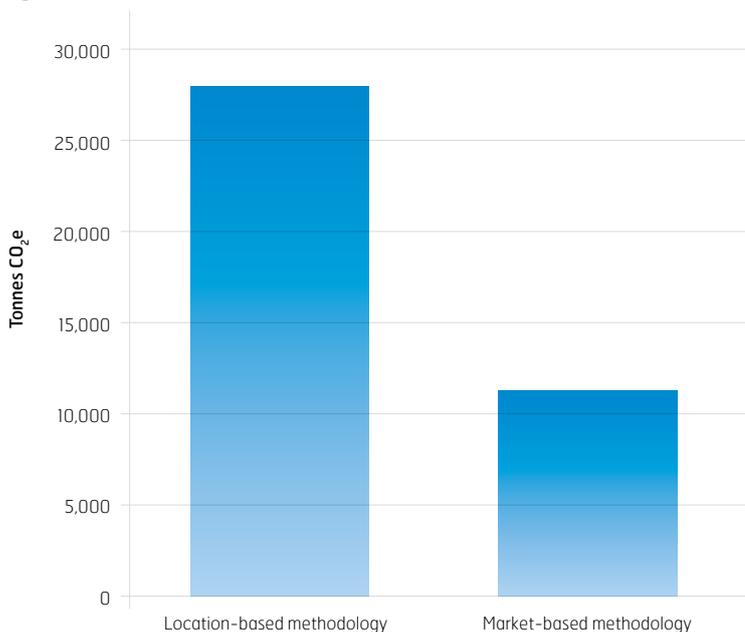
Where these supplier specific factors are unavailable, in accordance with the GHG Protocol Market-based scope 2 hierarchy, we have used the residual mix emission factor published by RE-DISS as we have been unable to obtain specific emission factors from our suppliers.

The location-based methodology is used in the NATS Holdings Limited Annual Report & Accounts. This is supplemented with the market-based methodology in the NATS Responsible Business report for full transparency.

Please note that this market-based figure has not been externally assured by our auditors, as our electricity suppliers have been unable to provide evidence of the exclusivity and traceability of the renewable electricity that we purchase and therefore do not conform with the GHG Protocol Scope 2 Quality Criteria.

In addition, emissions for market based reporting are reported in tCO<sub>2</sub> rather than tCO<sub>2</sub>-equivalent due to the availability of emission factors.

Figure 1



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# Verification and assurance

## External Verification

Carbon Credentials has collected the GHG emissions, energy and water data for this financial year following implementation of the GHG Protocol.

## External Assurance

PricewaterhouseCoopers LLP has undertaken an independent limited assurance review on selected environmental performance data for the year ended 31st March 2016. The metrics subject to assurance are indicated by the symbol “^” above. Their assurance report is available on the Company’s corporate website at [www.nats.aero/environment/cr](http://www.nats.aero/environment/cr).