



Carbon Footprint Verification Report for
Alliance Trust plc

15th February 2021

Verification summary

Verifiers:	Georgina Whitlock, Senior Environmental Consultant, Carbon Footprint Ltd
Reviewed by:	Grace Parker, Environmental Consultant, Carbon Footprint Ltd
Authorised by:	John Buckley, Managing Director, Carbon Footprint Ltd
Inventory period verified:	1 st January 2020 to 31 st December 2020
Level of assurance:	Limited
Assurance being given to:	Sharon Winter Alliance Trust plc 3 rd Floor, River Court 5 West Victoria Dock Road Dundee DD1 3JT
Verification Standard:	ISO 14064-3: 2019
Methodology used for the calculation:	GHG Protocol

Statement of verification

Alliance Trust plc
3rd Floor, River Court
5 West Victoria Dock Road
Dundee
DD1 3JT

12th February 2021

Scope

Alliance Trust plc engaged Carbon Footprint Ltd to verify the calculations and supporting evidence for its 2020 Carbon Footprint (data period: 1st January 2020 to 31st December 2020). Alliance Trust plc is responsible for the information within the carbon footprint assessment. The responsibility of Carbon Footprint Ltd is to provide a conclusion as to whether the statements made are in accordance with the Greenhouse Gas (GHG) Protocol.

Methodology

The verification was led by Georgina Whitlock, Senior Environmental Consultant, Carbon Footprint Ltd. Carbon Footprint Ltd completed the review in accordance with the 'ISO 14064 Part 3 (2019): Greenhouse Gases: Specification with guidance for the verification and validation of greenhouse gas statements'. The work was undertaken to provide a limited level of assurance with respect to the GHG statements made. Carbon Footprint Ltd believes that the review of the assessment and associated evidence, coupled with this subsequent report, provides a reasonable and fair basis for our conclusion.

The following data was within the scope of the verification (below shows the post-audit results):

- **Scope 1:** natural gas consumption and refrigerant loss – **6.11 tCO₂e**
- **Scope 2:** purchased electricity – **1.34 tCO₂e (location-based) and 2.13 tCO₂e (market-based)**
- **Scope 3:** business travel (air, rail, taxi and personal car), paper consumption, remote-working energy use, waste disposal (paper only), water (supply & wastewater treatment), electricity transmission & distribution and well-to-tank gas emissions – **5.44 tCO₂e**

Location-based total: 12.89 tCO₂e

Market-based total: 13.68 tCO₂e

Assurance opinion

Based on the results of our verification process, Carbon Footprint Ltd provides limited assurance of the GHG emissions statement, **and found no evidence that the GHG emissions statement:**

- is not materially correct and is not a fair representation of the GHG emissions data and information;
- has not been prepared in accordance with the GHG Protocol.



Georgina Whitlock, MEnvSci (Hons)
Senior Environmental Consultant

1 Introduction

Alliance Trust plc (Alliance Trust) is an investment and financial services company, headquartered in Dundee, Scotland. This report provides the outcomes of the independent verification of Alliance Trust's GHG statement for the period 1st January 2020 to 31st December 2020.

The verification was based on the 2020 carbon footprint calculations (version received 15th January 2021), supplemented with a remote meeting and review of supporting evidence. A verification plan (Appendix 1) was devised at the preliminary stages of the assessment to guide the verification process. The sampling plan in Appendix 2 lists the primary data that was requested.

The verification was undertaken in line with the International Standard ISO 14064-3: 2019 'Greenhouse gases: Specification with guidance for the verification and validation of greenhouse gas statements' to a limited assurance level.

1.1 Objectives

The objectives are:

- To provide assurance to Alliance Trust, to ISO 14064-3 standard, that the GHG statement is reliable and of sufficient quality for external reporting.
- To provide a verification statement that meets the requirements of CDP.
- To assist internal purposes – mainly for CSR reporting and other disclosures; annual reports and tracking towards internal targets.

1.2 Scope

The GHG statement that is being verified is Alliance Trust's carbon footprint for the period 1st January 2020 to 31st December 2020. The following sources of GHG emissions are within the scope of the verification:

- Scope 1 (direct): natural gas and refrigerant loss.
- Scope 2 (indirect): purchased electricity.
- Scope 3 (other indirect): business travel (air, rail, personal car, taxi), paper consumption, remote-working energy use, waste disposal (paper only), water (supply & wastewater treatment), electricity transmission & distribution, and well-to-tank gas emissions.

The GHG emissions have been consolidated through the operational control approach and are reported in terms of carbon dioxide equivalent (CO₂e).

1.3 Materiality

A qualitative and quantitative evaluation of any errors, limitations or misrepresentations has been undertaken. The verification team, using professional judgment, determined whether any qualitative discrepancies could affect the overall GHG statement and have a material impact on the decisions of the intended user. Quantitative discrepancies were calculated individually to understand the impact of them as a percentage of the GHG statement. **The pre-defined materiality threshold is 1% of the total inventory.**

1.4 Responsibility

Alliance Trust plc is responsible for the provision of the GHG statement and the supporting information. Carbon Footprint Ltd was contracted to provide a third-party verification of the GHG statement, to a limited level of assurance. Appendix 3 provides a profile of the verification team.

1.5 The work undertaken

The verification undertaken by Carbon Footprint Ltd was conducted in accordance with ISO 14064-3 (2019): Greenhouse gases- part 3: '*Specification with guidance for the verification and validation of greenhouse gas statements*'. This was to a limited level of assurance, as defined by the ISO 14064-3 standard. A verification plan (including sampling) was devised at the preliminary stages of the assessment to guide the verification process (see appendices).

In conformance with the ISO 14064-3 standard, the following activities were undertaken:

- Initial review of the GHG documentation and methodologies, including historical GHG data for the period 1st January 2020 to 31st December 2020.
- Remote audit involving discussions with staff from Alliance Trust regarding:
 - Scope of calculation (including appraisal boundaries).
 - Input data sets, any missing data, estimations made and assumptions.
 - Calculation methodology and conversion factors used.
 - Quality control procedures.
 - Results & interpretation.

1.6 Independence

The verifier has remained independent from activity taken to calculate the GHG statement. The verifier has maintained objectivity during the audit, basing conclusions on evidence obtained during the audit.

1.7 Abbreviations

AT	Alliance Trust plc
CO ₂ e	Carbon Dioxide Equivalent
CSR	Corporate Social Responsibility
Defra	Department for Environment, Food & Rural Affairs
GHG	Greenhouse Gas
ISO	International Organisation for Standardisation
km	Kilometres
kWh	Kilowatt Hours
tCO ₂ e	Tonnes of Carbon Dioxide Equivalent

2 Verification results

2.1 Assessment of the GHG information system and its controls

2.1.1 Boundary and data selection

Organisational boundaries

This GHG assessment covers Alliance Trust plc (AT). This is the first full year AT has been based at the River Court office, however due to the COVID-19 pandemic, staff have worked from home since 13th March 2020.

The GHG emissions have been consolidated through the operational control approach and reported in terms of carbon dioxide equivalent (CO₂e).

Both location-based and market-based emissions have been calculated, in line with the GHG Protocol.

Operational boundaries

This is the first year AT has included emissions associated with remote-working energy use within the assessment scope. Communal electricity and gas consumption has been apportioned to AT and included within Scope 1 & 2 emissions.

Scope 1 (direct): natural gas consumption and refrigerant loss.

Scope 2 (indirect): consumption of purchased electricity.

Scope 3 (other indirect): business travel (air, rail, personal car, taxi), paper consumption, remote-working energy use, waste disposal (paper only), water (supply & wastewater treatment), electricity transmission & distribution, and well-to-tank gas emissions.

2.1.2 Data management & limitations

The data is collated from various sources such as utility bills and expense claims obtained from the general ledger. For quality control, internal checks are made on the data as well as this external audit.

Direct electricity meter, and other utilities (gas & water) are covered in the service charge at River Court. However, consumption data is provided by the landlord for the GHG calculations.

2.2 Assessment of GHG data and information

2.2.1 Electricity consumption

Electricity consumption accounts for approximately 11.6% of Alliance Trust's total location-based GHG emissions.

River Court

- AT's total electricity consumption is obtained from the communal electric meter and AT's own electric sub-meter. The Building Manager emails AT the meter readings each month for both of these.
- The separate sub-meter was installed in October 2019, but apparently was not switched on until March 2020. January and February 2020 are therefore estimated, based on average kWh/day for the other months. This calculation was checked and is correct.
- A photo of the communal meter was provided as evidence, and showed the reading was in kVAh^{x10}. AT has converted the kVAh readings to kWh, and then apportioned to AT based on occupied floor area. The calculations to convert and apportion were checked and found to be correct, however the meter's multiplier of 10 had not been accounted for. This error accounted for 1.8% of the total emissions and was therefore corrected during the audit.
- I recommend asking the Building Manager to check the meter is showing readings in kWh rather than kVAh in future. The meter should allow this to be changed via the screen/buttons.
- The bills provided show that the supplier was switched from Opus (100% renewable tariff) last year to EON for the 2020 data period. However, AT were unable to find out if it was a renewable or standard tariff, therefore it has assumed standard to avoid under-estimating. This assumption is appropriate, however the incorrect supplier-specific factor was used. AT used EON's total fuel mix, rather than just its residual/standard fuel mix. This was corrected during the audit from 221 gCO₂/kWh to 370 gCO₂/kWh.

Remote working

- Due to the COVID-19 pandemic requiring staff to work from home, AT has included an estimation of the energy used at home for business.
- AT used a video produced by Carbon Footprint Ltd on "how to assess remote working emissions" to guide its calculation methodology.
- Assumptions used were deemed appropriate. For example, heating energy has been excluded as all staff have another person in the house during the working day, therefore heating would have been on anyway.
- Remote working electricity data had been incorrectly reported under scope 2. This has been corrected to scope 3.

2.2.2 Natural gas consumption

Gas consumption accounts for approximately 47.2% of Alliance Trust's total location-based GHG emissions.

River Court

- Communal gas meter readings are provided to AT by the landlord.
- A photo of the meter was provided as evidence, confirming that the meter readings are recorded in cubic metres (m³).

- Copies of emails with meter readings from the landlord were viewed during the audit, and found to match the data used in the calculation spreadsheet.
- Calculations to convert the m³ to kWh, and apportion to AT, were checked and found to be correct.

2.2.3 Refrigerant loss

The average leak rate method has been used, which is consistent with previous years. Although AT's office space does not connect to the building's HVAC system, they have included a share for the communal usage. The assumptions and estimations made have been deemed acceptable, and is a minor element of the overall GHG emissions.

2.2.4 Business Travel

Scope 3 – air, rail, taxi and personal car business travel

Grey fleet car travel:

- Not applicable this year – only taxi and rail travel.

Taxi:

- Data has been obtained from expenses. Same estimations and assumptions used as previous years to convert cost data to annual distance travelled (£2.45 per mile).
- Calculation methodology was deemed to be appropriate.
- Emission factor used is correct – the kilometre factor has been used rather than passenger.km which is consistent with previous years.

Rail

- Data was obtained from expenses and converted to kilometres using an assumption of 33p/mile (calculated based on fare for return travel Dundee to Edinburgh). This is consistent with previous years and an appropriate estimation method.
- Calculations were spot checked and found to be correct.

Flights:

- AT uses data obtained from expenses/general ledger, which states cost as well as departure/destination locations.
- The distance travelled was calculated per flight using a website (www.airmilescalculator.com) which is consistent with previous years. All flights taken by AT were domestic.
- The expenses data and distance calculations were provided as evidence during the audit. One flight was labelled as "single" but incorrectly calculated as a return trip. This was corrected during the audit.
- Appropriate emission factors were used, and radiative forcing was included which is best practice and consistent with previous years.

2.2.5 Other

Purchased materials – paper:

- Data has been obtained from expenses, which were viewed during the audit.
- Calculation was checked and found to be correct.

Waste disposal – paper:

- The amount of paper waste was assumed to be 100% of the paper purchased. Based on the reasons for printing and the documents being temporary, this is a reasonable assumption.
- All other waste is minimal and therefore has not been assessed.
- Calculation methodology, assumptions and emission factors used were found to be appropriate and correct.

Water consumption:

- Data has been obtained from invoices for the whole building and apportioned to Alliance Trust based on floor area. This is a suitable estimation method and was calculated correctly.
- September to December 2020 data was not available at time of calculation so this was estimated based on average consumption per day from the January to August data. Calculations were checked and found to be correct.
- The sum of water consumption was incorrectly omitting the estimated Sept-Dec consumption. This was corrected from 55m³ to 78 m³.
- Emissions for both supply and wastewater treatment have been included and calculated correctly.

2.3 Data calculations

Emission factors have been sourced from Defra/BEIS 2020, which is a reliable source and appropriate for the data period. Emission factors were spot-checked and mainly found to be correct/relevant to the emission sources. The emission factor used for gas was the “100% mineral blend” factor, which is not consistent with the previous year. However, the error is minor and therefore does not require re-calculation.

There was an error in calculating the electricity consumption for River Court, as the x10 multiplier stated on the meter had not been taken into account. As mentioned previously, this was corrected in the audit.

Market-based emissions have been calculated using supplier-specific fuel emission factors, which is the appropriate methodology. However, the factor used was for EON’s total fuel mix, rather than for its residual/standard fuel mix (i.e. what is left over after all renewable energy has been allocated to the renewable tariffs). This was corrected during the audit from 221 gCO₂/kWh to 370 gCO₂/kWh.

3 Conformance with verification criteria

The chosen methodology that has been used for accounting and reporting Alliance Trust’s GHG inventory is the GHG Protocol Corporate Standard. Carbon Footprint Ltd has examined Alliance Trust’s GHG statement in relation to the GHG Protocol’s accounting and reporting principles. The verification activities have shown that Alliance Trust has met the verification criteria satisfactorily – most of the requirements have been met, apart from reporting the emissions for each of the six GHGs separately, though these are included within the carbon dioxide equivalents (CO₂e).

Relevance – the data collected and reported reflects the significant environmental impacts of Alliance Trust’s operations.

Completeness – emission sources that come within the reporting boundary have been quantified and reported where possible. Exclusions (if applicable) have been disclosed and justified.

Consistency – methodologies are documented and appear to be consistent.

Transparency – Alliance Trust has stated its approach to data collection and explained the assumptions and estimations made.

Accuracy – sufficient accuracy has been achieved, and quality control systems are in place to reduce uncertainties and errors where possible.

4 Conclusions

Alliance Trust has captured its most significant emission sources within its assessment boundary. Supporting evidence was provided for the data audited. A number of errors were identified during the audit – all material and most minor errors were corrected and verified during the course of the audit.

Estimation methodologies used to account for missing data were deemed appropriate.

There were several errors identified, however these were all corrected during the course of the audit.

In conclusion, Carbon Footprint Ltd has verified Alliance Trust's GHG statement in accordance with ISO 14064-3 standard to a limited level of assurance.

4.1 Recommendations

Carbon Footprint Ltd understands the data limitations Alliance Trust has encountered. Below are several recommendations to assist Alliance Trust in improving the quality of its GHG statement:

- I recommend asking the Building Manager to check the meter is showing readings in kWh rather than kVAh in future. The meter should allow this to be changed via the screen/buttons.
- Obtain details of the energy tariffs from landlord and keep a record of evidence provided (e.g. utility bill stating the contract details or renewable energy certificate). Where specific tariff is not known, use the "residual/standard" fuel mix rather than the suppliers total fuel mix.
- Consider including WTT emissions for other sources, not just gas consumption.
- Consider assessing employee commuting emissions.
- Investigate whether data for other waste types can be obtained from invoices/waste transfer notes, or estimated based on number of bins and frequency of collection.

4.2 Assurance opinion

Based on the results of our verification process, Carbon Footprint Ltd provides limited assurance of the GHG emissions statement, **and found no evidence that the GHG emissions statement:**

- is not materially correct and is not a fair representation of the GHG emissions data and information;
- has not been prepared in accordance with the GHG Protocol.

It is Carbon Footprint Ltd's opinion that Alliance Trust plc has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of GHG emissions for the stated period and boundaries.

Appendix 1

Alliance Trust plc Verification Plan – Carbon Footprint 2020 (1st Jan 2020-31st Dec 2020)

ISO 14064-3 Ref.	ISO 14064-3 Requirements	Evidence	Comments
5.1.3.	Level of Assurance	To be agreed at the beginning	Anecdotal/proposal Limited
5.1.4	Objectives	To be agreed at the beginning	Proposal To provide assurance that data and calculations are correct (quality control). To provide third-party assurance, to ISO14064-3 standard, that the GHG statement is reliable and of sufficient quality for CDP and annual reporting.
5.1.5	Criteria	To be agreed at the beginning	Anecdotal GHG Protocol
5.1.6	Scope	Organisational boundaries, physical infrastructure & activities, GHG sources, type of GHGs, time period	Anecdotal, proposal Scope 1, 2 & 3. 1st January 2020 to 31st December 2020. Operational control. CO ₂ e.
5.1.7	Materiality	Establish materiality	Materiality threshold 1%
5.4.4	Verification records	The verifier shall maintain records to demonstrate conformity to the requirements of ISO14064-3.	Verification plan. Verification report. This verification plan is the basis of recording the audit and capturing information.
6.1.3.3	GHG information system & its controls	Processes for collecting, processing and reporting GHG information.	Anecdotal Travel data is recorded in the general ledger and energy data obtained from the landlord. Quality control – external checks are made via this third-party verification audit.
6.1.3.4	GHG data & information	Examination of the GHG data and information.	

ISO 14064-3 Ref.		ISO 14064-3 Requirements	Evidence	Comments
	(Review of calculation methodology and conversion factors)			
6.1.5	Verification Plan	Document assurance level, objectives, criteria, scope, materiality & schedule.	This document	This table documents the verification plan.
6.1.6	Evidence gathering plan		Sampling Plan	See Appendix 2.
6.3.1	Evaluation of the GHG statement	<p>Evaluate whether the evidence collected supports the GHG statement.</p> <p>Conclude whether or not the GHG statement is without material discrepancy and whether the verification activities provide the agreed level of assurance.</p>	Verification report	Sufficient evidence was provided to support the statement.
6.3.1.4	Assessment against verification criteria	Confirm whether the organisation conforms to the verification criteria.	Verification report	Organisation has met the verification criteria satisfactorily.
6.3.2 & 6.3.3	Conclusion and opinion	A verification statement containing the level of assurance, objectives, scope, criteria, the GHG statement and the verifier's opinion on the GHG statement.	Verification statement	A verification statement will be issued.

Appendix 2 – Sampling Plan

The sampling will be a risk-based approach, in order to collect adequate evidence to support the limited level of assurance. Calculations and results will be reviewed and discussed remotely as a desk-based exercise and during the site visit.

Data sampled were chosen due to materiality to the total carbon footprint and noticeable deviation from the previous year's results.

Primary data (e.g. utility bills, expense claims, fuel card reports etc.) requested for:

- Electricity – River Court
- Gas – River Court
- Air travel
- Energy certificates/contracts (for market-based emissions)

Secondary data was reviewed for all other sites and emission sources.

Appendix 3

Carbon Footprint Ltd Verification Team

Carbon footprint Ltd has enabled the completion of the carbon footprints of over 20,000 businesses globally via our tools and consultancy. We are confident that we bring independent, ethical conduct, fair representation, due professional care and fresh insights to carbon management and verification activities.

We work with a vast range of companies, from SMEs to multinational blue-chip corporations with goals to comply with legislation, cut the cost of carbon in their business, maximise sales by developing true sustainable credentials and prepare for future legislation.

We are a world leading carbon footprinting company:

- We follow international standards, such as ISO14064-1, PAS2050, GHG Protocol, ISO14064-3 within our work
- We are ISO 14001:2015 and ISO 9001:2015 certified
- We are approved under the Quality Assurance Standard (QAS) – this means that our own carbon footprinting tools and methodology is independently audited by AEA-Ricardo.
- We work with other businesses to complete/validate GHG emissions for their Mandatory GHG Reporting and CDP reporting requirements
- We run the Carbon Academy (for peer group learning)
- We provide input and advice to the government on low carbon legislation

Georgina Whitlock

Senior Environmental Consultant

Georgina has a Master's degree in Environmental Science and is a member of IEMA. She has conducted numerous carbon footprint assessments to ISO14064-1 standard and verifications to ISO14064-3 standard for businesses varying in type and size. She is also an approved Airport Carbon Accreditation verifier.

Grace Parker

Environmental Consultant

Grace has a Master's degree in Environmental Science and is a member of IEMA. She has experience in completing numerous carbon footprint assessments following ISO 14064-1 standard and the GHG Protocol, as well as verifications to ISO14064-3 standard. Grace also has experience in energy auditing.

John Buckley

Managing Director / Co-Founder Carbon Footprint Ltd

John set up Carbon Footprint Ltd in 2005, and has managed the strategy and growth of the company. An experienced practitioner in this field, he has developed a number of tools around appraisal, verification, validation services and is regularly invited to produce keynote speeches and provide training around these subjects.