

KPI definitions

2021 Reporting

abrdn.com

Carbon footprint

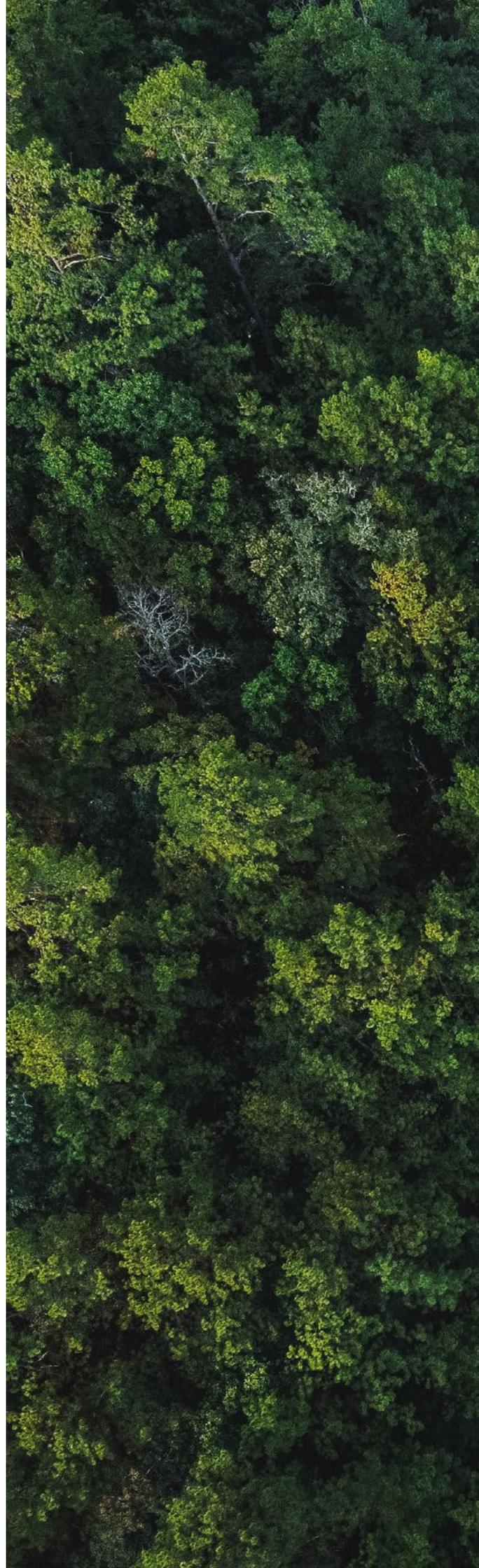
Overview

Our carbon reporting methodology aligns with the Greenhouse Gas Protocol. While both location-based and market-based emissions are reported, only the location-based emissions are externally assured. abrnh uses an operational control boundary to determine which entities are reported. Therefore the businesses we report on are abrnh plc and its wholly owned and operated subsidiaries, and exclude joint ventures and associates. Our figures are for the reporting period (calendar year 2021).

Where data is unavailable, it is estimated based on the same time period for the facility for the previous year, or the average consumption for the facility for the current reporting year, or a similar site within the portfolio. Where we have used the latter estimation process we have calculated based on Full-time equivalent (FTE)/Kilowatt hour (kWh) for both electricity and natural gas.

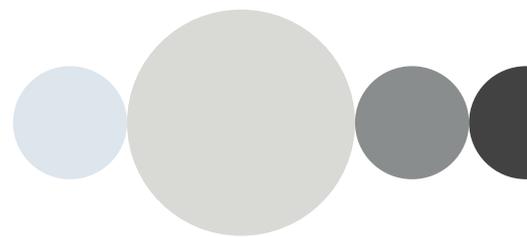
Measure

Annual total carbon emissions across Scope 1, 2 and 3.
(units: tCO₂e)





Carbon footprint



Scope 1

Natural gas

Natural gas used in abrdn's office buildings, including owned, leased and serviced office spaces, and where possible apportioned communal space. Gas is reported in kWh or m³ for all in-scope operations and converted into tCO₂e emissions using the 2021 Department for Environment, Food and Rural Affairs (DEFRA) guidance on conversion factors.

Fluorinated gas

Fluorinated gases (F-gas) used in equipment that is the responsibility of abrdn to operate and maintain. The F-gas usage is measured by the weight (kg) of gas replaced due to leakage or maintenance in each building. The gas is recorded as kilograms and converted into tCO₂e emissions using the 2021 DEFRA guidance on conversion factors.

Business fleet miles

Fleet miles for owned and long-term leased vehicles recorded by abrdn. The mileage recorded is converted into tCO₂e emissions using the 2021 DEFRA guidance on conversion factors for average petrol or diesel vehicles.

Diesel

Any diesel used in back-up generators, and generators on site where there is no natural gas grid, that are the responsibility of abrdn to operate and maintain. The diesel is recorded in litres and converted into tCO₂e emissions using the 2021 DEFRA guidance on conversion factors.

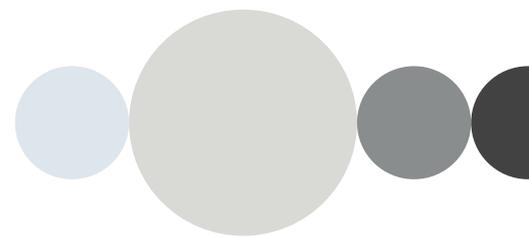
Scope 2

Electricity

Electricity used in abrdn's office buildings, including owned, leased and serviced office spaces, and where possible apportioned communal space. Electricity is metered and measured in kWh for all in-scope operations and converted into tCO₂e emissions using the 2021 DEFRA guidance on conversion factors for the UK. Outside the UK we used the 2019 factors from the International Energy Agency for offices, other than in Australia, Canada and the United States where we applied the most accurate/granular publicly published factors available for a region. For the US this means eGrid electricity factors, for Canada this means national inventory factors for the provinces/territories and for Australia this means NGERs state and territory factors.

A small number of leased and serviced office spaces receive heat and cooling from district heating schemes. The conversion factors used are locally provided. District heating is metered and measured in kWh for all in-scope operations and converted into tCO₂e emissions using the 2021 DEFRA guidance on conversion factors.





Scope 3

Business air passenger kms

All flights booked for business purposes through abrdn's third-party travel operators. The travel operator's records provide the basis for reporting and we rely on the classification provided by the travel operator for the purpose of the calculation. Flights are classified as per the DEFRA guidance, detailed in the table.

Once classified, km are converted into tCO₂e using the 2021 DEFRA guidance on conversion factors.

Rail travel kms

All rail travel booked for business purposes through abrdn's third-party travel operators. The travel operator's records provide the basis for reporting and we rely on

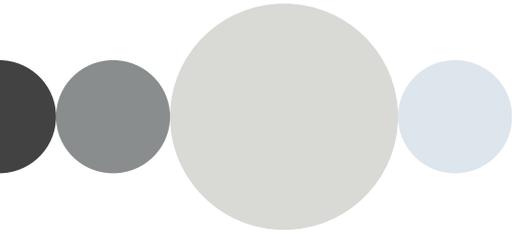
the classification provided by the travel operator for the purpose of the calculation. Rail distance travelled is converted into emissions using the 2021 DEFRA guidance on conversion factors for national and international rail travel.

Transmission and distribution losses

Transmission and distribution (T&D) losses are energy losses which occur in the process of supplying electricity to consumers due to technical and commercial factors. All emissions are converted from kWh of electricity to tCO₂e using the applicable regional guidance on conversion factors.

Activity	Haul	Class	Unit
Flights	Domestic, to/from UK	Average passenger	passenger.km
		Economy class	passenger.km
	Short-haul, to/from UK	Business class	passenger.km
		Average passenger	passenger.km
		Economy class	passenger.km
		Business class	passenger.km
		Premium economy class	passenger.km
	Long-haul, to/from UK	Business class	passenger.km
		Average passenger	passenger.km
		Economy class	passenger.km
		Premium economy class	passenger.km
		Business class	passenger.km
International, to/from non-UK	Average passenger	passenger.km	
	Economy class	passenger.km	
	Premium economy class	passenger.km	
	Business class	passenger.km	
	First class	passenger.km	

Carbon footprint



Waste

Our waste management provider records from the largest office locations using the DEFRA 2021 guidance conversion factors to calculate emission factors from each waste stream.

Emissions from working from home

For all working from home emissions we have applied the conversion factors as detailed in the electricity kWh conversion for Scope 2 above (although we have also calculated for well to tank electricity generation and well to tank transmission and distribution, as well as transmission and distribution in the UK, as these are scope 3 emissions). We have used the following assumptions for calculating our working from home emissions:

Working from home FTE (WfHFTE)

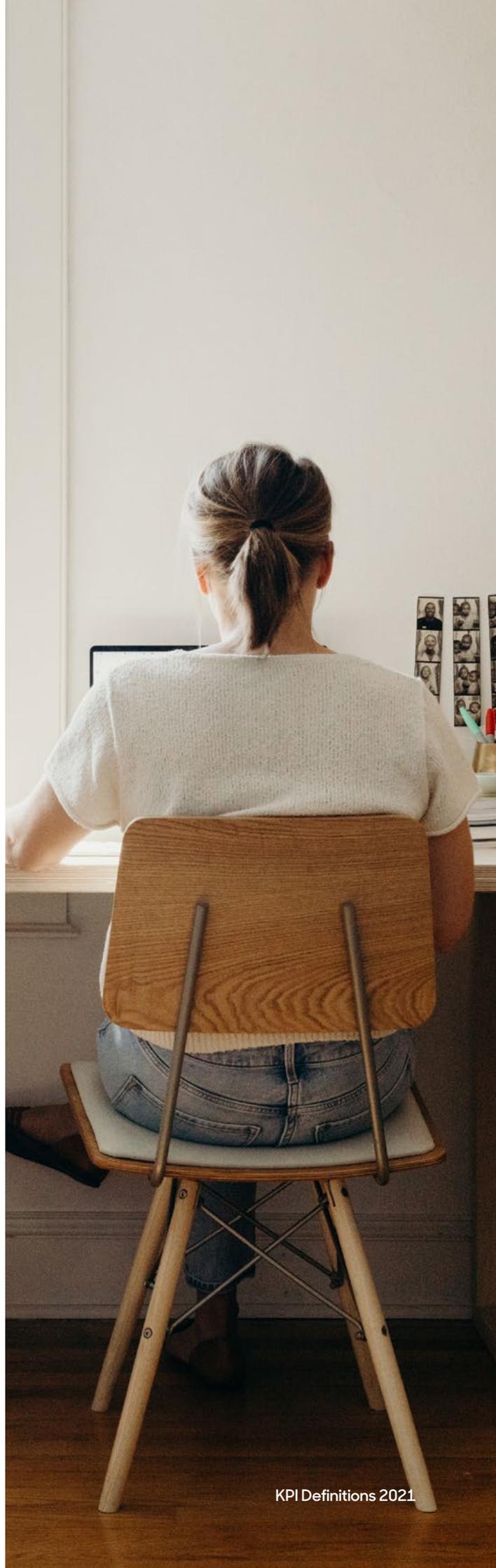
The FTE count for each location per calendar month, minus the office occupancy FTE. The office occupancy data was provided via our workplace teams.

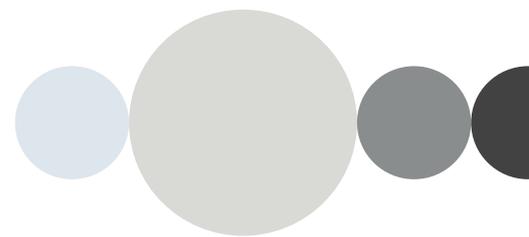
Working hours per calendar month (WHpcm)

We have assumed a standard 5-day, 35hr week (7hr/day) as per our average UK contract. The additional energy from working from home should not be calculated for periods of annual leave, therefore we have deducted our UK contracted 40 days annual leave in order to calculate working hours.

Work Station and Lighting kWh use

For workstations we have used 140W as stated in the CIBSE Guide F (2012). This allows for a laptop or PC, monitor, phone and printer. For lighting in the home office, we have assumed an allowance of 10W throughout the year.





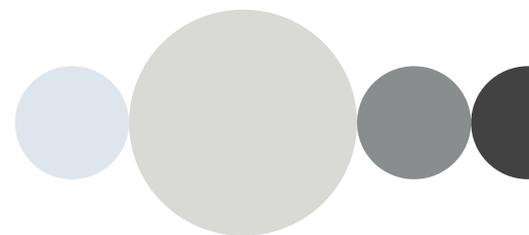
Heating Energy

We have assumed that heating cannot generally be restricted to a small working area and that time spent at home during the heating season requires the whole heating system to be active.

Due to the huge variation in heating requirements across our global locations we have made certain assumptions and have split our locations into three super regions:

1. UK and EMEA – where heating energy requirements are based on assumptions for the UK. The 2020 OFGEM publication of 'Typical Domestic Consumption Values'¹ gives a reliable "typical - medium" expectation of 12,000kWh per year for domestic gas usage. Research shows that approximately 77% of annual gas usage in a UK home is attributed to heating². We use this statistic as a proxy for unspecified heating energy. UK energy suppliers suggest that an average of 10 hours per day during the heating season is common, and we have assumed that the heating season is October to March (182 days)³ as part of our monthly calculation approach. We applied these assumptions to the whole UK and EMEA region of which the UK represents 94% of the FTE, and of which almost all our offices are located within a temperate climate zone.
2. The Americas – in the USA the heating is based on census regions. Where our offices are outside of the USA we have taken into consideration the climate of that location. For our Sao Paulo office (which is in a tropical climate zone) we have assumed no additional heating has been required for working from home. While in our Toronto office we have used the heating requirement data for the closest geographic USA census regions. The Energy Information Administration (EIA) indicates that circa 50% of homes in America use natural gas for heating⁴. We applied the census regional average gas usage values from the EIA (as shown in the table below). The average hourly heating demand was calculated using the typical northern hemisphere heating season. For the remaining 50% of homes that do not use natural gas, we have assumed heating is provided via electricity.
3. Asia Pacific – we assumed no additional heating required because the majority of our FTE in Asia Pacific are located in sub-tropical climate zones.

Census region and division	abrdrn Location	Average Annual gas use - Space Heating (kWh)	Average hourly heating demand (kWh)	Average Annual electricity use - Space Heating (kWh)	Average hourly heating demand (kWh)
New England	Boston, Connecticut, Maine	6,087	3.34	536	0.29
Middle Atlantic	Philadelphia, New York, Toronto	10,900	5.99	1104	0.61
East North Central	Illinois	15,225	8.37	1381	0.76
West North	Minnesota	11,623	6.39	1687	0.93
South Atlantic	Florida, Miami, Georgia, Sao Paulo	3,394	1.86	2000	1.1
Pacific	California	3,000	1.65	1229	0.68



Cooling Energy

Due to the huge variation in cooling requirements across our global locations we have made certain assumptions while accounting for a typical cooling energy requirement as noted within the region of operation. We have split our locations into three super regions these are:

- 1. UK and EMEA** - no allowance is expected for cooling energy.
- 2. Americas** - a recent survey⁵ suggested 90% of homes have access to air conditioning. We considered the two main types of air conditioning system; central or window/wall units. Window/wall units are expected to be controlled locally as required, while central systems may be connected to a programmable thermostat. We split the WfHFTE of each location by the census region according to the percentages, as per the

table below. Cooling period is generally June to September and therefore we have calculated only for these months and assumed that the air conditioning is on every day through the cooling season. There are exceptions, firstly for Sao Paulo where we have assumed air conditioning will be used all year, and Toronto where we assumed no air conditioning used.

- 3. Asia Pacific** - Without a sizeable research into the specific air conditioning requirements for each of our locations, the likely impact of homeworking on cooling-related emissions must rely on reasonable assumptions. We have assumed that 100% of our WfHFTE have air conditioning and that the kWh consumption is equivalent to that in the USA but with 50% centralised systems and 50% individual units. We have also assumed that air conditioning is used all year.

Census Region	Our offices	% using central system	kWh central systems	% using individual units	kWh individual units
Northeast	Boston, Connecticut, Maine, Philadelphia, New York	44%	3.5kWh	56%	1.4kWh
Midwest	Illinois, Minnesota	76%	3.5kWh	24%	1.4kWh
South	Florida, Georgia and Miami	85%	3.5kWh	15%	1.4kWh
West	California	74%	3.5kWh	26%	1.4kWh

Exclusions

In addition to joint ventures and associates, the following sources are also excluded from the carbon footprint:

- energy consumed within properties abrdn plc and its subsidiaries have invested in other than those directly owned by abrdn plc and its subsidiaries
- the kWh of district heating used within our Helsinki office as no data or estimation method was available for the reporting year
- air travel or rail travel that are not booked through the corporate third-party travel operators
- other types of employee business travel and commuting, for example employee travel by taxi and short-term car hire

¹ <https://www.ofgem.gov.uk/gas/retail-market/monitoring-data-and-statistics/typical-domestic-consumption-values>

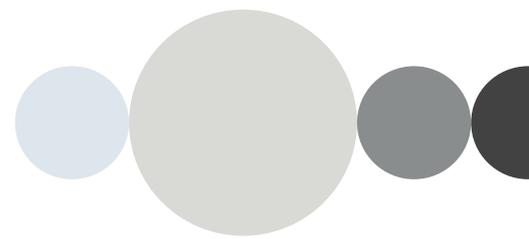
² Page 4 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/386858/Estimates_of_heat_use.pdf

³ Page 3 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/274772/4_Main_heating_systems.pdf

⁴ <https://www.eia.gov/energyexplained/natural-gas/use-of-natural-gas.php>

⁵ <https://www.bloomberg.com/news/articles/2019-07-10/why-we-always-fight-over-air-conditioning#:~:text=The%202015%20survey%20found%20that,before%20air%20conditioning%20became%20common.>

Diversity in the workforce



Percentage of minority ethnic Board members

Description

The abrdn plc Board currently comprises: 1 Chairman, 9 non-executive directors, 2 executive directors. Data on the ethnicity of our Board is found on our website.

Measure

The percentage of abrdn plc Board who identify as minority ethnic as at 31 December 2021.

Percentage of women at Board level

Description

The abrdn plc Board currently comprises: 1 Chairman, 9 non-executive directors, 2 executive directors. Data on the gender of our Board is found on our website.

Measure

The percentage of abrdn plc Board who are female as at 31 December 2021.

Percentage of women in senior leadership

Description

Our senior leadership is defined as: those one and two reporting levels below the CEO of abrdn plc. We do not include administrative employees in our total, who are removed based on their job title. We exclude anyone on garden leave and include those on any other form of leave (including but not restricted to maternity, paternity, and Armed Forces leave). Data on both gender and reporting level is maintained and extracted from our Workday people system.¹

Measure

The percentage of our executive population who are female as at 31 December 2021.

Percentage of women in our global workforce

Description

Our global workforce includes all full-time, part-time, fixed term, graduates, apprentices, secondees and intern employees of abrdn plc and its wholly owned subsidiaries. We do not make any adjustments for part-time working (full time equivalent) and count each person as one employee. We exclude anyone on garden leave and include those on any other form of leave (including but not restricted to maternity, paternity, and Armed Forces leave). Data on gender is maintained and extracted from our Workday people system.¹

Measure

The percentage of our global workforce who are female as at 31 December 2021.

¹ Colleagues without gender data on our Workday people system are excluded from calculation of percentage of women in senior leadership and percentage of women in our global workforce.

Independent Assurance Statement

Introduction and objectives of work

Bureau Veritas UK Ltd. (Bureau Veritas) has been engaged by abrdn to provide limited assurance over selected sustainability performance indicators for inclusion in the sustainability reporting 2021 ('the Report'). This Assurance Statement applies to the related information included within the scope of work described below.

Scope of assurance

The scope of our work was limited to assurance over the following content included within the Report for the period 1 January 2021 to the 31 December 2021 (the 'Selected Information'):

1. Percentage of women at Board level
2. Percentage of women in senior leadership
3. Percentage of women in the global workforce
4. Percentage of minority ethnic Board members
5. Scope 1 emissions
 - Fluorinated gas (F-gas), stationary fuel, company cars, natural gas
6. Scope 2 emissions (location based)
 - Electricity, district heating
7. Scope 3 emissions
 - Transmission & distribution losses, business travel by air and train, home-working emissions, waste generated in operations
8. Annual total kWh
 - Electricity, natural gas, company cars, stationary fuel and district heating

Reporting Criteria

The Selected Information has been prepared in accordance with abrdn's internal definitions and published in the 2021 KPI definitions document. The carbon reporting methodology for abrdn aligns with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (revised edition).

Limitations and Exclusions

The scope of our work does not include any verification of information relating to:

- Positional statements (expressions of opinion, belief, aim or future intention by abrdn) and statements of future commitment; and

- Any other information included in abrdn's Report outside the defined scope and reporting period above.

This limited assurance engagement relies on a risk based selected sample of sustainability data and the associated limitations that this entails.

Our work was limited to head office based activities and understanding how abrdn consolidates and reconciles data provided by country offices. The reliability of the reported data is dependent on the accuracy of data collection and monitoring arrangements at market/site level, not addressed as part of this assurance.

This independent statement should not be relied upon to detect all errors, omissions or misstatements that may exist.

Responsibilities

The preparation and presentation of the Selected Information in the Report are the sole responsibility of the management of abrdn.

Bureau Veritas was not involved in the drafting of the Report. Our responsibilities were to:

- Obtain limited assurance about whether the Selected Information has been prepared in accordance with internationally acceptable definitions of the relevant indicators;
- Form an independent conclusion based on the assurance procedures performed and evidence obtained; and
- Report our conclusions and findings to the abrdn's management in the form of a Management Report.

Assessment Standard

Our work was performed to a 'limited' level of assurance in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information, and in accordance with International Standard on Assurance Engagements 3410 - 'Assurance Engagements on Greenhouse Gas



Statements' ('ISAE 3410'), issued by the International Auditing and Assurance Standards Board.

Methodology followed and summary of work performed

As part of our independent verification, we undertook the following activities:

- Examined the data collection and consolidation processes used to compile the Selected Information, including assumptions made, and the data scope and reporting boundaries;
- Conducted interviews with relevant personnel from abrdrn's Head Office;
- Reviewed documentary evidence provided by abrdrn on a sample basis;
- Re-performed a selection of aggregation calculations of the Selected Information;
- Assessed the disclosure and presentation of the Selected Information to ensure consistency with assured information.

The scope of a limited assurance engagement is substantially less than for reasonable assurance both in terms of the risk assessment procedures and in performing the procedures to address the identified risks.

Conclusion

On the basis of our methodology and the activities described above, nothing has come to our attention to indicate that the Selected Information is not fairly stated in all material respects.

Statement of Independence, Integrity and Competence

Bureau Veritas is an independent professional services company that specialises in quality, environmental, health, safety and social accountability with over 190 years history. Its assurance team has extensive experience in conducting verification over environmental, social, ethical and health and safety information, systems and processes.

Bureau Veritas operates a certified¹ Quality Management System which complies with the requirements of ISO 9001:2015, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Bureau Veritas has implemented and applies a Code of Ethics, which meets the requirements of the International Federation of Inspections Agencies (IFIA)², across the business to ensure that its employees maintain integrity, objectivity, professional competence and due care, confidentiality, professional behaviour and high ethical standards in their day-to-day business activities.

The assurance team for this work conducted the verification independently and to our knowledge does not have any conflict of interest due to any other Bureau Veritas projects with abrdrn.

Bureau Veritas UK Ltd.
London
1 March 2022



**BUREAU
VERITAS**

¹ Certificate of Registration available on request.

² International Federation of Inspection Agencies – Compliance Code – Third Edition.

