GHG Emissions Report

2020/21

Turley

Foreword

As a responsible co-owned business, managing our environmental impacts is very important to Turley. Over the last year to eighteen months it has become increasing important to our clients, as their awareness and interest in their own impacts expands for a variety of reasons. The greenhouse gas (GHG) emissions associated with Turley as a consultancy are therefore of relevance to our clients as they report on their own Scope 3 emissions.

This year, we have again published our GHG emissions per £m turnover. The reporting process enables the monitoring and subsequent reduction of our GHG emissions. The outputs from our reporting will also assist our clients in assessing the emissions associated with our consultancy services relative to the amount they spend with us.

We hope that the disclosure of our data will encourage other organisations in planning and beyond to do the same. The more data that is published, the better our collective understanding of the wider impacts of the built environment. Ultimately, this will help drive greater awareness and change.

This document has been produced to support our disclosures; it provides detailed summaries of the data obtained and explanations of our processes.

If you have any comments or queries, please get in touch.

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Introduction

This report provides information on the Greenhouse Gas (GHG) emissions associated with the business operations of Turley for the financial year June 2020 – May 2021.

Turley operates across 14 offices across the UK and Ireland, in a range of building types that include historic conversions and city centre towers. Since the last report a new office has been opened in Dublin and for the first time, we are able to include full year data for this office. During the reporting period, the company employed 223 co-owners.

As described in our methodology section, we have adopted the GHG Protocol[1] to allow us to monitor performance ensure consistency and improve the accuracy of our reporting. We also align with the recommendations within the The CarbonNeutral® Protocol (January 2021).[2] For the second year in a row, Turley achieved CarbonNeutral® certification in March 2020 (based on the previous year's figures).

Our primary impacts are those over which we have operational control and we are actively engaging with our managing agents to improve the quality of our consumption data so that we can understand our usage so it can be better managed, where possible.

The availability and frequency of data collection across our offices varies depending on our managing agent; through requesting our data, we are providing an indicator to our managing agents that as tenants, this information is important to us, which in turn we hope will help to drive their internal investment in energy reporting and improve the quality of data over time.

This report sets out our data and performance at each of our locations, as well as our overall absolute emissions and key performance indicators (KPIs).

Figure 1: Turley Office Locations

[1] https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf

[2] The registered trademark of Natural Capital Partners licensed for use by entities which have achieved CarbonNeutral certification.

Annual Performance

Based on the GHG Protocol this section sets out Turley's absolute emissions followed by a breakdown of emissions by scope including emissions from our energy consumption, business travel, homeworking and commuting patterns.

Absolute Emissions

Our absolute emissions are our total emissions and do not take into account the size of our organisation, our turnover, or the area of office space we occupy. **Table 1** sets out the company total emissions including those related to energy consumption, business travel and homeworking.

Table 1: Absolute GHG Emissions

Emission Scope	GHG Emissions [tonnes CO_2e]		%
	2019-20	2020-21	Change
Scope 1	6	0	-100%
Scope 2	97	67	-31%
Scope 3	216	185	-14%
TOTAL	**319**	**252**	**-21%**

Scope 1 emissions related to refrigerant leakage associated with air conditioning units have been scoped out as this source is outside of the company's operational control.

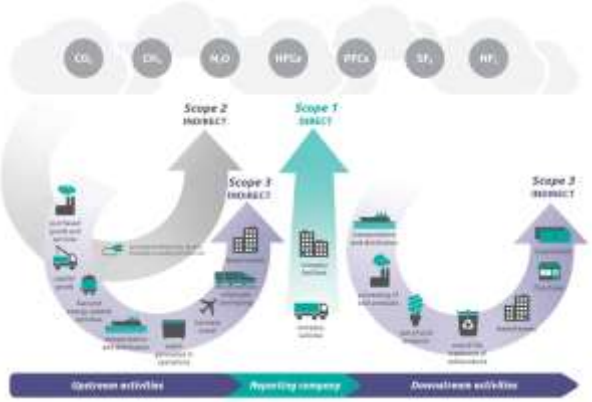
Table 1 shows our Scope 2 emissions have reduced, this is in part due to the continued decarbonisation of the electricity network helping reduce operational emissions. As could be expected, there was also some drop off in energy usage in metered offices due to the extensive working from home as a result of the COVID-19 restrictions.

Our total Scope 3 emissions currently include emissions associated with office water and wastewater, office paper consumption, emissions associated with the purchase of IT equipment (Laptops, mobiles etc), courier services used by the company, electricity transmission & distribution losses, office waste, business travel, co-owner commuting and homeworking.

This is the second year we have been able to record our emissions associated with co-owner commuting based on a co-owner survey and the first year of estimating and reporting emissions from the purchase of IT equipment, courier services, emissions arising from hotel accommodation associated with business travel and homeworking. Despite including additional emissions sources in our footprint this year the absolute Scope 3 emissions were reduced by 14% comparing to the previous year.

Figure 2: Diagram explaining Scope 1, 2 and 3 Emissions

(Source: GHG Protocol)



Scope 1 Emissions: Gas

No Turley office utilises gas, therefore there are no associated Scope 1 emissions.

Following a robust scoping exercise, Scope 1 emissions related to refrigerant gas losses associated with air conditioning units were excluded from this year's carbon footprint. Turley neither owns nor controls the air conditioning equipment and therefore in accordance with GHG protocol is not required to report these emissions.

Scope 2 Emissions: Electricity

Turley have operational control over office electricity supplies however in the majority of cases we rely on data provided by our managing agents, which varies in terms of quality and frequency of collection.

In some cases, we have had to estimate consumption data. Where no data is available, we have estimated based on the average consumption per square meter of our other offices for the reporting year and applied this figure to the office area.

With regards to offices in Derry, Dublin and Edinburgh, these are leased spaces and our electricity use is not separately metered. The cost of this is thus included within our service level arrangements (SLAs). As no metered data is available, we have estimated the totals based on the average consumption per square meter of our Belfast office for the reporting year and applied this figure to each office areas respectively.

Glasgow and Leeds are now virtual offices, therefore there's no office electricity consumption associated with these locations.

We have been unable to get any information from the building manager for our London, Bristol and Cardiff offices, thus, we have also estimated the totals. For Cardiff, again Belfast office intensity was used. For London and Bristol, the Cambridge office intensity figure (kWh/sqm) was used, which is one of the lowest intensities across our portfolio but as the offices were largely unoccupied during the reporting period due to the Covid-19 pandemic, its use would not lead to (unintentional) under-reporting.

Table 2 shows that the company's Scope 2 emissions have reduced by 31% from 2019-20. This is mainly due to the reduction in energy consumption within the offices as people worked from home as a result of COVID-19 restrictions. It is also partly due to the continued decarbonisation of the electricity network and reduced annual carbon emissions factors.

Table 2: Scope 2 Use of Purchased Electricity

	2019-20		2020-21	
Office	kWh	tCO_2e	kWh	tCO_2e
Belfast	21,350	5.45	17,799	4.15
Birmingham	28,366	7.25	25,473	5.94
Bristol	39,209	10.02	21,822	5.09
Cambridge	17,451	4.46	10,949	2.55
Cardiff	12,571	3.21	8,261	1.93
Derry	2,145	0.55	1,788	0.42
Dublin	1,634	0.42	1,363	0.32
Edinburgh	30,628	7.83	14,818	3.45
Glasgow	-	-	-	-
Leeds	15,798	4.04	-	-
London	29,960	7.66	24,314	5.67
Manchester	143,108	36.58	128,347	29.92
Reading	16,282	4.16	15,429	3.60
Southampton	20,795	5.32	16,898	3.94
TOTAL	379,298	96.95	287,262	66.97

Scope 3 Emissions: Fuel & Energy Related Emissions

Based on our electricity consumption reported under Scope 2, the upstream well-to tank (WTT) and transmission and distribution (T&D) emissions are reported in **Table 3.**

Our Fuel and Energy Related (FERA) emissions currently omit the energy used in communal areas of our offices as we have insufficient data at present to report this information.

Decreased WTT and T&D emission factors for electricity along with a lower overall consumption figure have therefore contributed to a 35% emissions reduction during the 2020-21 reporting period.

Table 3: Scope 3 FERA Emissions

WTT & TD	tCO_2e		%
	2019-20	2020-21	Change
Offices	22.90	15.00	-35%

Scope 3 Emissions: Business Travel

Business travel emissions are calculated by obtaining data from expense claims and from our travel booking agents. This data excludes distances travelled by foot or by cycle, both of which would have zero emissions.

There was no air travel in 2020-21 due to the restrictions in response to the pandemic caused by Covid-19. As shown in **Table 4**, there was a significant

decrease in business travel overall by all modes of transport due to the pandemic as well as due to increased virtual networking between offices and engagement with clients.

Table 4: Scope 3 Business Travel

Transport Mode	2019-20		2020-21	
	miles	tCO_2e	Miles	tCO_2e
Rail	462,403	36.46	8,744	0.52
Air	49,139	22.24	-	-
Taxi	5,866	1.85	495	0.17
Car	175,131	60.22	47,776	12.67
Ferry	-	0	-	-
Bus/ Coach	304	0.07	11	0.00
TOTAL	692,843	120.83	57,025	13.35

In 2020-21 reporting period, Turley have included emissions arising from hotel accommodation associated with business travel for the first time. Although these emissions were small (0.22 tCO_2e) due to limited travel during the pandemic, including this additional emissions source into our footprint contributes towards improved accuracy of our reporting.

Scope 3 Emissions: Co-Owner Commuting

In November 2021, we carried out a survey amongst all of our co-owners in order to understand the typical commuting patterns during 2020-21. The following data excludes distances travelled by foot or by cycle, both of which would have zero emissions. There were 140 responses from co-owners.

Our working patterns in relation to where we work and how we travel to and from our offices has considerably changed since the beginning of the pandemic, therefore significantly affecting the results of the survey. Overall there was a 55% decrease in emissions associated with co-owners commuting as reported in **Table 5.**

Although a range of commuting modes including local bus, over and underground train and tram as well as walking and bike were recorded, the majority of journeys during 2020-21 was made in private cars accounting for over 95% of the total co-owners commuting emissions. Public transport accounted for the remaining less than 5% emissions, including overground train at 2.5%, underground train and bus at 1% each and tram at less than 1%.

Table 5: Scope 3 Co-owners Commuting Emissions

	tCO_2e		%
	2019-20	2020-21	Change
Commuting	69.1	31.3	-55%

Turley are continuing to review policies and support systems that will need to be put into place for this to happen in the most efficient manner possible.

Scope 3 Emissions: Co-Owner Homeworking

The CarbonNeutral Protocol (January 2021) was updated to include homeworking emissions as a required emissions source for entity certification.

Turley have estimated co-owners home working emissions in accordance with EcoAct's Homeworking Emissions White Paper[3]. The emissions covered by the assessment include co-owner's electricity consumption comprising laptop, second screen, phone and lighting as well as gas consumption for heating during the UK heating season (October to March).

Table 6 reports the emissions associated with co-owners homeworking per employee and total for the company.

Table 6: Scope 3 Homeworking

Homeworking	2020-21	
	Per employee tCO_2e	Total tCO_2e
	0.51	115

[3] https://info.eco-act.com/en/homeworking-emissions-whitepaper-2020

Scope 3 Emissions: Resource Use

Paper consumption is based on the quantity of paper of each size and weight ordered by each office. **Table 7** reports the quantity of paper consumed and emissions associated with the production of that paper based on average production methods and recycled content.

In August 2016, the company implemented PIN printing and since 2017/18 paper consumption across the business has reduced by 90%. This reporting year, there was a small drop in use of paper with Covid-19 further impacting this reduction.

Table 7: Scope 3 Resource Use (Paper)

Paper	2019-20		2020-21	
	Kg	tCO_2e	kg	tCO_2e
Offices	353	0.26	238	0.22

In addition to paper use, in 2020-21 Turley also estimated and reported for the first time emissions from the purchase of capital goods (laptops, mobiles) and emissions from courier services provided to the business. Emissions from capital goods were estimated based on the life-cycle assessment studies undertaken by the manufacturers for the products purchased by the company. These emissions resulted in 5.24 tCO_2e.

Emissions from courier services provided to the business were estimated based on the receipts submitted to our finance team. These emissions resulted in 2.64 tCO_2e.

Intensity Metrics & KPIs

Intensity metrics allow us to monitor our emissions based on the size of our organisation, the area our offices occupy and our turnover.

The area we occupy and the number of employees help us internally to compare the performance of our locations, target improvement and learn from our better performing offices.

For example, the energy intensity of our offices will vary depending on factors such as age of fit-out and occupancy.

Our emissions per £m of turnover can be used by our clients to estimate their Scope 3 emissions associated with the procurement of our services. Our total emissions per £1 m turnover is 10.86 tCO_2e.

There are movements in every business, and between the reporting years, some of our offices have moved to new locations, we have seen a decrease in the number of employees overall; similarly, our turnover has slightly decreased in 2020-21. These changes are set out in **Table 8** and these metrics form the basis of our KPIs and are used to monitor our annual performance.

Table 8: Intensity Metrics

Emission Scope	2019-20	2020-21
Area [m^2]	3,183	2,906
Employees [no.]	277	223
Turnover [£m]	£26,717,737	£23,238,166

KPIs

Utilising the company intensity metrics the Scope 1 and 2 KPIs for 2020-21 are set out below.

Scope 1&2 Emissions

Scope 1 and 2 Emissions

67 tCO_2e

[2019–20: 103 tCO_2e]

Scope 1 & 2 Emissions per £m turnover

2.88 tCO_2e

[2019-20: 3.86tCO_2e]

Scope 1 & 2 Emissions per m^2 office space

23 $kgCO_2e$

[2019-20: 32$kgCO_2e$]

Scope 1 & 2 Emissions per employee

300 $kgCO_2e$

[2019-20: 372 $kgCO_2e$]

Energy Intensity per m^2 of space

99 kWh

[2019-20: 119kWh]

Conclusions

The results from this year's report indicates some key trends, described below:

- Our Scope 1 emissions have declined over the years and are now zero. None of offices use gas anymore and emissions related to refrigerant leakage associated with air conditioning units have been scoped out as this source is outside of the company's operational control.
- Our Scope 2 emissions have declined from 97tCO_2e in 2019-20 to 67 tCO_2e in 2020-21. This was in part due to decarbonisation of the grid but mainly due to reduced consumption in metered offices when co-owners worked from home due to the COVID-19 pandemic;
- As such, KPIs relating to Scope 1 and Scope 2 emissions have declined significantly (by approximately 25%), including emissions per £m turnover, emissions per m^2 office space and emissions per employee;
- Emissions associated with homeworking have been estimated and reported for the first time as required by the updated CarbonNeutral Protocol (January 2021). Homeworking emissions resulted in 114.6 tCO_2e.
- We have improved our reporting process to include recommended emissions sources associated with the purchase of IT equipment, courier services and emissions arising from business travel hotel accommodation.
- The company are reviewing working arrangements with a view to promoting more flexible working patterns. This is likely to have a positive impact on emissions associated with business travel and co-owner commuting.
- Finally, parametric uncertainty has increased somewhat from +/-3.2% in 2019-20 to +/-4.5% in 2020-21 for Scope 1 and 2 emissions. This is as we have based some of Scope 2 figures on benchmark data as we were not able to liaise with building agent on electricity use as easily as in previous years due to COVID – 19. In relation to Scope 3, the cumulated uncertainty is +/-10.3%. This is again due to not being able to liaise with building managers on energy use and our commuting survey data being pro-rated across all co-owners.

We will continue to report our greenhouse gas emissions data as accurately as we can in years to come, hoping to drive further transparency, awareness and change in the sector.

Appendix: Methodology and Data Quality & Uncertainty

Methodology

Our Approach

In order to ensure the transparency and consistency of our reporting, and to allow comparison with data from other organisations, we have applied the Greenhouse Gas (GHG) Protocol Corporate Standard and have adopted an 'operational control' approach. As we are now a carbon neutral company we also take into account, Natural Capital Partners Protocol (2021).

Our relevant upstream and downstream emissions are assessed using GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

We have applied an operational control approach and the following descriptions explain what this means and how it applies to Turley.

Scope 1: Direct GHG emissions relate to the combustion of fuel or other release of gases (e.g. fugitive emissions from air-conditioning plant) that occur from sources within our operational control.

Scope 2: Electricity indirect GHG emissions relate to purchased electricity consumed in uses over which we have operational control.

Scope 3: Other indirect GHG emissions is an optional reporting category that covers all other indirect emissions. The categories of emissions most material to Turley include:

- Business travel
- Fuel & energy related emissions (FERA)
- Purchased goods and services (water, paper, couriers)
- Capital goods (laptops, mobiles)
- Wastewater and waste generated in operations
- Employee (Co-owner) commuting and homeworking.

Activity Data

Emissions are calculated based on activity data, which relates to the quantity of fuel burned, fugitive emissions, or electricity purchased in carrying out the activity that result in emissions.

Scope 1 Fuel Consumption

Fuel is consumed in stationary or mobile plant and equipment that we are operationally responsible for. For the most part, our offices are served by communal systems over which our managing agents have control. We do not own or operate any vehicles directly, and emissions associated with our business transport are instead captured under 'business travel'.

Scope 1 Fugitive Emissions

Fugitive emissions are a result of the unintentional release of gases, and in buildings include the release of HFC emissions during the use of air-conditioning equipment. We are not responsible for the operation and maintenance of air-conditioning units, therefore we have not reported on potential emissions.

Scope 2 Use of Purchased Electricity

Electricity for use is generally purchased on our behalf by managing agents in all of our offices, where a direct contract with the supplier is in place this data is included. In most cases, our supply is either directly metered or sub-metered, and we are able to request our consumption data. As we are reliant on third-parties for this information, we have limited control over their processes and the frequency we receive this data can vary significantly.

Scope 3 Business Travel

Emissions associated with business travel are calculated based on the distance travelled by each mode of transport. This data is obtained via either expenses claims or our various travel agents.

Due to how this data is currently aggregated, we are unable to carry out sense checks easily on this information, so will be looking at how we can improve this reporting in future years. This would also enable us to carry out further analysis on the distances travelled by each mode.

We do not currently report the distance travelled on foot or by cycling. This would not affect our absolute emissions as both of these modes have zero emissions associated with them, but it would lower the intensity of our emissions (e.g. CO_2e/km travelled).

Scope 3 Fuel and Energy Related Emissions

FERA emissions include all emissions that relate to our energy consumption that fall outside of our Scope 1 and Scope 2 reporting.

This includes emissions that occur downstream of our gas and electricity consumption, either through losses in transmission and distribution (T&D), or through the processing of energy before it reaches the point of use (well-to-tank or WTT). In order to calculate these emissions, emission factors for these activities are applied to the activity data recorded under Scopes 1 and 2 and no further data needs to be collected.

Currently the energy used in communal areas of our offices is omitted as we have insufficient data at present to report this information.

Scope 3 Purchased Goods and Services

We record the quantity of paper we consume in kg; following a successful trial in our Bristol office, PIN printing was rolled out across all of our offices in August 2016 and as a result we have seen a marked reduction in paper consumption since then.

We record the quantity of purchased IT equipment (laptops, mobiles). Using the information from the life-cycle assessments for these products carried out by the manufactures, we are able to estimate the emissions associated with manufacturing and transportation of the IT equipment purchased by the company.

Our finance department also records data associated with courier services in GBP and miles. This allows us to estimate the emission from the use of these services.

We also report water and wastewater based on benchmark figures as we do not have the ability to measure the quantity of water consumed and wastewater generated.

Scope 3 Waste Generation

Across our offices, the majority of our waste is paper, packaging and food waste. We have put in place procedures across all of our offices to segregate our general waste, recycling, and where applicable, food waste for collection, but we do not have the ability to measure the quantity of waste we generate ourselves.

In most of our offices, waste is collected via our managing agents, and although we do receive some data on quantities of waste and recycling rates for certain locations, this is at the moment inconsistent and is not reported on as part of our corporate emissions (although where data is available, it has been included in the data section of this report).

Scope 3 Employee Commuting

This is the second year that we have reported on our emissions associated with employee or co-owner commuting. We surveyed co-owners on their typical commuting patterns (number of days in office in a typical week and their preferred mode of transport). We received 140 responses and used the information to pro-rate and estimate the total emissions during a working year (48 weeks) for all 223 employees. We then applied the emissions factors against the different modes to estimate the total commuting emissions. In relation to emissions from private car, we did not survey the type or size of car engine and therefore used 'Average Car (Petrol)' emissions factor.

Scope 3 Employee Homeworking

This is the first year where we have reported employee homeworking emissions to comply with the updated requirements of the CarbonNeutral Protocol (January 2021).

We have estimated co-owners home working emissions in accordance with EcoAct's Homeworking Emissions White Paper. The emissions covered by the assessment include co-owner's electricity consumption comprising laptop, second screen, phone and lighting as well as gas consumption for heating during the UK heating season (October to March).

Emission Factors

We have applied figures from BEIS (Full Set (Advanced Users) 2020) produced for the purpose of company reporting. These figures are national averages and reflect 'location-based' emissions.

For electricity, in accordance with the GHG Protocol Scope 2 Guidance, companies should also report on 'market-based' emissions where these are available. Market-based emissions take into account the combinations of sources that different suppliers use to generate electricity, which can result in emission factors that vary significantly from the national average; this allows us to take into account the procurement of greener supplies. However, as we only procure one electricity supply directly, we have chosen not to report this metric at this time (although we state where this is the case and recognise the difference in emissions in our Data and Performance section).

The emissions factors applied in our reporting are as shown in Tables 9 and 10.

Table 9: Fuel Related Emission Factors

Activity/ Fuel	DEFRA 2020	
	Unit	$kgCO_2e$
Grid Electricity	kWh	0.23314
WTT Electricity	kWh	0.03217
T&D Electricity	kWh	0.2005
Natural Gas	kWh	0.18387

Table 10: Other Emission Factors

Activity/ Fuel	DEFRA 2020	
	Unit	$kgCO_2e$
Rail: National	pkm	0.03694
Rail: Light & Tram	pkm	0.02991
London underground	pkm	0.0275
Taxi: Regular	km	0.20369
Taxi: Black cab	km	0.31191
Bus: London	km	0.07856
Bus: Local (other)	km	0.1195
Large diesel car, over 2.0 l	km	0.20419
Large petrol cars, above 2.0 l	km	0.27807
Medium diesel car, 1.7 to 2.0 l	km	0.16637
Medium petrol car, 1.4 - 2.0	km	0.18659
Small diesel car, up to 1.7 l	km	0.13721
Small petrol car, up to 1.4 l	km	0.14836
Car: Average, petrol	km	0.1743
Vans, class 1, diesel	miles	0.23904
Paper production	tonne	919.39
Water supply	Cubic meters	0.344
Water treatment	Cubic meters	0.708
Waste, commercial, combustion	tonnes	21.317
Waste, commercial, closed loop recycling	tonnes	21.317

Parametric Uncertainty

We have undertaken an assessment of the quality of our Scope 1 and Scope 2 emissions; this is in accordance with the *GHG Protocol guidance on uncertainty assessment in GHG inventories and calculating statistical parameter uncertainty.*

To provide an analysis of parametric uncertainty in accordance with GHG Protocol guidance. The quality of our activity and emission factor data is ranked to assess the likely level of uncertainty in our reported emissions.

Table 11 provides a description of the types of activity data we collect and their assigned interval of accuracy as a percentage of the assumed mean value. This assessment is based on our interpretation of the data accuracy levels described in the GHG guidance and their respective confidence intervals expressed as a '+/-' percentage of mean value. The same process is applied to emissions factor data, with the descriptions in **Table 12** applied, these along with the raw Scope 1 and 2 data are used to calculated parametric uncertainty using the calculation below. Spreadsheet templates were used in

2020-21 to calculate the uncertainty.

Parametric Uncertainty

For each piece of data, the following formula is applied to assess the quality of that data:

GHG Emissions, $F = A \times C$

Uncertainty of calculated emissions, $E = \sqrt{(B^2 + D^2)}$

Where:

A = *Activity Data*

B = *Confidence interval for activity data (from Table 11)*

C = *GHG Emission Factor (from Table 9)*

D = *Confidence interval for emission factor (from Table 12)*

A greater number of data points results in an assumed lower level of uncertainty, demonstrating the importance of regular data collection.

Overall uncertainty is then assessed by applying the formula below:

Cumulated Uncertainty, $H = \frac{\sqrt{(F \times G)^2}}{F}$

Table 11: Uncertainty Intervals for Activity Data

Activity Data	Description	Interval
Electricity Use	Electricity use is based on meter reads/ automated data	+/-5%
Electricity Use	Electricity use is apportioned based on two actual meter reads < 3 months apart	+/-10%
Electricity Use	Electricity use is apportioned based on two actual meter reads > 3 months apart	+/-15%
Electricity Use	Electricity use is apportioned based on one actual and one estimated meter read	+/-20%
Electricity Use	Electricity use is estimated based on average use of supply within 6 month period	+/-15%
Electricity Use	Electricity use is estimated based on average use of supply over > 6 month period	+/-20%
Electricity Use	Electricity use is estimated based on average use of similar supplies	+/-25%
Electricity Use	Electricity use is not metered and must be estimated from equipment and time of use	+/-30%
Electricity Use	Electricity use is estimated by the supplier	+/-30%
Electricity Use	Electricity use is not metered and must be estimated from benchmark data	+/-40%

There are many types of energy meter, all of which record information in a slightly different way, and in our experience, common errors in recording this data include the incorrect placing of decimal places, the reading of a single component of consumption rather than the total, and the recording of the wrong units (such as the kVa total instead of kWh).

Good practice would be for somebody with a thorough understanding of the data to carry out an annual spot check of each meter, or for the individuals taking readings to take clear photographs of the meters and meter reads so that they can be verified at a later date if a potential error is highlighted. By taking regular readings, errors can often be identified by reviewing consumption patterns.

In addition, the majority of our data is obtained from our managing agents, who may or may not have processes in place to ensure the accuracy of the data collected. We have limited control over this, but carry out reasonableness checks which include a review of consumption per day, and a review of consumption per m^2 of floor area.

Where regular (i.e. monthly) readings are provided, an assessment of daily consumption provides an indication of the accuracy of individual readings; if in one month daily consumption is significantly higher or lower than

in previous months, this either highlights a spike or reduction in consumption (which should be investigated), or an erroneous reading that we would highlight to our managing agent to check.

Table 12: Uncertainty Intervals for Activity Data

Activity Data	Description	Interval
Electricity Use	Single fuel used for generation (e.g. quantity from on-site generation)	+/-5%
Electricity Use	Annual average for a specific supplier, taking into account their fuel mix	+/-10%
Electricity Use	Annual average for a grid with multiple fuel sources	+/-15%

Further Information

This report was produced in-house by Turley Sustainability to support our 20120-21 CSR Report.

Increasing awareness of the effects of climate change and the need to reduce GHG emissions is driving a need for greater understanding of emissions and how these can be reduced.

Measurement and reporting stimulates better energy management practices, and with savings of £2billion per year on business and energy bills estimated through the implementation of cost effective measures in buildings and business processes, the argument for developing robust processes and understanding your data is strong.

If you think you may be a mandatory participant in the new reporting regime, we can support you in developing a bespoke approach that suits your needs and allows you to extract the greatest value from the process.

Related Services

Some of our other related services include:

- Net Zero / Net Zero Ready Strategies
- Reporting and application of reporting frameworks
- Corporate sustainability and social responsibility strategies
- Materiality assessments
- Climate Change assessment
- Carbon management plans
- Social value strategies and assessments
- Internal policy and procedure development
- External benchmarking support
- Behaviour change initiatives
- Standalone research

Please get in touch if you would like further information about the content of this report, or any of the services we provide.

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