technical factsheet 190

Carbon accounting for small businesses – interim guidance

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This guidance has been developed in conjunction with Green Accountancy, an ACCA-registered practice that is active in persuading other accountants to make environmental issues a key part of their work and advice.

1 INTRODUCTION

Carbon accounting (otherwise known as greenhouse gas accounting) measures the environmental performance of a business so that targets can be set for, and reductions achieved in, its environmental impact.

This technical factsheet provides ACCA members in practice with guidance on advising small businesses about setting up and operating carbon accounting, and on the associated tax advantages. This service line can enhance the profitability and competitiveness of a practice while providing benefits to the environment. The information in this factsheet may also be used by ACCA members employed in small businesses or charities who wish to adopt aspects of sustainability reporting.

The factsheet concentrates on a simple form of carbon accounting that is suited to entities with turnovers up to, say, £7m; this includes companies of all types, charities, partnerships and sole traders. A simple form of carbon accounting has been chosen because it is potentially accessible to all, so that businesses are not put off by either the amount of time it will take to complete the carbon accounts, or the complexity of that process. This increases the likelihood that carbon accounts will be prepared and used as a tool to assist in reducing carbon emissions.

This factsheet may also be of interest as an introduction to carbon accounting for larger businesses, or as an introduction to environmental management and reporting more generally. Reporting can extend to sustainability reports and integrated reports that try to present a wider picture of the contribution a business makes to achieving society's long-term aims.[1]

While the guidance is written in the context of the UK, it may be applied in other jurisdictions where equivalent information is available.

This factsheet is issued as 'interim guidance' and will be updated over the next two years to take account of feedback from users. Please refer to Appendix 7 *Feedback on interim guidance* where this process is explained and questions are provided to facilitate comment. Discussion in the ACCA official members LinkedIn group is encouraged.

2 CARBON ACCOUNTING

The carbon accounting dealt with in this technical factsheet is a simplified version of the comprehensive carbon accounting that might be undertaken by a large company.[2]

In setting up such carbon accounting the following decisions and stages are typically necessary:

1 set the relevant business objectives
2 determine whether the whole business or just parts of it will be included
3 identify the business activities that are responsible for greenhouse gas emissions and (after preliminary investigation) those to be accounted for
4 decide on the start and periodicity of data acquisition
5 set up appropriate systems for data capture, processing and reporting
6 collect primary data for the base period and convert it to its carbon dioxide equivalents
7 evaluate the outcome and decide future emissions reduction targets
8 take steps to achieve the targets
9 monitor progress by evaluating later outcomes against the base period.

[1] See in particular section 9 *The wider picture*, Appendix 5 *Comprehensive carbon accounting* and Appendix 6 *Further resources*.
[2] An introduction to full carbon accounting and a note of the differences from the simplified version are provided in Appendix 5 *Comprehensive carbon accounting*. Section 9*, The wider picture*, explains other forms of environmental reporting.

2.1 Decide business objectives

In addition to reducing the output of gasses that cause global warming, the following business objectives may be relevant:

- securing business growth through meeting expectations of customers
- favourable positioning with banks, government and other external stakeholders
- staff motivation
- cost reduction
- tax advantages.

The objective, or objectives, may determine what activities are accounted for and how they are reported. For example, emissions associated with water use may not be significant, but may be included where staff are encouraged to save water.

A business may decide to keep carbon accounting and reporting as an internal matter, either as it begins carbon accounting or in the longer term, but external publicity and reporting are often appropriate for achieving business objectives. Some suggestions on this are to be found in section 8 *Marketing*.

2.2 Determine which parts of the business are to be included

If a business is straightforward, reporting will be for the whole business. A more complex organisation might include different businesses and legal structures, perhaps extending to joint ventures or franchise arrangements. UK government guidance is available on what emissions ought to be included in such circumstances[3]. Unless the carbon accounting is affected by particular external requirements, such as might be imposed by an important customer, the choice of reporting boundary is entirely voluntary; although if it does not make sense to stakeholders, it might be perceived as undermining the value of the report.

2.3 Identify the business activities to be accounted for

Unless involved in business activities that themselves generate significant greenhouse gas emissions[4], a small business would expect to consider accounting for activities where the emissions are principally those that are produced by others but are attributed to the activities of the business. Typically these are:

- energy: heating (non-electricity) such as gas or other carbon fuel consumption
- energy: electricity (heat, light and power)
- transport: car/van/lorry
- transport: public transport
- transport: cycle and foot
- transport: commuting and remote working
- water use
- consumables: paper, packaging and plastic bags.

Some of the above activities may not be significant for a particular business and it may be possible, having made appropriate estimates, to eliminate the activity from monitoring, even though it might continue to be reported on a historical or estimated basis if overall performance figures are needed.

Otherwise insignificant activities may nevertheless be included in order to meet business objectives.

2.4 Decide on the start and periodicity of data acquisition

It is usual to report at least annually, often to the same date as the financial statements. Alternatively, where the volume of data is such that transactions are captured not only in financial amount but in carbon equivalent, monthly or

[3] See Annex A of *Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting guidance*, June 2013, Department for Environment Food & Rural Affairs, https://www.gov.uk/government/publications/environmental-reporting-guidelines-including-mandatory-greenhouse-gas-emissions-reporting-guidance

[4] For example livestock farming, in which case this simple form of carbon accounting would not generally be useful.

indeed more frequent reporting is possible. This normally requires specialist accounting software. A quarterly cycle is often adopted by small businesses, as this matches their quarterly billing by utility companies and allows consideration of seasonal variations if these are important.

When carbon accounting is first started, it is necessary to build up a picture of the level of existing greenhouse gas emissions. This may be done by retrospectively assessing a past year; or a shorter period, annualising it as a basis for future comparison. Alternatively, systems may be put in place and operated in order to accumulate experience over the current year with a view to treating it as the base year.

One of the features of the report dealt with in this factsheet is a way of presenting the figures such that year-on-year comparison is possible, even when a business is undergoing rapid expansion or other significant changes in circumstances.

2.5 Set up appropriate systems

In the light of earlier decisions and the information that is available, an appropriate system or systems should be put in place. Data recording and analysis may be done manually, on spreadsheet, using other local or cloud-based programs, or integrated with the accounting systems.

The cost of such systems and the time to operate them should be proportionate to the business needs that the carbon accounting is intended to satisfy. The simple form of carbon accounting dealt with in this technical factsheet may conveniently be carried out using a tailored system of spreadsheets in a workbook.

2.6 Collect base period data and convert to carbon equivalents

Primary data will be in units appropriate to the activity. For motor transport, for example, that might be in litres of fuel used, which might be estimated from the number of miles[5] travelled. It is necessary to obtain an appropriate conversion factor to express the measurement in its carbon equivalent. In the UK, such factors are provided by the government. For example, a litre of diesel fuel is converted to its carbon equivalent (in kilograms) by multiplying the amount by a factor of (for 2014) 2.669 kg/litre.

Conversion factors are provided on an annual basis as the underlying circumstances may change. For example, in relation to electricity consumed, the percentage of electricity generation from coal-fired or nuclear power stations may change and this will be reflected in the official conversion factors. A business reporting in a period that straddles a change in factors from one calendar year to the next may recalculate after using provisional figures (eg, if reporting quarterly) but for most small businesses such changes are unlikely to be material and it is easier to begin to use the latest factors only when they are published.

Conversion factors are generally available in the UK in two forms: CO_2 and CO_2e. The CO_2 factor is just for carbon dioxide; the CO_2e factor combines that with the emissions of other greenhouse gases such as methane (CH_4) and nitrous oxide (N_2O) that also result from the activity. Using UK-generated electricity as an example, in 2014 the factors are: kg CO_2 0.49023 and kg CO_2e 0.49426. The difference is less than one per cent, so either figure could be used consistently. In this technical factsheet we have used the more accurate and widely used CO_2e factors.

The conversion factors are further explained in section 3 *Accounting for business activities*.

2.7 Evaluate the outcome and decide future carbon reduction targets

Once the carbon equivalents for the different activities are established for the base period their relative significance can be assessed, allowing decisions to be made about where best to target reductions. Setting reduction targets has to take account of the nature of the business, and may be influenced by whether there are available indications of benchmarks for activities. Targets should be achievable but produce worthwhile reductions as, without that, there is no real point to carbon accounting.

[5] The mile is the usual measure of distance in the UK. 1 mile = 1.609344 kilometres.

Realistically, targets may be set after considering the means through which they can be achieved. It may be possible to reduce business travel carbon by switching from the use of petrol to liquid petroleum gas (LPG) for example, but if it is known that there will be no new vehicle purchases in the coming year, that would be a longer-term target.

A business that has successfully reduced its carbon emissions may find that these emissions reach an effective minimum (normalised per £1,000 of turnover, as explained in section 2.9 *Monitor progress against the base year*). In such cases, active reduction is no longer a target and the business will be concerned with maintenance and remaining alert for further opportunities, such as might be afforded by new technology.

2.8 Take steps to achieve the targets

In order to reduce GHG emissions it is necessary to take appropriate steps. These are more likely to be effective if they are planned, documented and effectively communicated both internally and, to the extent necessary, externally. For example, a move to paperless systems is likely to affect those with whom the business trades.

It may be possible to express targets in terms of a carbon budget so that progress may be tracked (say monthly) allowing corrective actions to be taken if necessary. Section 5 *Reducing carbon emissions* provides guidance on actions to reduce emissions.

2.9 Monitor progress against the base year

Even if there is no active monitoring of actual achievements against a carbon budget there should be periodic assessment of progress towards targets. This should be done at least annually, beginning with a comparison of the current year to the base year.

An expanding business may find that the absolute figures for carbon emissions have increased, despite efforts to control them. By normalising the figures against an activity indicator (for example per £1,000 of turnover) it is possible to see whether the relative performance has improved. For some industries a different activity indicator may be in use, for example the number of units manufactured or passenger miles conveyed. Care should be taken, not only in choosing the activity indicator, but also in considering whether it has been subject to any changes that would reduce its usefulness for comparability from year to year.

At the end of the evaluation, communication of results and, possibly, reconsideration of targets and the effectiveness of measures taken should inform the future approach to emissions reduction. Sections 4 *Reporting carbon emissions* and 6 *External publicity and reporting* provide further information on the communication of results.

The base year position may itself need to be reconsidered, but this is not often the case in a small business. There may have been economic growth (or decline) and changes in operating units or sales mix, but this is why the base year is used as a reference point for change. It needs revisiting only if significant changes in methodology are made (or significant errors are subsequently discovered) or there are significant acquisitions or disposals or significant outsourcing or insourcing of relevant activities. In such circumstances results for intervening years will also probably need recalculation. In the event that significant changes are made to conversion factors, the UK government website[6] will warn users that they may need to re-baseline their data to compensate for changes in how, for example, electricity factors are calculated and displayed. General guidance on rebasing is provided internationally.

3 ACCOUNTING FOR BUSINESS ACTIVITIES

The following sub-sections suggest how relevant data may be processed for each business activity that gives rise to greenhouse gas emissions. Reporting is not necessarily done in these categories (see instead section 4 *Reporting carbon emissions*), for example business travel may be reported as 'air travel' and 'other'.

[6] http://www.ukconversionfactorscarbonsmart.co.uk/

3.1 Energy: Heating (non-electricity, eg gas)

The emissions associated with any heating provided by electricity will be included in the emissions as calculated for electricity (see below).

Gas use for heating will be measured by recording meter readings at the start and end of each reporting period[7]. Figures on gas bills can be used to estimate historical readings. Gas meters may give gas use in therms (an energy unit), cubic meters or cubic feet (volume measures). Volume measures of gas must be converted into their energy equivalents in a manner suited to comparison. Energy is measured using different units of measurement depending on the context. The standard SI unit is the joule, but in carbon accounting the most common measure used is the kilowatt-hour (kWh),[8] often defined in plain language as the energy given out by a one-bar radiant electric heater over the course of an hour. Using an appropriate conversion factor, the CO_2e of the GHGs emitted in the production of the relevant number of kWhs is calculated.

Other common fuels are measured by weight (coal and wood) or volume (oil) and an appropriate conversion factor is applied to calculate the carbon dioxide equivalent of the emissions from burning them.

Wood from a renewable source can be viewed as a store of solar energy and therefore its use is potentially less damaging than using fossil fuel. This is reflected in the carbon factor used to calculate the carbon emissions associated with wood heat.

3.2 Energy: Electricity

Electricity use is normally metered, allowing a meter reading to be taken at the start and end of each reporting period. If this is not done, then an estimate can be made by interpolating electricity bill readings.[4]

Using an appropriate conversion factor, the number of kWhs is converted to its carbon equivalent. In the UK, separate conversion factors are available for emissions arising from electricity generation and from electricity transmission and distribution. A small business would combine these to recognise the full impact of its electricity use.

Supplied electricity that is certified under the independent certification scheme based on OFGEM's green supply guidelines[9] counts as a reduction similar to a carbon offset (see section 3.9 *Carbon offsetting and green tariff electricity*). The energy supplier will be able to provide a figure for the percentage of renewable energy used in generation.

3.3 Transport: Car/van/lorry

Emissions from vehicles can be most accurately calculated if the amount of petrol or other fuel used in the period is recorded. This will give a result that reflects all relevant factors such as the fuel efficiency of the vehicle, the driving environment and so on.

The litres of petrol, diesel or other fuel used are converted to their carbon equivalent using an appropriate conversion factor. If the amount of fuel used is not known, then the miles travelled and emissions rate for the vehicle (CO_2 g/km) can be used in an equivalent calculation. Mileage at the beginning and end of a reporting period can be taken from a vehicle's milometer, with amounts adjusted for any private (non-commuting) use. Alternatively, the data may be available from expense claims. When vehicles are disposed of in a period, the mileage at disposal should be noted. If it is necessary to estimate mileage for regular journeys, distances between locations may be reported by satellite navigation systems or calculated on route planning websites.

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[7] A business using a shared building may pay energy and water charges as part of a rent and not have access to meter readings. If the landlord does not provide information, alternatives ways to estimate emissions may include:

- recording electricity use for appliances from an energy monitor
- estimating heating needs based on the size and insulation level of the building
- estimating water use based on the number of people working and how much is used by a typical person.

Electricity use might also be estimated from the wattage of bulbs and appliance and the time they are in use (and on standby).

[8] 1 kWh = 3,600,000 joules. The joule ('J') is part of the International System of Units (abbreviated 'SI' from French: Le Système international d'unités), often referred to as 'the metric system'.

[9] The Office of Gas and Electricity Markets – see https://www.ofgem.gov.uk/ofgem-publications/57771/green-supply-guidelines-final-proposals-open-letter.pdf

The emissions rate for a vehicle (CO_2 g/km) will be on the vehicle registration certificate or, for a particular make and model, may be found at these websites:

- http://carfueldata.direct.gov.uk/
  (for vehicles registered since January 2001)
- http://www.parkers.co.uk/cars/reviews/
  (for some older cars)

The government website above provides a host of authoritative data that would also be relevant in other EU member states. Its comprehensive glossary includes a note that '*In 6000 miles a car will produce roughly its own weight in CO_2.*'

3.4 Transport: Public transport

Business travel is any travel related to the business excluding commuting, which is accounted for separately (see section 3.6 *Transport: Commuting and remote working*).

For each journey, the type of travel and total miles relating to the business should be recorded, for example two people travelling by train between London and Newcastle (and return) amounts to 996 miles (distance 249 miles x 2 for return journey, x 2 for two people). If journeys are regular, the recurring miles for a period can be calculated overall.

Carbon dioxide equivalent emission factors for public transport are based on typical emissions per passenger per mile. While this might not reflect the actual impact of a journey (of say two people travelling on the same train), it provides consistent reliable information for decision making.

Carbon dioxide equivalent emission factors for air travel are less well agreed than those for travel on land (or water) because of the difficulty in estimating and differences of opinion over whether and to what extent to recognise 'radiative forcing' (other climate impacts of air travel) in the factor.[10]

Theoretically, different classes of ticket could be recognised in the choice of conversion factor (as a surrogate for passenger space occupied) but in the simple form of carbon accounting set out in this technical factsheet economy class is assumed. Different emissions factors are used for short-haul (within Europe) or long-haul flights but no distinction is made for domestic flights (within UK). Radiative forcing is recognised in the emission factor chosen.

Distances between destinations and indeed specific journey distances (taking account of routes chosen) are available from many websites. For example, distances between cities (globally) can be found at http://www.mapcrow.info/ and distances for UK journeys can be found at Transport Direct http://www.transportdirect.info. There should be general agreement between websites when estimating distance, but consistent use of one is likely to be more time-efficient.

Several websites estimating distance also estimate the carbon impact of the journey depending on the mode of travel chosen. The precision and reliability of such estimates and their consistency over time is difficult to assess because the underlying data and algorithms are hidden from view. In order that an accountant can to ensure the material correctness of the carbon accounts it is necessary to carry out the calculations rather than relying on such a 'black box'.

3.5 Transport: Cycle and foot

It is generally agreed that travel by cycle, or on foot, is not responsible for the generation of greenhouse gases. Any amounts attributable to, for example wear and tear, are insignificant. There is little point, therefore, in estimating how many miles or journeys are involved, unless this is demanded by interested stakeholders.

A company may report aspects of such emissions-free travel in relation to other reductions achieved; for example, '*the company achieved its target of reducing its travel emissions by 20% by providing bicycles for employees*'.

[10] An introduction to the issues and further links concerning radiative forcing

3.6 Transport: Commuting and remote working

Recognised UK guidelines (see below) indicate that owner/director/employee commuting (ie travel from home to work) should be included in the carbon emissions of a business. This is because businesses are able to decide whether and to what extent to encourage lower or zero emission forms of transport for commuting.

Travel to and from work should be recorded in a similar way to business travel. Total mileage may be estimated from journey distances for each employee multiplied by the normal number of days worked during the period.

If a person works at home, commuting may be reduced or eliminated. The particular circumstances will determine whether related energy consumed in the home should be accounted for as consumed for business purposes. Usually an initial consideration of the impact of home working and the related reduction (if any) in energy consumption on business premises will be sufficient to determine whether accounting for and difference in the carbon is worthwhile. Similar considerations may apply to water use.

3.7 Water use

Water use gives rise to greenhouse gas emissions by the water supply company and is usually accompanied by emissions resulting from the disposal of waste water.

Business water supply is normally metered and the total consumption in a period may be determined from meter readings or from bills, in the same way as energy consumption.[4] When multiplied by an appropriate factor, the related carbon dioxide equivalent emissions can be calculated. In the UK, factors are available for both water supply and water treatment. In the simple form of carbon accounting set out in this technical factsheet, these factors are added together.

One additional factor to consider is that tap water is perfectly drinkable in the UK. Bottled water, regardless of size of bottles, creates considerable additional resource and energy use.[11]

Businesses concerned with environmental conservation may wish to record and report water consumption to interested stakeholders irrespective of the significance of the related emissions. The amount of water used per person is a good indicator of consumption that can be addressed over time. Targets vary, depending on the type of building occupied and the nature of business carried on. For a small office-based business, one published best-practice target is 4.4 cubic metres of water per person per year.[12]

3.8 Consumables: paper, packaging and plastic bags

Most business should consider their use of paper. Use of one ream of paper (500 sheets) equates to 8.4kg of CO_2; which is similar to travelling 40 miles in a small car.[13] To avoid the need for counting stocks, it would be normal to assess use on the basis of paper purchased rather than paper used.

Businesses in the retail trade may wish to consider accounting for the use of lightweight disposable plastic bags and other packaging. The estimation of greenhouse gas emissions for plastic bags and packaging is done in a similar way to that for paper: emissions associated with purchases for the period are expressed as their carbon dioxide equivalent through the use of an appropriate conversion factor. Conversion factors may be advised by a supplier, approximated by using publicly available figures or (for complex packaging) through consideration of the mix of raw materials that are used.

Plastic bag use is under legislative review within the European Union as the environmental impact of waste bags is a particularly sensitive matter.[14] In the EU some 100bn plastic carrier bags are used every year, many ending up polluting the environment and harming wildlife. As a consequence, most countries have initiatives in place to reduce their use.

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[11] The 'whole life' carbon assessment for bottled water use is complex, but a respected US state report (Oregon) concluded that it was more than 46 times worse than drinking tap water. See FAQ 3 at http://www.deq.state.or.us/lq/sw/wasteprevention/dwfaqresults.htm

[12] See http://www.green-office.org.uk/audit.php?goingto=factsheet5

[13] A typical small car emits say 125gm CO_2 per km, so distance driven to produce the CO_2 attributable to a ream of paper is 8400/125 = 67.2 km, or 41.8 miles.

[14] https://www.theparliamentmagazine.eu/articles/news/meps-demand-80-cent-reduction-lightweight-plastic-bag-use

Small businesses are often exempted from associated regulatory changes but consumers may value the adoption of voluntary measures.

Simple carbon accounting will give only part of the picture for plastic bag use. Switching from lightweight plastic bags to heavier multi-use bags may apparently increase the emissions associated with plastic bags purchased by a business if the heavier bags are not reused for repeat purchases. To establish what minimises emissions, a market-leading retailer may carry out complex life-cycle assessments of the carbon associated with plastic bag use. A small business may look towards market leaders as a guide to what strategies can be adopted.[15]

3.9 Carbon offsetting and green tariff electricity

'Carbon offsetting' is the practice of paying others to make an emissions reduction that a business itself cannot (or prefers not to) achieve. It can be done through intermediaries (by buying 'carbon credits') who fund emissions reduction schemes. A whole industry has grown up around carbon offsetting but the actual worth of such actions is controversial.

It is difficult to prove that a claimed reduction is actually attributable to the cost funded and, because profits have to be made, the system is not 100% efficient in channelling the money expended into the related projects. It is fair to say that carbon offsetting is less effective than direct reduction of a business's own emissions.

The reporting suggested in section 4 *Reporting carbon emissions* shows offsetting as a separate line item. It is not netted against the primary emission figures.

Purchasing green tariff (renewable source) electricity can be considered to be effectively a form of offsetting. For mixed-source supply, the electricity supply company will give a percentage for renewables.

3.10 Carbon equivalents

In the majority of the sub-sections above, reference is made to the process of using conversion factors to express measures of emissions-generating activities in the 'common currency' of kilograms of carbon dioxide. This is a simple multiplication exercise, once the activity is measured in appropriate units (for example, converting mileage into litres of petrol).

Suggested factors for each type of activity are provided in Appendix 1 to this factsheet. Such factors are subject to change and links are provided to the relevant UK government websites where generally accepted figures are maintained. If a business carries out operations outside the UK, equivalent national factors may be available and should be used, as they would necessarily take account of the particular circumstances in the jurisdiction.

The following table lists five of the common factors and a reverse lookup is provided so that the amount of activity to generate a kilogram of carbon dioxide equivalent may be appreciated:

Activity (measured in appropriate units)	***Conversion factor (2014)***	***1 kg of CO_2e results from:***
Electricity used (generation and transmission)	0.619 kg CO_2e/ kWh	1.616 kWh used
Air travel long haul	0.233 kg CO_2e /km	4,292 km flown
Petrol	2.300 kg CO_2e/l	0.435 l of petrol used
Water (use and waste)	1.053 CO_2e/m^3	950l of water used
Paper	8.400 kg/ream	60 sheets of paper used

4 REPORTING CARBON EMISSIONS

The forms of reporting will be decided in the light of business objectives, the intended users and so on. A business might prefer to keep carbon accounting confidential to management but external publicity and reporting can often contribute to achieving business objectives (see section 6 *External publicity and reporting*).

Reporting may vary from formal reporting to shareholders with the financial statements through to generating text messages to staff about related operational matters. The data capture and processing must support whatever forms of reporting are decided upon. The simple form of carbon accounting covered in this technical factsheet may conveniently be dealt with using a tailored system of spreadsheets in a workbook.

[15] A useful analysis of strategies is provided at http://www.allaboutbags.ca/reduction.html

Reporting of current performance will normally be accompanied by comparative figures or a 'baseline' and compared with a 'carbon budget', if one is used. An expanding business may find that the absolute figures for its carbon emissions have increased, despite efforts to control them. By normalising the figures against an activity indicator (for example per £1,000 of turnover) it is possible to see whether the relative performance has improved. Care should necessarily be taken, not only in choosing the activity indicator used in normalisation, but also in considering whether that has been subject to any changes that would reduce its usefulness for comparability from year to year. It may well be that, for a particular business, activity, such as the number of units manufactured or sold, is a better measure than turnover when prices are volatile.

The following is an example of a simple annual report that has been used successfully by many small businesses. The title uses the word 'environmental' in preference to 'carbon' or 'greenhouse gas emissions' as it is generally more understandable. Travel is shown in three categories: Commuting (non-air), Business (non-air) and Air (business travel), as those categories have proved most useful in setting objectives to reduce emissions. Even a small amount of air travel can have a significant impact on the overall figures.

The presentation of an annual report can be more complex, or different, if that is more effective in meeting the business objectives. For example, a business that never uses air travel might prefer to split business travel between owned vehicles and public transport, or a company with two businesses might want to show their performances separately.

The Example Business
Environmental Report for the year to 31 December 20xx

		20xx CO_2e kg		**Base year CO_2e kg**
Electricity		20,640		18,780
Gas		5,800		5,340
Travel:				
Commuting	7,670		8,410	
Business (non-air)	4,320		4,110	
Air	0		6,400	
		11,990		18,920
Paper use		1,680		1,650
Water		50		52
Gross total emissions (CO_2e kg)		40,160		44,742
Green tariff electricity		–5,800		0
PV Solar electricity generated		0		0
Carbon offsetting expenditure (CO_2e kg)		0		0
Net total emissions (CO_2e kg)		34,360		44,742

Turnover £1,000,000 (base year £900,000)

	CO_2e kg per £1000 turnover	**CO_2e kg per £1000 turnover**
Gross total emissions	40.16	49.71
Offsetting (Green tariff)	–5.80	0
Net total emissions	34.36	49.71

Notes to the environmental report
Notes to the environmental report should be prepared to give additional information about the above, such as:

- which parts of the business are included
- how aspects have been measured
- where conversion factors have been sourced

- further analysis of emissions by heading
- any significant changes from the base year (or prior year)
- commentary on performance
- commentary on planned actions.

5 REDUCING CARBON EMISSIONS

Feasible actions towards achieving the reduction targets depend on the physical characteristics of each activity and are usually obvious, such as using less paper. The actions may be thought about in several categories:

- reduction of existing activity, eg drive fewer miles
- increases in the efficiency of existing activity, eg use a more fuel-efficient car
- different ways of achieving existing objectives eg meet using video conferencing.

Some actions are immediately possible while others are either too costly to carry out in the short term or are of a long-term nature, so it is beneficial to consider at least two time categories:

- short-term actions, eg install water-saving devices in toilet cisterns
- long-term actions, eg install rainwater collection and use system.

It may be possible to plan the timing of long-term actions, or at least determine the reasons that prevent them from being more immediate, and the likely timing for the ending of those reasons; for example a change to a more efficient heating system may depend on moving to new premises.

Each action will have its own timing, financial cost (or saving) and impact on emissions. This allows the actions to be ranked and considered individually and collectively. There are other dimensions to candidate actions that can affect decision making about them: for example there may be negative consequences (eg sales staff not performing as well), or some actions may be linked to others (eg staff cycle scheme and car park pricing). It is likely that a business accounting for its greenhouse gas emissions will want to implement all short-term, minimal-cost actions that have no obvious negative consequences, irrespective of the magnitude of the emissions reduction.

The impact on emissions may be simple to estimate because it is either a change to an activity measure (eg miles travelled) or to an emission conversion factor (eg from the factor for petrol to the factor for LPG). Some reductions will be difficult to estimate, but it may be possible to find indicative figures. Some sources for these are given in Appendix 1.

A business engaged in carbon accounting may also seek to influence carbon reductions (and other environmentally beneficial actions) in its value chain. Accounting for such matters is outside the scope of this technical factsheet. A small business may, however, want to adopt a policy of formalising its approach and, if not actually measuring, at least have something to judge its actions against. This might be just internal guidance on procurement or be presented as part of a statement about carbon reduction, or perhaps in a statement about 'how we do business'.

A business may also do things to reduce the greenhouse gas emissions of others; for example re-positioning a security camera to cover customer cycle parking may encourage cycle use; indeed a business may emphasise the development and promotion of products and services that reduce emissions by others – this technical factsheet is an example of that.[16]

6 EXTERNAL PUBLICITY AND REPORTING

Carbon accounting and reporting can be an entirely internal matter for a business, either as it begins carbon accounting or in the longer term, but publicising environmental credentials is important or vital to many businesses. While a business may wish to keep its financial performance confidential, if it wishes to benefit from increased business respect and growth in sales that can come from having good environmental credentials then it is implicit that people have to know what it is doing.

[16] There is currently no international standard on such 'avoided emissions' but some industries have made progress on standardising accounting and reporting, for example in the chemicals value chain, http://www.wbcsd.org/Pages/eNews/eNewsDetails.aspx?ID=15911&NoSearchContextKey=true

In this respect there can be a difficult line to tread. It is very rare for a business to publicise its exact emissions, resource use and waste consumption, but it is important that significant considerations and actions are communicated. Even without publication, the report and the actions associated with it can be used to assist a business in preparing a simple (perhaps one-page) 'Environmental Policy Statement', such as might be requested by customers. Every business has some impacts and even a single-person business providing consultancy services providing only their time can record and make available a summary of the decisions made about travel, energy and other purchasing.

A second stage might be to prepare a more thorough 'Environmental Statement' drawing on the internal environmental report. The Environmental Statement should show the performance and position of the business.

The environmental report may be primarily for internal use but information from it, or indeed the full report, may be made available to investors, employees and larger customers on an individual basis. In some cases it might be made fully public. If the environmental report is made available to those outside the business, the objective of that publication will be one of the factors influencing the form of reporting (see section 4 *Reporting carbon emissions*).

Some businesses may find that they wish to report performance more widely than allowed by the constraints of the simple form of carbon accounting set out in this technical factsheet. In such cases reference should be made to section 9 below and the practitioner will consider whether they have, or can acquire, the appropriate competence to advise (see section 7.1 *Competence*).

7 PROFESSIONAL RESPONSIBILITIES

The simplified carbon accounting dealt with in this factsheet is intended to be accessible to all. The professional responsibilities of accountants should not be regarded as a barrier to providing such a service, but rather as an opportunity to stress the professional considerations that place the accountant in a position of trust as a business adviser.

7.1 Competence

The ACCA Code of Ethics and Conduct (Section 130 Professional competence and due care) explains that the principle of professional competence and due care imposes the following obligations on all professional accountants:

(a) to maintain professional knowledge and skill at the level required to ensure that clients or employers receive competent professional service, and
(b) to act diligently in accordance with applicable technical and professional standards when providing professional services.

In order to provide carbon accounting services, the professional accountant will necessarily need to attain and maintain the related professional competence: a continuing awareness and an understanding of relevant technical, professional and business developments.

Section 130 also notes that a professional accountant shall take reasonable steps to ensure that those working under his or her authority in a professional capacity have appropriate training and supervision.

Section 130 concludes with a note that, where appropriate, a professional accountant shall make clients, employers or other users of the accountant's professional services aware of the limitations inherent in the services. The impact of this will depend on the service provided. A limitation that might be communicated would be where there is a relevant standard with which the service might be expected to comply, but the service is not designed to ensure compliance.

7.2 Association with information

A professional accountant shall not knowingly be associated with reports, returns, communications or other information where the professional accountant believes that the information:

(a) contains a materially false or misleading statement
(b) contains statements or information furnished recklessly, or
(a) omits or obscures information required to be included where such omission or obscurity would be misleading.

When a professional accountant becomes aware that they have become associated with such information, the accountant shall take steps to be disassociated from that information.

The above obligation (under Code section 110 Integrity) should prompt the practitioner to ensure that, as well as containing only correct figures, a report is sufficiently transparent about its boundaries, the quality of the data and any assumptions made.

7.3 Public reporting engagements

A practitioner may report publicly on a carbon report where the engagement takes the form of a compilation, assurance or agreed-upon procedures.

Reference should be made to any applicable national standards for such engagements and, for guidance on best practice, to international standards on such engagements and on associated quality control. If an engagement is voluntary, a standard may be used by agreement even if it is not mandatory.

For assurance engagements, practitioners should be aware of the framework for assurance engagements provided by the International Audit and Assurance Standards Board (IAASB) and in particular in the International Standards on Assurance Engagements (ISAEs) issued by that body, which outline principles and procedures to be applied, as well as guidance for practitioners, in the performance of this type of work. ISAE 3000 *Assurance Engagements Other than Audits or Reviews of Historical Financial Information* is the standard that is written for general application to all assurance engagements. ISAE 3410 *Assurance Engagements on Greenhouse Gas Statements* is a specific standard that may be relevant.

8 MARKETING

This technical factsheet provides ACCA members in practice with guidance on advising small businesses on setting up and operating carbon accounting, and on the associated tax advantages (see Appendix 3). The technical aspects of carbon accounting are not difficult, but there are non-technical matters that are more important when considering whether and how a client service can be created and successfully marketed.

The two key aspects of marketing any service are that: the service provider must be capable of doing the necessary work to a high standard, and those in a position to use the service should know that it is available. There are a range of services that members in practice provide that need hardly any marketing, because potential clients assume, for example, that accountants are competent to, and do, prepare accounts. That is one reason why this technical factsheet refers to 'carbon accounting'. It makes the service seem a logical extension to services already provided by accountants.

Carbon accounting can be viewed as above, as one aspect of 'providing general business advice', or used as a unique selling proposition for a firm. It is important for the practitioner to decide precisely how to position the service, either overall or for segments of the client base, in order to tailor the marketing approach. This is not itself a simple process in the early stages when developing a service.

The single most important aspect of the marketing message for a firm is trust. The client must have trust in the firm's ability to provide the service. There are many ways to build that trust but in relation to carbon accounting there is one sure way to destroy it forever: unless the firm 'practices what it preaches' and does its own carbon accounting, it will have no credibility.

Making the firm's position visible can be done through email footers (eg '*Please consider the environment before printing this email*'), the website, social media and promotional literature. Nonetheless, having partners and staff supporting and engaging in environmental performance is the best form of marketing.

9 THE WIDER PICTURE

This technical factsheet concentrates on a simple form of carbon accounting that is suited to small businesses. There are further forms of carbon accounting that are related to products or to the whole value chain within which a business operates (its suppliers and customers)[17]; there are more ways of reporting environmental impact than just those used in carbon accounting; and there are sustainability reports and integrated reports that try to present a wider picture of the contribution a business makes to achieving society's long-term aims.

These forms of reporting are mainly relevant to larger companies, which may be legally required to report, or may report voluntarily in response to stakeholder pressure. Knowledge of such aspects can inform small business reporting (especially see sub-section 9.1 *Environmental reporting*) or allow a growing business to develop its reporting in line with best practice.

The sub-sections that follow outline the key sources relating to:

- environmental reporting
- sustainability reporting
- integrated reporting.

ACCA has been engaged in furthering these reporting areas for, in some cases, decades, through reporting awards, thought leadership and collaborative working with key agencies. The ACCA website provides a historical perspective on that activity and up-to-date information on the subject matter. The ACCA Qualification is updated regularly to keep abreast of key developments, for example by the inclusion of integrated reporting in the syllabus.[18]

9.1 Environmental reporting

'The Companies Act 2006 (Strategic Report and Directors' Reports) Regulations 2013 requires quoted companies to report on greenhouse gas (GHG) emissions for which they are responsible. Quoted companies, as defined by the Companies Act 2006, are also required to report on environmental matters to the extent it is necessary for an understanding of the company's business within their Annual Report, including where appropriate the use of key performance indicators (KPIs). If the Annual Report does not contain this information, then it must point out the omissions.'[19]

9.2 Sustainability reporting

'A sustainability report is a report published by a company or organization about the economic, environmental and social impacts caused by its everyday activities. A sustainability report also presents the organization's values and governance model, and demonstrates the link between its strategy and its commitment to a sustainable global economy.'[20]

A comprehensive Sustainability Reporting Framework that is widely used around the world is provided by the Global Reporting Initiative (GRI). The Framework includes the reporting guidelines, sector guidance and other resources.

GRI is an international not-for-profit organisation, with a network-based structure. Its activity involves thousands of professionals and organisations from many sectors, constituencies and regions. The Framework is developed collaboratively with the expert input of these parties. International working groups, stakeholder engagement and due process – including public comment periods – help make the Framework suitable and credible for all organisations.

A database of reports is maintained http://database.globalreporting.org/

[17] An introduction to full carbon accounting and a note of the differences between this and the simplified version are provided in Appendix 5 *Comprehensive carbon accounting*.
[18] http://www.accaglobal.com/uk/en/student/acca-qual-student-journey/sa/features/acca-embeds-integrated-reporting.html
[19] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/206392/pb13944-env-reporting-guidance.pdf
[20] https://www.globalreporting.org/information/sustainability-reporting/Pages/default.aspx

9.3 Integrated reporting

'Integrated reporting is a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation.
An integrated report is a concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value in the short, medium and long term.'[21]

For further information see http://www.theiirc.org/

Integrated reporting is not yet widespread. A pilot programme, in which ACCA has participated, is in place to test the first framework for integrated reporting. More information may be found on ACCA's website and through the site's search facility.

[21] http://www.theiirc.org/

APPENDIX 1 CONVERSION FACTORS

The following factors are generally those relevant for calendar years 2014 and 2013. The source for most is the government database, which allows a spreadsheet to be downloaded together with related information and instructions. It is important to read the 'what's new' section of the spreadsheet each year in case it identifies changes that, if material, should be explained in reporting. These explain some significant changes between 2014 and 2013, eg short-haul air travel.

If the carbon reporting period is not a calendar year, the conversion factors used for the period should be the ones for the year in which most months of the reporting period fall.[22]

This subset of the conversion factors has been selected for simplicity, common application and 'maximum carbon'. The latter means that where a choice can be made between factors, the higher has been used. For fuels such as diesel this means including 'Well to tank' (WTT) emissions that recognise the carbon gases necessarily emitted before fuel is purchased and used. For air travel it means including radiative forcing (see sub-section 3.4 *Transport: Public transport*).

	Conversion factors		**Analysis of components**	
	2014	**2013**	**2014**	**2013**
Electricity generated – use[23]			0.494	0.445
Electricity generated – WTT			0.075	0.070
T&D- UK electricity – use			0.043	0.038
T&D- UK electricity – WTT			0.007	0.006
Electricity (kg CO_2e/ kWh)	0.619	0.559		
Natural Gas – use			0.185	0.184
Natural Gas – WTT			0.025	0.028
Natural Gas (kg CO_2e/ kWh)	0.210	0.212		
Burning oil (kg CO_2e/ l)	2.538	2.538		
Coal (kg CO_2e/ kg)	2.848	2.852		
Wood (kg CO_2e/ kg)	0.052	0.077		
Diesel (kg CO_2e/ l)	2.669	2.671		
Petrol (kg CO_2e/ l)	2.300	2.310		
Liquid petroleum gas (kg CO_2e/ l)	1.691	1.680		
Waste vegetable oil[24] (kg CO_2e/ l)	0.667	0.668		
Air travel long haul (kg CO_2e/ km)	0.233	0.252		
Air travel short haul (kg CO_2e/ km)	0.184	0.213		
Train (kg CO_2e/ km)	0.056	0.058		
Coach (kg CO_2e/ km)	0.036	0.035		
Local bus (kg CO_2e/ km)	0.124	0.136		
Underground (kg CO_2e/ km)	0.073	0.074		
Taxi (Black cab) (kg CO_2e/ km)	0.266	0.185		
Water supply			0.344	0.344
Water treatment			0.709	0.709
Water[25] (kg CO_2e/ m3)	1.053	1.053		

[22] For a June period end it is suggested that the later of the two years is chosen.

[23] Use and WTT elements, although not shown throughout the illustrative analysis, are present in the government database for many of the conversion factors listed. A spreadsheet linking the above factors back to the government database is available from ACCA on request.

[24] Estimated at a quarter of emissions from diesel.

[25] Water supply and treatment volumes may differ, for example if on-site supply or recycling is in place.

Paper (kg CO_2e/ ream)	8.400	8.400		
Recycled paper (kg CO_2e/ ream	4.200	4.200		

APPENDIX 2 WHY CLIENTS SHOULD DO IT

This appendix lists some incentives for preparing environmental reports. This will help owners, managers and advisers of small entities to understand the reasons for carbon accounting. This will inform the process and help those concerned to get the most out of it.

There are many ways in which small businesses and other organisations can improve their environmental performance. By taking simple and consistent reporting measures, setting targets and reducing impacts small entities can 'go green' without attracting the tag of 'green wash'. Smaller entities considering the environment will benefit themselves, their stakeholders and the wider environment: a real win-win.

Protecting our environment

- Our environment is the only one we have.
- We need clean air, water, soils and resources.
- It is our legacy for future generations.
- Nature is fun and exciting, and gives us real experiences.
- The UK has suffered heat waves, flooding, climate change, pollution and habitat destruction.
- It's not too late, there are no excuses.

Business growth

- Expanded market for goods and services.
- Public attitudes are changing.
- Two thirds of people are more likely to use a business that claims to have a small 'carbon footprint'.
- Such perceptions affect even those businesses that do not supply directly to the public.
- Larger firms' procurement policies require suppliers to have an environmental policy.
- There are taxation reductions and grants available for actions benefitting the environment.
- Modern, ethical, responsible and well-managed businesses protect the environment.

Cost savings

- Costs of gas, electricity, fuel and water are rising.
- Reducing consumption and reusing items saves £s.
- Think environment = think business efficiency.
- Paperless systems give quick access to information.
- Train journeys give vital reading and thinking time.

Happy stakeholders

- Employees are keen to take part in and promote environmental activities.
- Staff recruitment, motivation and retention are vital to successful organisations.
- Team-building events have only a fraction of the effect of taking up the environmental challenge.
- Banks and external shareholders, for example, want to invest in sound organisations.
- Insurers, property landlords and even HM Revenue & Customs will view your business in new light.

APPENDIX 3 UK TAX INCENTIVES

Changes to a business stemming from its environmental commitment will have tax effects. These may involve paying more tax on increased profits or paying less tax through taking advantage of incentives offered by government to promote 'going green'.

Tax exemptions (and also grants) may be available for small businesses that do not use much energy, or that buy energy-efficient technology, or demonstrate that the business is operating more efficiently and producing less waste.

Tax and similar legislation changes frequently and the following should not be relied upon to provide current advice. The intention is merely to illustrate the potential impacts. Incentives available to large business and specialised industries (eg rail transport) have been ignored.

Further information may be obtained, in particular from https://www.gov.uk/green-taxes-and-reliefs

Climate change levy (CCL)

There are various exemptions, for example small quantities (de minimis) of fuel and power may automatically be treated as supplies for domestic use, even where they are supplied to a business. See HMRC's website.

Capital allowances on energy-efficient items

A business can, for example, claim 100% first year allowances one water-efficient technologies and energy-saving products; see this example.

Landfill tax

If a business gets rid of waste using landfill sites it pays landfill tax. The amount can be reduced by reducing waste sent to landfill. Tax credits are available for sending waste for recycling, incineration or reuse.

Transport

Low emission cars may benefit from lower rates of tax charge on employees, lower road fund licence charges and even exemption from the London Congestion Charge. Such incentives have been successful and are now diminishing.

A business may give employees interest-free loans that are used to purchase season tickets for public transport. A salary sacrifice scheme may save tax and national insurance on the costs.

There is no tax charge on providing cycles for commuting.

APPENDIX 4 EXAMPLE LETTER OF ENGAGEMENT FOR CARBON ACCOUNTING SERVICES

This provision of a services letter should be read in conjunction with the ACCA Engagement Letter suite.

Insert date

Dear Insert name

1. We are pleased to accept the instruction to act as preparer of your carbon accounts and are writing to confirm the terms of our appointment and our respective responsibilities.
2. The purpose of this letter, together with the attached terms and conditions, is to set out our terms for carrying out the work and to clarify our respective responsibilities.
3. We are bound by the ethical guidelines of ACCA, and accept instructions to act for you on the basis that we will act in accordance with those ethical guidelines. A copy of these guidelines can be viewed at our offices on request or at www.accaglobal.com

Period of engagement

4. This letter is effective from insert date.
5. We will deal with matters arising in respect of periods prior to the above as appropriate.

Scope of services to be provided

Our responsibility to you

6. We have set out the agreed scope and objectives of your instructions within this letter of engagement. Any subsequent changes will be discussed with you and where appropriate a new letter of engagement will be agreed. We shall proceed on the basis of the instructions we have received from you and will rely on you to tell us as soon as possible if anything occurs which renders any information previously given to us as incorrect or inaccurate. We shall not be responsible for any failure to advise or comment on any matter that falls outside the specific scope of your instructions. We cannot accept any responsibility for any event, loss or situation unless it is one against which it is the expressed purpose of these instructions to provide protection.

Your responsibility to us

7. The service that we give can only be as good as the information on which it is based. In so far as that information is provided by you, or by third parties with your permission, your responsibility arises as soon as possible if any circumstances or facts alter, as any alteration may have a significant impact on the services provided. If the circumstances change therefore or your needs alter, advise us of the alteration as soon as possible in writing.

Responsibilities

8. You are responsible for providing us with the necessary information and prime records for the preparation of the carbon accounts, including:
   - 8.1. Usage records.
   - 8.2. Relevant purchase invoices.
   - 8.3. Facts relevant to estimates.
   - 8.4. Amend for other records.
9. We have also agreed that you will provide the following:
   - 9.1. Copies of expense claims relating to transport.
   - 9.2. Statements from directors and staff concerning means of commuting mileages and frequency.

Our service to you

10. We will prepare from the information and explanations provided by you, your monthly/quarterly/annual carbon accounts, in accordance with Technical Factsheet 190.
11. We will discuss with you the carbon accounts/prepare a report and commentary on the figures for discussion with the board/management.
12. We will not carry out any audit work as part of this assignment. To carry out an audit would entail additional work so that we could report on the truth and fairness of the carbon accounts.
13. We have a professional responsibility not to allow our name to be associated with carbon accounts that may be misleading. In extreme cases when this matter cannot be resolved, we will withdraw from the engagement and notify you in writing.

14. The carbon accounts are prepared for your internal use within your business. They should not be shown to any other party, in a manner in which we are identified with them, without our prior agreement.

Limitation of liability

15. We specifically draw your attention to paragraphs 42 to 47 of our standard terms and conditions that set out the basis on which we limit our liability to you and to others. You should read this in conjunction with paragraphs 62 and 63 of our standard terms and conditions that exclude liability to third parties. These are important provisions which you should read and consider carefully.
16. There are no third parties that we have agreed should be entitled to rely on the work done pursuant to this engagement letter.

    OR

    We have agreed that the following third parties should be entitled to rely on our work pursuant to this engagement: insert details of third parties.

Other services

17. You may request that we provide other services from time to time. If these services will exceed £insert value, we will issue a separate letter of engagement and scope of work to be performed accordingly.

Agreement of terms

18. This letter supersedes any previous engagement letter for carbon accounting for the period covered. Once it has been agreed, this letter will remain effective until it is replaced.
19. You or we may vary or terminate our authority to act on your behalf at any time without penalty. Notice of variation or termination must be given in writing.
20. We would be grateful if you could confirm your agreement to the terms of this letter by signing the enclosed copy and returning it to us immediately.
21. If this letter is not in accordance with your understanding of the scope of our engagement or your circumstances have changed, please let us know.
22. This letter should be read in conjunction with the firm's standard terms and conditions.

Yours sincerely,

For and on behalf of

Insert firm name

I/We confirm that I/we have read and understood the contents of this letter and related terms and conditions and agree that it accurately reflects my/our fair understanding of the services that I/we require you to undertake.

Signed..... Date.....

For and on behalf of

Insert business name

APPENDIX 5 COMPREHENSIVE CARBON ACCOUNTING

This factsheet concentrates on a subset of comprehensive carbon accounting. It is necessary to explain comprehensive carbon accounting overall in order to establish the boundaries of the subset.

In comprehensive carbon accounting, the greenhouse gas emissions[26] are analysed between Scopes 1, 2 and 3. Scope 1 is the direct emissions, such as from owned-vehicle operation and burning gas for heating. Scope 2 is indirect emissions relating to energy, typically electricity generation and transmission from a supplier. Scope 3 is other indirect emissions caused by the business, such as those relating to purchases and waste disposal. In the UK, for certain large companies, Scope 1 and Scope 2 emissions are required to be reported, whereas Scope 3 reporting is discretionary.

- Scope 1 emissions that are included in the simple system are only those where the emissions relate to owned transport and fuels being burnt (such as in gas heating). Emissions from production processes and 'fugitive emissions' (leaks) are not included because they are rare and, where significant, would merit wider consideration of environmental impacts and reporting.
- Scope 2 emissions are all included in the simple system if they are significant.
- Scope 3 emissions need further consideration (as set out below).

In selecting emissions for inclusion in an actual report, one must subject all emissions to a materiality test/test of significance/cost and benefit appraisal. Measurement of Scope 3 emissions is likely to be less accurate than for direct emissions as, not being directly controlled, there may be a higher degree of estimation and extrapolation in the data and little or no assurance over it.

A large company will determine a boundary for its direct carbon footprint that also forms the 'inner boundary' to its indirect emissions. This boundary for the indirect Scope 3 emissions will be more fixed and certain than the 'outer boundary'. Because reporting of Scope 3 is discretionary, a company will choose to account for those emissions that are reasonably sufficient to satisfy its business reporting objectives at an acceptable cost.

The company will establish an outer boundary for its indirect emissions in relation to its particular products and services or, less commonly, to the whole value chain within which it operates (including emissions of its suppliers and customers). The remoteness of the outer boundary from the company is influenced by many factors but these are often determined by the categorisation of the emissions in the way set out below.

Indirect emissions are often categorised as either 'upstream' or 'downstream'.[27] The categories (or sub-categories) shown in bold type below are included in the simple system used in this technical factsheet. The sub-categories may not be significant for a particular business. Conversely, a business may wish to extend its reporting to other matters. This might occur where, for example, a direct emission, such as own transport used for delivery, is replaced by outsourced distribution.

Upstream

1. Purchased goods and services – **water, paper, packaging** (including retail plastic bags)
2. Capital goods
3. Fuel- and energy-related activities
4. Upstream transportation and distribution
5. Waste generated in operations – **general waste**
6. **Business travel**
7. **Employee commuting**
8. Upstream leased assets

   Other upstream

[26] A large company may not only account for overall emissions measured as carbon dioxide equivalents but may account separately for individual greenhouse gases (6 of which are covered by the Kyoto Protocol).

[27] The upstream/downstream categories and activities below including their numbering correspond to the categories and activities documented in the WRI and WBCSD 'GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard'. The original numbering has been used for ease of reference between here and the GRI G4, the WRI and WBCSD. 'Other upstream' and 'other downstream' are not numbered.

Downstream

9. Downstream (third-party) transportation and distribution
10. Processing of sold products
11. Use of sold products
12. End of life treatment of sold products
13. Downstream leased assets
14. Franchises
15. Investments

Other downstream

In addition to the above, the simple approach used in this technical factsheet also refers to subcontracting and outsourcing as these may be relevant to the relationship between an accountant in practice and a client.

APPENDIX 6 FURTHER RESOURCES

Internet links are provided in many sections of this technical factsheet. In this appendix the most important references are collected and further websites are suggested that provide information directly, or indirectly, relevant to simplified carbon accounting. Inevitably, internet links will become broken and reference should be made to popular search engines to relocate material or discover new developments.

Department for Environment Food & Rural Affairs (DEFRA) – Twitter @DefraGovUK

As explained more fully on its webpage, the Department for Environment Food & Rural Affairs provides:

- Environmental Reporting Guidelines, including mandatory greenhouse gas emissions reporting guidance
- advice for those companies required to report, as well as for those for which it remains voluntary; this is included in the environmental reporting guidance
- a guide for small businesses on how to measure and report greenhouse gas emissions .

There is a Web-based tool to help companies calculate their emissions. This shows all relevant conversion factors. A user guide and a list of common queries about the greenhouse gas conversion tool are available. Details of the methodologies used to calculate the factors can be found in the emission factors methodology paper.

Since 1 October 2013 the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013 has required all UK quoted companies to report on their greenhouse gas emissions as part of their annual Directors' Report. A list of companies that currently report on their environmental performance can be found on the Corporate Register. The Department for Transport's work-related travel guidance helps organisations in the UK measure and manage the greenhouse gas emissions from commuter journeys and business travel.

Transport Direct

Transport Direct is a website funded by the Department of Transport and other public agencies. It provides comprehensive services in relation to public transport including journey planning and illustrative comparative calculation of carbon dioxide emissions for a car or public transport for a specified journey.

Environment Agency – Twitter @EnvAgency

The Environment Agency is an executive non-departmental public body responsible to the Secretary of State for Environment, Food and Rural Affairs. Its principal aims are to protect and improve the environment, and to promote sustainable development. It plays a central role in meeting the environmental priorities of central government through its functions and roles.

Its webpage on the environment topic incudes links to policy areas that may be of interest:

- encouraging businesses to manage their impact on the environment
- reducing and managing waste
- protecting biodiversity and ecosystems at home and abroad
- reducing the UK's greenhouse gas emissions by 80% by 2050.

Department of Energy & Climate Change (DECC) – Twitter @DECCgovuk

The Department of Energy & Climate Change (DECC) is a ministerial department that works to make sure the UK has secure, clean, affordable energy supplies and promote international action to mitigate climate change. Its website incudes links to policy areas that may be of interest:

- encouraging businesses to manage their impact on the environment
- helping households to cut their energy bills
- supporting international action on climate change.

Committee on Climate Change – Twitter @theCCCuk

The Committee on Climate Change is an executive non-departmental public body. It advises the government on emissions targets and reports to Parliament on progress made in reducing greenhouse gas emissions. Its website provides information that may be of interest to those concerned with climate change.

APPENDIX 7 FEEDBACK ON INTERIM GUIDANCE

This interim guidance was published on 1 September 2014. It will be updated after a year to show the 2015 carbon conversion factors and incorporate improvements based on feedback from users. It is anticipated that a further annual update will take place in 2016, at which time the guidance will no longer be described as 'interim'.

Feedback is welcome on the factsheet as a document, the simple system of carbon accounting that it explains or the outcomes of its use with clients (or in your own business as a firm of accountants or in another entity). While the guidance is written in the context of the UK, it may be applied in other jurisdictions where equivalent information is available. Feedback is welcomed, therefore, from users in all jurisdictions.

Feedback may be given at any time (and more than once):

- openly in the ACCA official members LinkedIn group
- by email to condoccomments@accaglobal.com

If you provide feedback it would be helpful if you could indicate your experience, if any, of environmental matters, as well as the capacity in which you use, or envisage using, this simple carbon accounting system (or using the information as an introduction to carbon accounting for larger businesses).

In relation to the factsheet itself, we welcome comments on any aspect of it, including any omissions, and also your views on what further resources should be provided in future. We would particularly welcome answers to one or more of the following questions:

Q1 Did the summary of the carbon accounting stages (section 2 *Carbon accounting*) provide the right level of information to effectively introduce the simple system of carbon accounting? If not, how can it be improved?
Q2 Did the section explaining how to measure carbon for common business activities meet your needs? If not, what should be added (or omitted)?
Q3 The sections on reporting and reducing carbon emissions were deliberately kept relatively simple. Would you have liked to see anything different and if so what? What further material could be provided (probably separately) that would be useful?
Q4 Was the section on external publicity and reporting (section 6 External publicity and reporting) useful? Should it be deleted or changed and, if the latter, how?
Q5 The factsheet included a section on professional responsibilities: competence, association with information and public reporting engagements (section 7 Professional responsibilities) and an illustrative letter of engagement (Appendix 4). Was this content helpful? How can it be improved?
Q6 The marketing section discussed the various ways the service might be positioned and also warned that credibility depends on 'walking the walk'. Do you agree with that? Did this put you off introducing the service?
Q7 Marketing may also be informed by the appendices 'Why clients should do it' and 'UK tax incentives'. Were these useful? How could they be improved? Should ACCA produce a client leaflet or brochure to be tailored by a firm?
Q8 The factsheet explored environmental, sustainability and integrated reporting (section 9 The wider picture). It also explained comprehensive carbon accounting (Appendix 5) and provided related further resources (Appendix 6). Was this content helpful? How can it be improved?
Q9 Conversion factors were provided in an appendix (Appendix 1). Is this the right approach or should the document simply refer to the more-detailed online sources?
Q10 Should ACCA provide any educational material in relation to this simple form of carbon accounting? If so, what material (video, case study, etc)?

And more widely:

Q11 What are your views on the simple system of carbon accounting explained in the factsheet or the outcomes of its use with clients (or in your own business as a firm of accountants or in another entity)?
Q12 How could this feedback process be improved?

Thank you in advance. Your views are important to the success of this project and its impact on the environment.