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# Product Carbon Footprint Protocol

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Required data and documentation to enable footprint communication and product labelling.

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## Part 2: Requirements for Communication

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# The Carbon Trust

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## **About the Carbon Trust**

The Carbon Trust is an independent company established in 2001. Its mission is to accelerate the move to a sustainable low carbon economy by working with business, the public sector, and investors.

The Carbon Trust carries out a wide range of activities, including working directly with business to reduce greenhouse gas emissions, explaining the strategic implications of climate change and investing in new technologies and businesses that will help to tackle climate change.

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# Foreword

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## Product Footprint Certification

The Product Carbon Footprint Protocol (PF Protocol) builds on the experience of the Carbon Trust product carbon footprint certification programme in establishing requirements for greenhouse gas (GHG) emission measurement, management and reduction.

The PF Protocol delivers clear requirements and guidance for organisations seeking to measure and reduce their product's emissions, and is provided in two parts:

- Part 1: sets the minimum requirements for footprint certification; and
- Part 2: establishes requirements for communication and labelling.

This PF Protocol is freely available for use by organisations and programme operators to support their continuing efforts to reduce GHG emissions from their activities.

## About the Carbon Label

Everything we buy, produce and use has a carbon footprint. The carbon footprint of a good or service is the total carbon dioxide (CO<sub>2</sub>) and

other greenhouse gases emitted during its life. It includes production, use and disposal.

Devised by the Carbon Trust, the Carbon Label<sup>1</sup> is a way for companies to show they have measured and/or reduced the carbon footprint of a good or service.

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<sup>1</sup> Use of the Carbon Label logo, or other claims of conformance is restricted to those organisations that have achieved certification of their product's carbon footprint by Carbon Trust Certification or its accredited and licensed certification partners.

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# 1 Introduction

Part 2 of the Product Carbon Footprint (PF) Protocol establishes criteria and options for effective communication and labelling. It builds on the certification definitions, principles, and requirements in Part 1.

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There are currently three global standards or technical specifications focussing on product carbon footprinting:

- PAS 2050 (2011)<sup>2</sup>
- GHG Protocol Product Standard
- ISO 14067

Each of the above documents has a slightly different approach to the requirements for communicating the results of a footprint calculation. However, the core principles for each are derived from ISO 14020, 14021, 14025 and DEFRA's Green Claims Guidance. See section 5 for details. Part 2 of the PF Protocol is intended to provide a consistent set of requirements compatible with these wide ranging communication frameworks.

The specific aims of the PF Protocol are to enable suitable communication of quantified information covering footprints and planned or achieved reductions. In order to do so, the Protocol sets rules for comparability and trade-offs between simplicity and completeness.

The PF Protocol Part 1 defines clear requirements for data and calculations. Part 1 hence provides the basis for Part 2. The combination provides confidence and

consistency whilst preventing misleading claims of precision or certainty.

## 1.1 Part 2 of the PF Protocol is organised in four sections

1. Introduction
2. General Public Communications
3. Comparison Claims
4. Reduction

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<sup>2</sup> If using PAS 2050:2008, refer to the "Code of Good Practice" and "Code of Good Practice Interpretation Document"

## 2 General public communications

The PF Protocol is primarily intended to be applied to public communication of footprints. Effective, communication of quantified information on-pack or otherwise at point-of-sale is inherently more complex than, for example, making a simple statement of achievement.

### 2.1 Public Communication Options

Companies are permitted to communicate the certified results and/or claim a reduction commitment/achieved reduction, as introduced in Table 2. Expiry or withdrawal of certification means companies will no longer be permitted to make related public statements in association with the Carbon Trust.

Footprint measurements must conform to the requirements laid out in Part 1.

### 2.2 Preparing Footprint Results

Presenting simple, quantified environmental information in any public arena should be done with care. A single footprint number relies on a great deal of background information that itself cannot effectively be communicated at the point of sale. Any assumptions and commentary regarding the footprint must be available upon request, so that consumers may understand issues around (amongst others) precision and uncertainty. See section 2.1 for full reporting requirements.

In order to manage precision and uncertainty in a straightforward manner, final footprints for public use must be rounded according to the list in Table 1. The rules generate up to an approximate +/- 5% rounding impact.

**Table 1 – Footprint Rounding**

Life cycle GHG emissions (CO <sub>2</sub> e) per functional or reference unit	Round to nearest:
> 10g, <= 20g	1g
> 20g, <= 40g	2g
> 40g, <= 100g	5g
> 100g, <= 200g	10g
> 200g, <= 400g	20g
> 400g, <= 1.0Kg	50g
> 1.0Kg, <= 2.0Kg	100g
> 2.0Kg, <= 4.0Kg	200g
> 4.0Kg, <= 10.0Kg	500g
etc.	etc.

Disclosure of results directly to another business within a supply chain should be done using the raw, unrounded footprint values.

A change to a calculated footprint that alters the rounded result is considered to be material.

**Table 2 - Communication Options**

Communication option	Requirements in addition to conformity with Part 1 of this Protocol
‘The Product Carbon Footprint of this product has been certified by <Certification Body>’.	If the level of assurance is listed as “limited” on the contract and verification statement, this must be clearly indicated in all communications.
The list or a subset of the list of certified numbers, reductions and products may be published.	To support publication of product footprint information, it is necessary to generate and make available upon demand an Inventory Report or other supporting information as required by the relevant footprint standard.
Comparison between certified products.	Further details are defined in section 3 Comparison claims below.
Companies may claim: ‘The footprint reduction of X% achieved by this product has been certified by <Certification Body>’.	Information regarding the measures taken to generate reductions must be included within the Inventory Report. See section 4 , Reduction.
A company’s commitment to reduce the footprint(s) of < certified product list>.	This is a future-oriented claim and must not be quantified. See section 4.3.1 Setting out future intentions.
A claim to business clients regarding cradle-to-gate footprints of certified products.	The boundary limitations of a Cradle-to-Gate (Business-to-Business) footprint must be clear.  If the use phase is not included in the product footprint it cannot be communicated to the general public, only to a business.

## 2.3 Supplementary Rule Hierarchy

In addition to the methods for presenting footprint results discussed above, the use of supplementary or product category rules helps to ensure consistency and transparency of public information.

The following hierarchy of rules must be applied when deciding which published rules are applicable:

1. Generic (e.g. transport emissions calculation)
2. Sector specific (e.g. bakery products)
3. Product specific (e.g. bread)

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## 2.4 Requirements for Third Party Verification

footprint and have readily available information regarding any biogenic storage.

Public disclosure must always be accompanied by a valid verification statement from a third party, which must at least be available upon request. The verification statement must be based upon decision-making processes covering the following areas:

- Conformity to the relevant product footprint standard
- Product definition
- Data requirements, scope, quality and materiality
- Reduction calculations and comparisons, if applicable
- Inventory reporting

## 2.5 Preparing to use a Label

General information can be found on our website<sup>3</sup>, and detailed usage requirements are available upon request.

The Carbon Label may optionally be accompanied by a text box. The content may cover comparison claims, cradle to gate information, reduction information, mitigation actions suggested for consumers etc. and must be reviewed and approved by Carbon Trust Certification Ltd.

Cradle to grave footprints may be used upon both primary (consumer) and secondary packaging. However, cradle to gate footprints may only be applied to secondary packaging in order to avoid misleading interpretation.

Any cradle to gate footprint must be clearly indicated as such, be presented as a net<sup>4</sup>

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<sup>3</sup> <http://www.carbontrust.com/client-services/footprinting/footprint-certification/carbon-footprint-label>

<sup>4</sup> Emissions net of any temporary biogenic storage expected to be released within the full life-cycle of the product

## 3 Comparison claims

A common reason for releasing footprint results into the public domain is as the basis for some form of comparison. Members of the public will also likely make their own tacit comparisons to pre-existing information or assumptions. It is crucial therefore that the basis for these comparisons is as clear and consistent as possible to avoid misleading claims.

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Comparison claims can be grouped into 5 categories as follows. Certified reduction claims are covered in section 4 .

### 3.1 Brand Compared to Brand

It is possible to compare a product footprint with one published by a competitor. Any such comparison can only be made against a footprint generated with equivalent rules and assumptions. As such, this is a “Type III” comparison claim as defined by ISO 14025. To make such a public comparison requires agreement from all brand owners involved.

### 3.2 Comparison with Generic Products

If a direct product comparison is not possible or desired, a specific brand’s product may be compared against a generic product with the same function, e.g. “Average Soda” compared to a company’s specific soft drink.

To gain this type of generic number, companies must use comparable, anonymised published or unpublished footprints.

A minimum of two existing product footprints are required to calculate the generic footprint. If Carbon Trust Certification is responsible for

managing a confidential generic footprint, normally only the resulting average footprint will be disclosed to the company making the claim.

### 3.3 Impact on Company’s own Product System

Rather than making comparisons to other products, an alternative available is to compare intra-product scenarios. For example, everything else being equal, companies may compare the footprint of 1Lt coke bottles made of PET or glass. Both or just one of the PET or glass variants may exist as a sold product.

### 3.4 Comparisons of Individual Parts of the Life Cycle

If companies wish to focus the message upon a particular element of a footprint, Carbon Trust Certification allows the comparison of partial footprints. For example, the comparison of the use phase of a 32 inch LED TV with the use-phase of a 32 inch LCD TV.

Companies must ensure that any material upstream life cycle emissions are comparable to ensure the claim is not misleading. If one product has a lower use phase but much higher

manufacturing or distribution emissions the claim may be considered misleading.

### 3.5 Impact on a Different Product System

Rather than comparing a product's footprint with another, companies may disclose the impact their product has on the emissions of a system it works with. For example:

- Additives can affect the efficiency of central heating systems.
- Fleet fuel efficiency software affects the fuel economy of driven vehicles.

In this case, the product will often have a low embodied footprint in comparison with the system that it affects. To that end, this type of comparison has two elements which must be performed:

1. Calculate the product's footprint to provide transparency on the relative impact of the product's embodied emissions compared to the impact on the system; and,
2. Generate a comparison between two use phase scenarios, either:
  - a. With and without the product or;
  - b. With 2 variants of the product.

Full transparent reporting of the assumptions used is required.

If only the second element of the comparison is calculated, ISO 14064 Part I will apply.

## 4 Reduction

Claims about planned or actual footprint reductions require specific and careful management. This section defines our requirements for making and managing fair, clearly defined reduction claims.

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### 4.1 Calculating Achieved Reductions

Part 1 of the PF Protocol provides requirements for calculating quantified reductions. There are no requirements regarding the size of any achieved quantitative reduction.

When quantification is not possible (e.g. significant data quality clashes), reductions may be disclosed on a qualitative basis in agreement with Carbon Trust Certification.

The basis for achieved, qualitative reduction claims must be disclosed.

### 4.2 Consumer Reductions

Not all reductions may occur in a company's supply chain or own operations. If suitable evidence can be provided, consumer-driven reductions may be applicable. Evidence is required describing a programme of change or marketing campaign that will lead to a modified use-phase in future, e.g. new cooking instructions.

### 4.3 Managing Reduction Programmes

Companies must ensure that any reduction claim is resolved before the original footprint

becomes obsolete (e.g. the validity period defined by the product footprint standard expires).

#### 4.3.1 Setting out future intentions

Claims about future reductions must be supported by a suitable, publically disclosed, reduction plan (for example within an Inventory Report).

A failure to demonstrate planned reductions removes the option to make future claims, until this failure is addressed. A company may use alternative communications (e.g. regarding footprint measurement or project-based activities).

#### 4.3.2 Banking large reductions for the future

If large reductions of at least 5% are made the results may be used over up to 4 subsequent years, assuming no significant subsequently increase. In other words, if an initial reduction of more than 5% is achieved, this may be re-used twice, assuming a 2-year footprint validity period. This is known as "banking". Claims of this nature must reference the original footprint year, so that the time period covered by a reduction claim is clear.

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### 4.3.3 Intention and causality

All sources of emission change must be included, as specified in Part 1 section 4.1.3.

Some events which affect reduction programmes are unavoidable and are classed as “force majeure”. Events included in this definition are:

Fire, flood, earthquake, storm, hurricane or other natural disaster (including pests and diseases), war, invasion, act of foreign enemies, hostilities (whether war is declared or not), civil war, rebellion, revolution, insurrection, military or usurped power or confiscation, terrorist activities, government sanction, blockage, embargo, interruption or failure of energy suppliers.

In this case, reduction assessment may be delayed by up to a year.

Other, operational, events may cause a failure to reduce. In this case, it is possible to pause reduction claims until corrective action is taken, or use alternative communications (e.g. regarding footprint measurement or project-based activities).

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## 5 References

Further relevant information on product emissions assessment, communication and certification may be found in the following referenced documents:

- ISO 14064-1:2006 Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- ISO 14064-3:2006 Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions
- ISO 14065:2013 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition
- ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations – Principles and procedures
- Publicly Available Specification PAS 2050:2011, BSI
- Greenhouse Gas Protocol: Product Life Cycle Accounting and Reporting Standard (2011), WRI & WBCSD
- ISO/TS 14067:2013 Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification and communication
- Green Claims Guidance (2011), DEFRA
- The Carbon Footprint Label: Style guidelines (2013), Carbon Trust
- Code of Good Practice for Product Greenhouse Gas Emissions and Reduction Claims (2008), Carbon Trust