

THE CARBON FOOTPRINT of J. Arthur Bower's 70 litre Multi-Purpose Compost



Using the Carbon Trust's draft Carbon Footprint Measurement Methodology (version 1.3) the carbon footprint of a 70 litre bag of J. Arthur Bower's Multi-Purpose Compost, up to point of sale, was calculated as 1.714kg CO₂-e (25g/l) in June 2007.



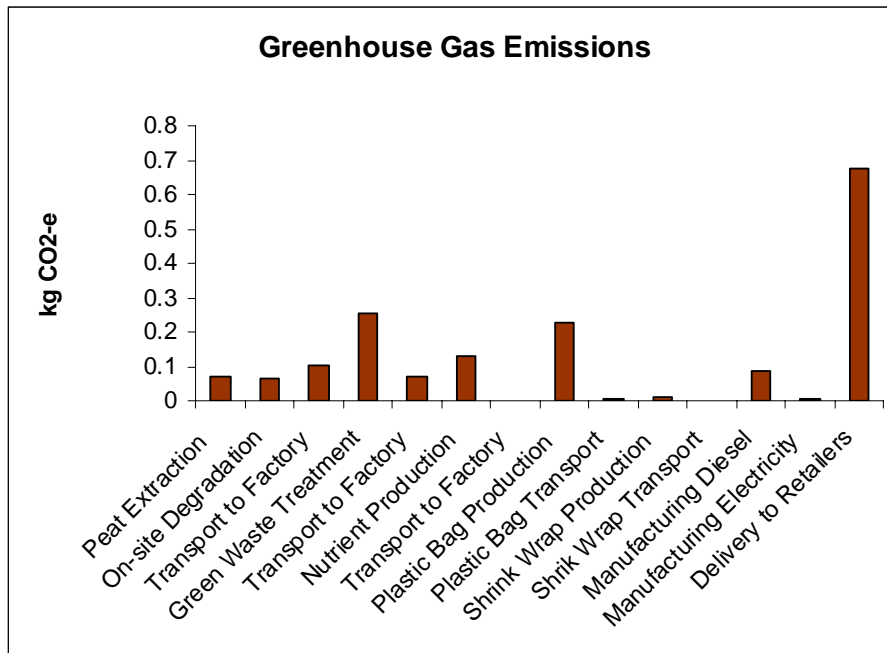
The Carbon Trust's draft methodology includes all life cycle impacts from extraction, production and transport (up to the retail outlet) and disposal. It does not include the following life cycle elements:

- The embodied energy from the manufacture and maintenance of process equipment and building construction as this is expected to be small per product as it is spread over many years' lifetime.
- In-store heating and lighting because the manufacturer cannot affect the retailers' shop conditions.
- Consumer transport of items from the shop back home as this is complicated by the fact that several items can be bought in one trip. Similarly the transport of employees to and from the place of manufacture is not included.
- In-use emissions. This is because usage patterns would have to be assumed; for example the energy used by electrical goods such as TVs and the associated greenhouse gas (GHG) emissions, importantly the manufacturer cannot affect these or change usage patterns. The draft methodology notes that this is a limitation as in-use emissions affect some products more than others.
- No reference systems are included in general, e.g. avoided alternative disposal methods. However, it may be necessary to include reference systems for particular products, particularly where there is likelihood of significant impacts from land use change.

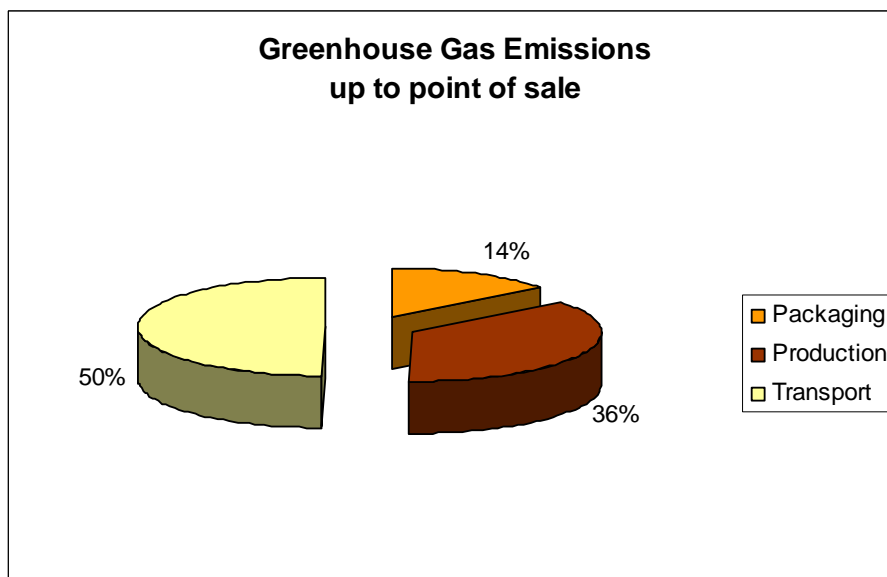
The calculation of the carbon footprint included the following elements:

- Peat extraction and on-site degradation.
- Processing of garden green waste.
- Manufacturing fertiliser nutrients.
- Transport of all material to the processing factory.
- Production of plastic granules to make the bags.
- Manufacturing the bags.
- Transport to and from the bag-making factory.
- Manufacture and transport of outer shrink-wrap packaging.
- Processing and mixing the compost.
- Transport to retail outlets.

The findings were as shown in the graphs below, with the largest carbon impact of the process up to the point of sale coming from the distribution of the compost to garden centres.



All the transport through the production process accounted for half the total CO₂-e emissions, production of the compost for 36% and packaging for the balance of 14%.



AEA was commissioned to calculate the carbon footprint of J. Arthur Bower's 70 litre Multi-Purpose compost for the life cycle from the extraction of materials, through production and transport, up to and including its use in the garden. While in-use emissions are not included in the carbon footprint presented here, this was calculated by AEA. It is recognised that in-use emissions from the decomposition of the peat component within multi-purpose compost over many years is significant. WSH is committed to continuing to reduce these emissions by reducing the percentage of peat component and replacing with green garden waste.

AEA is a leading international company in the field of energy and the environment. They have over 30 years' experience in the sector, extensive experience in working with public and private companies, calculating carbon footprints and recent projects include studies on 'food miles', shopping bags and car tyres.