

Wickes 2021 Greenhouse Gas Methodology

The GHG accounting methodology is presented for the GHG emissions from Wickes' own operations in the UK.

Scope 1 (direct): emissions arising from fuel used in stationary equipment, fuel combustion for transportation, and fugitive emissions from refrigerant leaks.

Organisational boundaries	
Control approach	Operational control approach.
Category 1: Stationary Combustion	
Calculation Boundary	Stationary combustion includes combustion fuels in stationary equipment such as boilers, furnaces, burners, turbines, heaters, incinerators, engines, flares etc. In this assessment, emissions from stationary combustion were mainly from the use of natural gases for space heating and hot water.
Methodology	Average-data method.
Calculation	Stationary combustion: The emissions from stationary combustion were calculated based on the purchased quantities of natural gas using published emissions factors for the U.K.
Assumptions	Please note for locations where there was erroneous data previous year's or averages were used to extrapolate.
Data Sources	Activity data was sourced from utility bills and the onsite metering readings summary provided by Wickes. The emissions factors originated from the Greenhouse gas reporting: conversion factors 2021 from the UK Government's Department of Business, Energy & Industrial Strategy.

Category 2: Mobile Combustion	
Calculation Boundary	This category includes emissions from fuel combustion in transportation devices such as automobiles, trucks etc. For this assessment, the emissions from mobile combustion was mainly from the use of vehicles that are owned or under operation control of Wickes.
Methodology	Fuel-based method.
Calculation	Mobile combustion: The emissions from the mobile combustion were calculated by multiplying distance travelled with published emissions factors for the U.K. The emissions factors were determined based on the vehicles' type and fuel characteristics. For goods vehicles, emissions factors for average laden were used in the calculation.

Assumptions	Where data was not available on the laden of the lorry, average laden was assumed for all kilometres travelled. For all lorries up to 26 tonnes in weight, it was assumed rigid, and anything above was assumed to be articulated.
Data Sources	Activity data was sourced from Wickes' distance travelled records. In addition, emissions factors from the freighting of goods were sourced from the Greenhouse gas reporting: conversion factors 2021 from the UK Government's Department of Business, Energy & Industrial Strategy.

Category 3: Fugitive Emissions	
Calculation Boundary	This category includes emissions that are intentionally or unintentionally released, such as equipment leaks from joints, seals, packing, gaskets, as well as fugitive emissions from coal piles, wastewater treatment, pits, cooling towers, gas processing facilities, etc. In this assessment, the fugitive emissions were from refrigerant leakage from the air conditioning systems that were used across Wickes sites.
Methodology	Extrapolation method (extrapolation based on the gross internal area (m ²) of the area with air conditioning systems).
Calculation	Fugitive emissions: Refrigerant fugitive has been determined as the only possible fugitive emissions that Wickes could have in 2021. As Wickes did not have the data on hand, the emissions for this category was extrapolated by multiplying the air-conditioned area (in m ²) by the appropriate area-based emission factor.
Assumptions	Please note that refrigerant usage is not tracked across Wickes' real estate. As a result, contingent on the purpose of the space (office, distribution centre, or retail location), an industry average refrigerant use per metre square was used as a proxy for primary data.
Data Sources	Primary data from the metres squared of air-conditioned space (office, distribution centre, and retail locations) was used as input data. Emissions factors from refrigerants were sourced from the International Energy Agency Energy Efficiency Indicators 2021 database in combination with South Pole internal resources.

Scope 2 (indirect): emissions arising from the purchase of electricity.

Category 1: Purchased electricity	
Calculation Boundary	Scope 2 is an indirect emission category that includes GHG emissions from the generation of purchased or acquired electricity, steam, heat, or cooling consumed by the reporting company.
Methodology	Location-based and market-based.
Calculation	Electricity: the amount of electricity consumed (in kWh) was multiplied by the appropriate emissions factor (for location and market-based) for the U.K. to determine the amount of tCO ₂ e generated from electricity generation.
Assumptions	Please note for locations where there was erroneous data previous year's or averages were used to extrapolate.
Data Sources	Activity data was sourced from utility bills and the onsite metering readings summary provided by Wickes. The location-based emissions factors originated from the Greenhouse gas reporting: conversion factors 2021 from the UK Government's Department of Business, Energy & Industrial Strategy. The market-based emissions factors were sourced from the International Energy Agency database.

Scope 3 (indirect): emissions that are the result of activities from assets not owned or controlled by Wickes, but that Wickes indirectly impacts in its value chain

Category 1: Purchased Goods and Services	
Calculation Boundary	This category includes all upstream (i.e., cradle-to-gate) emissions from the production of products purchased or acquired by the reporting company in the reporting year. Products include both goods (tangible products) and services (intangible products).
Methodology	Hybrid method (average-data method and spend-based method).
Calculation	<p>Core goods (sold in store): the amount of each product purchased (in kilograms) was multiplied by an industry average emissions factor to determine the upstream tCO₂e generated.</p> <p>Non core goods and services (not-sold in store): the amount of each good and services purchased (in £) was multiplied by an appropriate spend-based emissions factor to determine the upstream tCO₂e generated.</p>
Assumptions	For all procurement on areas of expenditure less than £100,000, a broad-based services emissions factor was used to ensure that all areas of expenditure were covered in emissions calculations.
Data Sources	Activity data was sourced from Wickes' purchased goods and services record. Emission factors for upstream production of goods were sourced from Ecoinvent 3.8, published in 2021. Emissions factors for professional services were sourced from Comprehensive Environmental Data Archive (CEDA) 2019; the currency, inflation and purchasing power have been adjusted to the current year for the emissions factors derived from CEDA.

Category 2: Capital goods	
Calculation Boundary	This category includes all upstream (i.e., cradle-to-gate) emissions from the production of capital goods purchased or acquired by the reporting company in the reporting year. Emissions from the use of capital goods by the reporting company are accounted for in either scope 1 (e.g., for fuel use) or scope 2 (e.g., for electricity use), rather than in scope 3.
Methodology	Spend-based method.
Calculation	Capital goods: the amount of each capital good purchased (in £) was multiplied by an appropriate spend-based emissions factor to determine the upstream tCO ₂ e generated.
Assumptions	Please note that the source for capital goods and non-core goods is the same. All capital goods were filtered from the data to ensure they were accounted for in the correct category.

Data Sources	Activity data was sourced from Wickes' procurement record. Emissions factors for professional services were sourced from Comprehensive Environmental Data Archive (CEDA) 2019; the currency, inflation and purchasing power have been adjusted to the current year for the emissions factors derived from CEDA.
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Category 3: Fuel and energy related activities	
Calculation Boundary	This category includes emissions related to the production of fuels and energy purchased and consumed by the reporting company in the reporting year that are not included in scope 1 or scope 2.
Methodology	Average-data method.
Calculation	Fuel and energy-related activities: the amount of energy used for each Scope 1 and 2 emissions sources was multiplied by an appropriate well-to-tank and/or transmission and distribution loss factor to determine the tCO ₂ e generated.
Assumptions	No assumptions were used to calculate the well-to-tank and transmission and distribution loss emissions energy inputs used in Wickes' operations.
Data Sources	Activity data was sourced from energy and fuel consumption records that are used for Scope 1 & 2 accounting. Emissions factors for well-to-tank and transmissions and distribution loss emissions were sourced from the Greenhouse gas reporting: conversion factors 2021 from the UK Government's Department of Business, Energy & Industrial Strategy.

Category 4: Upstream transportation and distribution	
Calculation Boundary	Transportation and distribution of products purchased in the reporting year, between a company's tier 1 suppliers and its own operations in vehicles not owned or operated by the reporting company (including multi-modal shipping where multiple carriers are involved in the delivery of a product, but excluding fuel and energy products and third-party transportation and distribution services purchased by the reporting company in the reporting year (either directly or through an intermediary), including inbound logistics, outbound logistics (e.g., of sold products), and third-party transportation and distribution between a company's own facilities.
Methodology	Fuel-based method.
Calculation	Upstream transportation and distribution: the amount travelled by each type of lorry (tonnage and orientation) was multiplied by its respective fuel emissions factor to determine the amount of tCO ₂ e generated.

Assumptions	Where data was not available on the configuration or laden of the lorry or van, average laden and vehicle size was assumed for all kilometres travelled.
Data Sources	Activity data was sourced from the distance travelled by Wickes' suppliers making deliveries to Wickes record. Emissions factors from the freighting of goods by Wickes' suppliers were sourced from the Greenhouse gas reporting: conversion factors 2021 from the UK Government's Department of Business, Energy & Industrial Strategy.

Category 5: Waste generated in operations	
Calculation Boundary	Category 5 includes emissions from third-party disposal and treatment of waste generated in the reporting company's owned or controlled operations in the reporting year. This category includes emissions from disposal of both solid waste and wastewater.
Methodology	Waste-type-specific method.
Calculation	Waste generated in operations: the amount of (in kilograms) and type of waste was multiplied by an emissions factor representing its disposal method to determine the amount of tCO ₂ e generated.
Assumptions	No assumptions were used to calculate the emissions from the disposal of waste from Wickes' operations.
Data Sources	Activity data was sourced from Wickes internal waste management data systems on the weight and type of disposal. Emissions factors from the disposal, incineration and recycling of waste from Wickes' operations was sourced from the Greenhouse gas reporting: conversion factors 2021 from the UK Government's Department of Business, Energy & Industrial Strategy.

Category 6: Business travel	
Calculation Boundary	This category includes emissions from the transportation of employees for business related activities in vehicles owned or operated by third parties, such as aircraft, trains, buses, and passenger cars.
Methodology	Spend-based method.
Calculation	Business travel: the amount spend (in £) was multiplied by an emissions factor representing the specific method of transportation taken to determine the amount of tCO ₂ e generated.
Assumptions	No assumptions were used to calculate the emissions from employees' use of transportation for business-related activities.
Data Sources	Activity data was sourced from Wickes' internal travel reimbursement record. Emissions factors for professional services were sourced from Comprehensive Environmental Data Archive (CEDA) 2019; the currency,

	inflation and purchasing power have been adjusted to the current year for the emissions factors derived from CEDA.
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Category 7: Employee commuting	
Calculation Boundary	This category includes emissions from the transportation of employees between their homes and their worksites. Emissions from employee commuting may arise from: automobile travel, bus travel, rail travel, air travel, other modes of transportation (e.g., subway, bicycling, walking), and companies may include emissions from teleworking (i.e., employees working remotely) in this category.
Methodology	Distance-based method.
Calculation	Employee commuting: the average commuting distance travelled in the U.K. was multiplied the national commuting patterns (breakdown of transportation method) and then multiplied by the respective emissions factors (per kilometre travelled).
Assumptions	As no employee survey was completed by Wickes, it is assumed that Wickes employees follow the commuting trends calculated by the Office for National Statistics.
Data Sources	Primary data was retrieved from Wickes on the headcount, employee split (between full-time and part-time), and company work from home policies. Emission factors for respective transportation methods were sourced from the Greenhouse gas reporting: conversion factors 2021 from the UK Government's Department of Business, Energy & Industrial Strategy.

Category 9: Downstream transportation and distribution	
Calculation Boundary	This category includes emissions that occur in the reporting year from transportation and distribution of sold products in vehicles and facilities not owned or controlled by the reporting company.
Methodology	Hybrid method (fuel-based method and spend-based method).
Calculation	Downstream transportation and distribution: the amount travelled by each type of lorry (tonnage and orientation) was multiplied by its respective fuel emissions factor to determine the amount of tCO ₂ e generated. For the couriers where only spend data was available, the amount spent (in £) was multiplied by the appropriate spend-based emissions factor to determine the amount of tCO ₂ e generated.
Assumptions	Where data was not available on the configuration or laden of the lorry or van, average laden and vehicle size was assumed for all kilometres travelled.

Data Sources	Activity data was sourced from the distance travelled record by companies completing deliveries for Wickes. Emissions factors from the freighting of deliveries by van and lorry to Wickes' customers were sourced from the Greenhouse gas reporting: conversion factors 2021 from the UK Government's Department of Business, Energy & Industrial Strategy.
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Category 11: Use of sold products	
Calculation Boundary	This category includes emissions from the use of goods and services sold by the reporting company in the reporting year. A reporting company's scope 3 emissions from use of sold products include the scope 1 and scope 2 emissions of end users. End users include both consumers and business customers that use final products.
Methodology	Direct use-phase emissions method (products that directly consume energy (fuels or electricity) during use).
Calculation	Use of sold products: only direct use-phase emissions of sold products were calculated for this category. The quantities of each sold product that directly consume energy during use were summarised from the "Sold Goods" record. The total expected lifetime of each sold product and electricity or fuel consumption per use of the product was derived from the products' technical specifications and secondary/proxy data source (incl. literature, content from Wickes' website, technical specification of a similar product, etc.). Life cycle emissions factors for fuels and electricities were collected from reputable U.K emissions factor databases. The emissions from the use of sold products were calculated by multiplying the fuel/electricity emissions factor with the sum across fuels and electricity consumed from the use of products over their lifetime.
Assumptions	For all products purchased and used by Wickes' customers, the calculations in this category assume that all products follow average lifetime trends to properly reflect emissions from their respective use.
Data Sources	Primary data was sourced from Wickes sold products record from online and in-store transactions. Electricity and fuel-based emissions factors were sourced from the Greenhouse gas reporting: conversion factors 2021 from the UK Government's Department of Business, Energy & Industrial Strategy. In addition, average product lifetime usage information was sourced from product manufacturer resources.

Category 12: End of life treatment of sold products	
Calculation Boundary	Category 12 includes emissions from the waste disposal and treatment of products sold by the reporting company (in the reporting year) at the end of their life. This category includes the total expected end-of-life emissions from all products sold in the reporting year.
Methodology	Waste-type-specific method.
Calculation	End of life treatment of sold products: the total mass of each product sold (in tonnes) was summarised from the "Sold Goods" record. The proportion of waste being treated by different methods (e.g. landfilled, incinerated, recycled) was assumed in accordance with the "UK Statistics on Waste" report published by the Department of Environment Food & Rural Affairs. Average waste-treatment specific-emissions factors based on all waste treatment types were collected for each product type. The emissions from end of life treatment of sold products are calculated by multiplying the total mass of each product type by the proportion of waste being treated (tonnes) by waste treatment method (%), and then multiplied by the emissions factor of the waste treatment method (kgCO ₂ e/tonne).
Assumptions	For all products purchased and disposed of by Wickes' customers, it is assumed they follow the UK national average disposal methods for recycling, landfill, and composting.
Data Sources	Primary data was sourced from Wickes sold products record from online and in-store transactions. Emissions factors from the disposal, incineration and recycling of waste from products customers are buying from Wickes were sourced from the Greenhouse gas reporting: conversion factors 2021 from the UK Government's Department of Business, Energy & Industrial Strategy.