

Virtus Data Centres – October 2026

REPORT

Savills Earth

Former Sipson Garden Centre Whole Life-Cycle Carbon Assessment

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01. Executive summary

This Whole Life-Cycle Carbon (WLC) Assessment has been prepared by Savills Earth in support of an outline planning application, all matters reserved except for access, for the redevelopment of the Former Sipson Garden Centre, Sipson Road, West Drayton UB7 0HP, as a Virtus data centre facility.

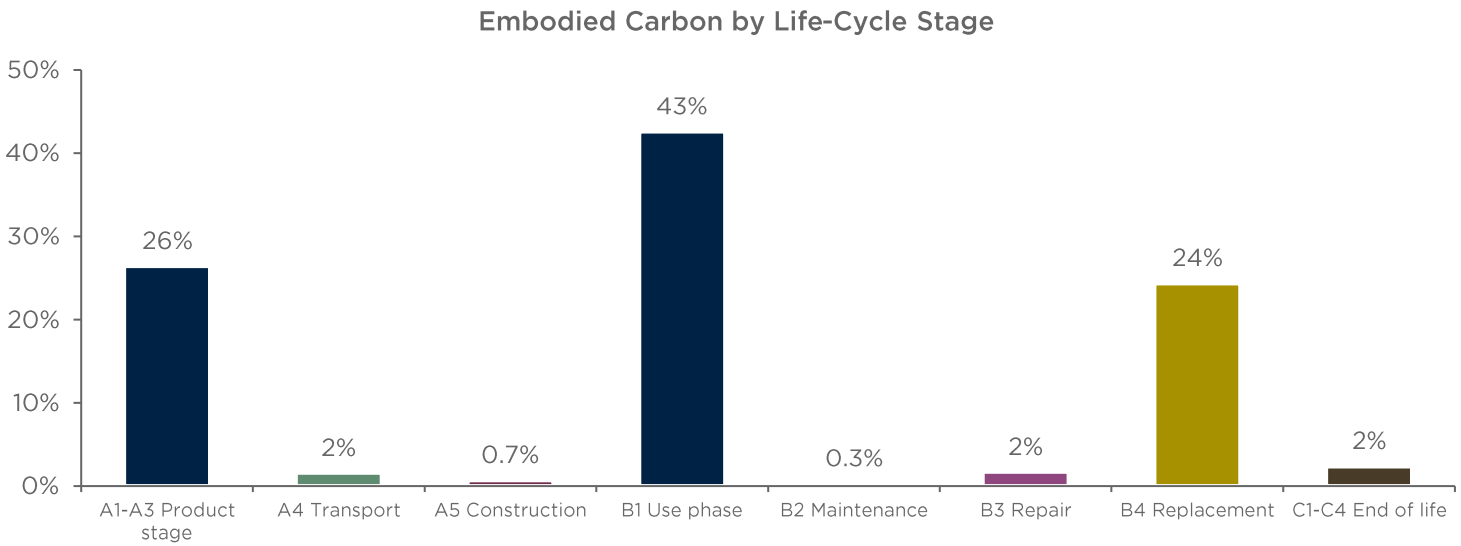
To ensure best practice, the carbon modelling has been undertaken according to the RICS v2 methodology which superseded the v1 methodology in 2022. To align with GLA expectations the same carbon model has also been reported in line with the RICS v1 methodology (see Appendix 1). The embodied carbon figures are lower for RICS v1, ensuring the report presents the more conservative estimate.

For the purpose of this report, the RICS v2 results are calculated under the non-decarbonised scenario for embodied carbon to capture a conservative estimate given the early stage of design.

The assessment considers A0–A5, B1–B5 and C1–C4 over a 60-year life cycle. Module D is reported separately. At this outline stage, material quantities and emissions are estimated from AECOM's RIBA Stage 2 information and the current One Click LCA model. A 15% contingency factor is included for the embodied carbon stages.

Upfront carbon (A1–A5) has been estimated at 24,788 tCO_2e, or 1,110 $kgCO_2e/m^2$, and embodied carbon (A-C) at 86,397 tCO_2e, or 3,868 $kgCO_2e/m^2$, using a provisional building GIA of 22,337 m^2.

Within embodied carbon, MEP services represent approximately 87% of the total and B1 refrigerant use approximately 43%, reflecting the intensity of power and cooling systems given the data centre use.



B6 operational carbon has been totalled at 2,686,187 tCO2e, or 120,257 kgCO2e/m2. This includes baseline electricity consumption of the data centre and diesel used for annual testing of the backup generators. These figures have been estimated from energy calculations provided by AECOM.

Potential solar generation on site, while not included in the whole life carbon figure at this stage, could reduce operational emissions by 1,235 tCO2e.

Total whole-life carbon including B6, comes to 2,772,584 tCO2e or 124,125 kgCO2e/m2. Operational energy therefore accounts for approximately 97% of whole-life carbon.

Structural quantities, concrete mixes, steel sourcing and replacement cycles should also be optimised, representative data replaced with manufacturers' EPDs, and the assessment updated at Reserved Matters and post-construction.

Site wide Proposed Demand	Regulated Energy Emissions (tCO_2/yr)	Unregulated Energy Emissions (tCO_2/yr)	Total Operational Emissions (tCO_2/yr)
Baseline Electricity Demand	320,423	2,349,770	2,670,193
Generator Testing	-	15,994	2,686,187
Potential PV Reduction	-1,235	-	2,684,952

02. Introduction

This Whole Life-Cycle Carbon (WLC) Assessment has been prepared by Savills Earth to support the outline planning application, all matters reserved except for access, submitted to the London Borough of Hillingdon for the redevelopment of the Former Sipson Garden Centre, Sipson Road, West Drayton UB7 0HP (the Site).

This WLC Assessment should be read in conjunction with the supporting Circular Economy Statement and Energy and Sustainability Statement submitted with the planning application.

Site Description

The Site covers approximately 6.9 hectares east of Sipson Road, close to the M4 Spur Road. The former garden centre building has already been demolished. Remaining features include timber-frame buildings, porta cabins, modular units and hardstanding. The Site is currently used for Airside Support Vehicle servicing and repair. Existing materials will be assessed through pre-demolition and pre-redevelopment audits at Reserved Matters stage.

Site location



Description of the Proposed Development

The outline application seeks planning permission for:

"Redevelopment of the former Sipson Garden Centre site to provide a data centre facility including associated energy infrastructure, security measures and access arrangements."

- *The Proposed Development is for a data centre with an IT load of up to 54 MW and a building of up to approximately 25,000 m^2 GFA. It includes ancillary offices, external plant, a substation, parking, landscaping, attenuation and photovoltaic provision. Maximum building height is up to 20 m.*
- *The application is made in outline with all matters reserved except for access. Parameter plans define the maximum development envelope; detailed layout, appearance, scale and landscaping will be confirmed at Reserved Matters stage. Access is proposed from Sipson Lane.*

The current carbon model uses a provisional 22,337 m^2 building GIA (5,533 m^2 office and 16,804 m^2 data hall). The GIA and treatment of internal plant, the substation, external plant and gantry steelwork remain subject to confirmation. The figures derive from the information provided at time of model completion and will be subject to updates as needed at Reserved Matters stage.

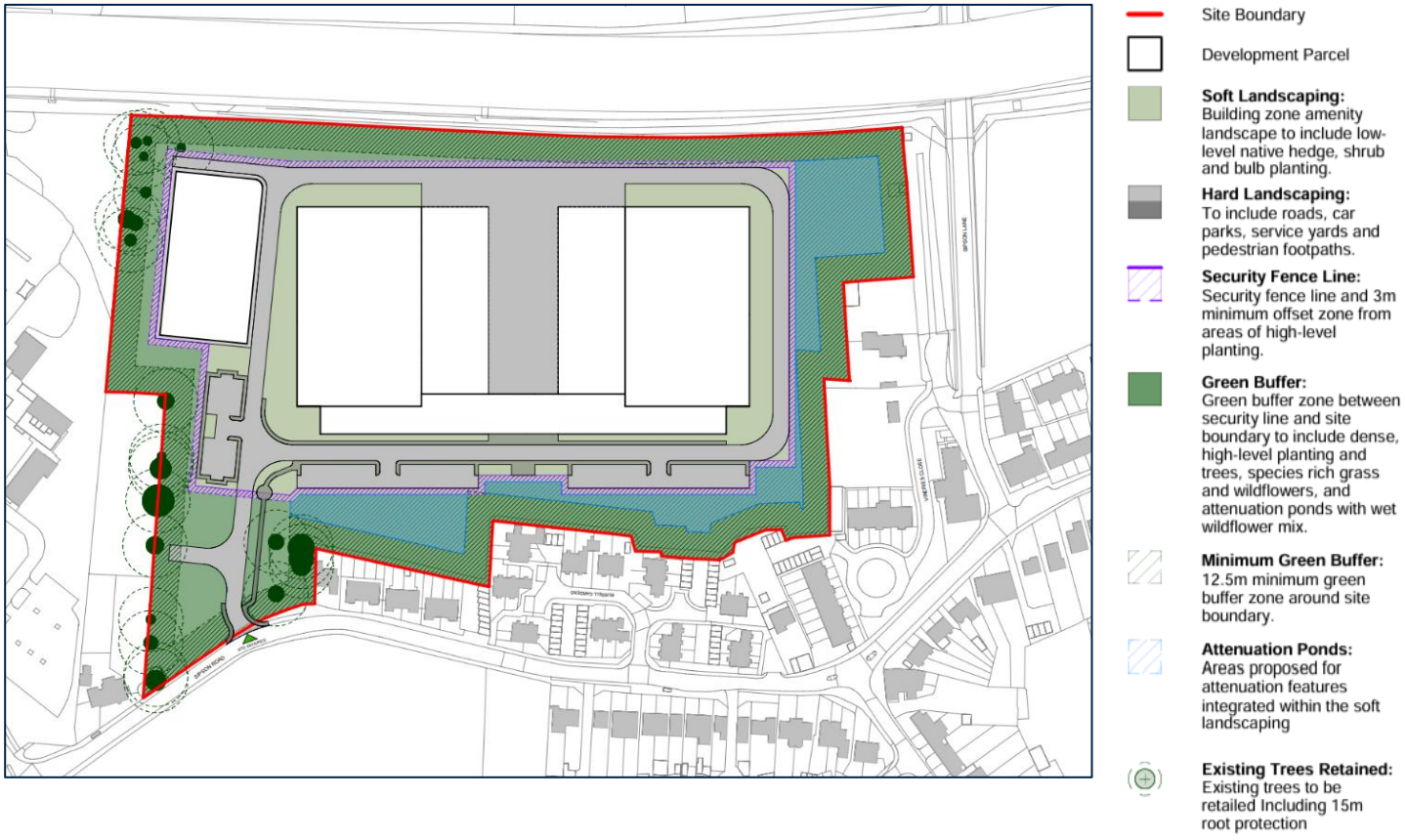
Structure and purpose of this report

This WLC Assessment has been prepared to quantify the proposed development's carbon emissions from material production, construction, operation and end of life, and to identify opportunities to reduce emissions as the design progresses.

The following sections of this WLC Assessment provide the following:

- Methodology
- WLC Principles
- Results
- Conclusion
- Appendices

Landscape & green infrastructure parameters plan



Policy Framework

The London Borough of Hillingdon is the local planning authority for the Former Sipson Garden Centre site. The Greater London planning policy framework, including the London Plan, applies to this outline proposal.

London Plan Policy SI 2: Minimising greenhouse gas emissions

Major development proposals should minimise greenhouse gas emissions. A whole life-cycle carbon assessment identifies emissions from construction, use and end of life so they can inform design and planning decisions.

London Plan Policy SI 7: Reducing waste and supporting the circular economy

The separate Circular Economy Statement sets out the project's approach to resource efficiency, material recovery and designing for adaptability and disassembly.

The current application is in outline with all matters reserved. Carbon figures and circular economy commitments will be refined once the design and material specifications are confirmed at Reserved Matters stage.

Embodied Carbon Reduction Strategy:

- Optimise the proposed steel frame and concrete quantities, including cement-replacement content, as the structural design progresses.

- Specify representative material data and product EPDs when available, and consider reuse of existing on-site materials where testing permits.

Operational Carbon Reduction Strategy:

- Confirm electricity demand, IT load, PUE and backup generator testing in the energy model.

- Examine efficient data-hall cooling and plant selection, with refrigerant impacts assessed through the whole life cycle.

- Confirm the contribution of proposed photovoltaic provision before applying any operational carbon credit.

The 60-year WLC calculation follows the structure of RICS whole life carbon methodology and the relevant GLA reporting approach.

Relevant technical guidance

RICS Whole Life Carbon Assessment, second edition



The RICS whole life carbon methodology describes the reporting of product, construction, in-use, operational and end-of-life modules. Module D benefits are reported separately from the building life-cycle total.

This outline-stage assessment uses the available RIBA Stage 2 evidence and records assumptions for later design-stage review.

RICS Whole Life Carbon Assessment, first edition



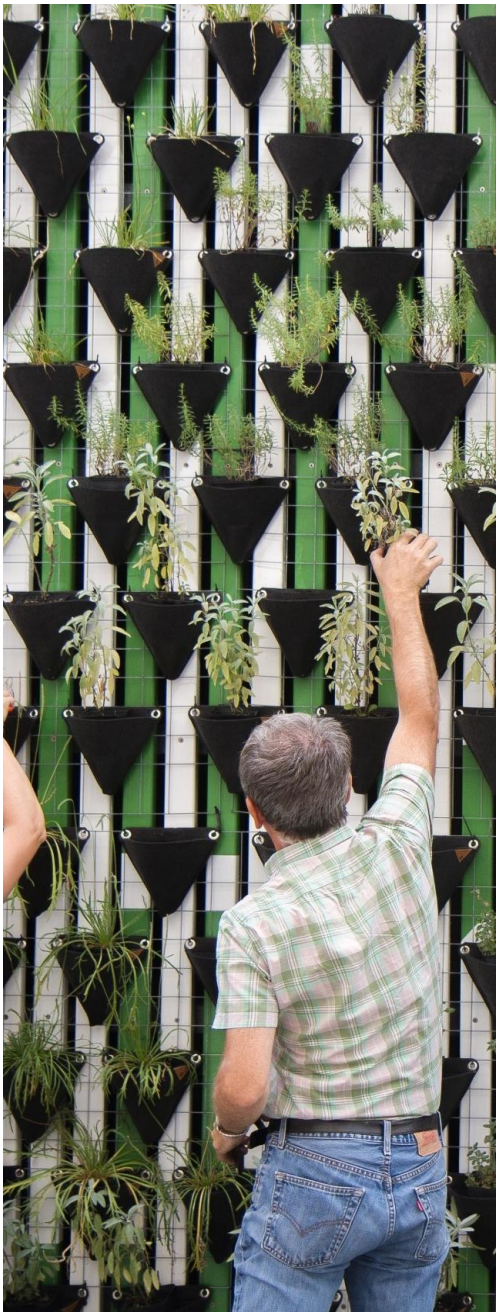
This assessment also presents results using the first edition of the RICS Whole Life Carbon Assessment methodology to align with the GLA reporting approach. These results supplement the main second-edition assessment and are presented in Appendix 01.

For operational carbon, the first-edition results in this report use a constant electricity carbon factor, rather than the decarbonising grid scenario adopted in the main assessment.

03. Methodology

Climate change is considered to be one of the greatest environmental challenges of our time. Although the UK Government has set legally binding carbon reduction targets in the Climate Change Act 2008, policy measures have so far mainly focussed on addressing carbon emissions from operational use of buildings. Sizeable carbon emissions arising from the built environment are not only attributable to the use of built assets (operational emissions), but also to the construction of the asset (embodied emissions). A Whole Life Carbon (WLC) approach collectively looks at embodied carbon, which is the total greenhouse gas emissions arising from the extraction of raw materials, manufacturing of products, transport and construction processes, and operational emissions, together with end-of-life emissions of a built asset.

A low WLC approach requires moving away from the linear to the circular economy approach, which will inform the design team's material choices and processes used for construction. A linear economic approach (take, make, dispose) to materials is currently the standard approach adopted by our society. However, this is unsustainable. A circular economy designs out waste by keeping resources circulating through the system at their highest value for as long as possible before recovering and regenerating materials when they reach the end of their service life.



Life Cycle Modules

The model considers A0–A5, B1–B5, B6, C1–C4 and Module D over a 60-year assessment period. B6 energy inputs are preliminary and its final carbon result remains TBC. B7 operational water is outside the current study. Module D is reported separately and is not deducted from A0–C4.

The life-cycle modules which account for each key stage in the life of a typical project are:

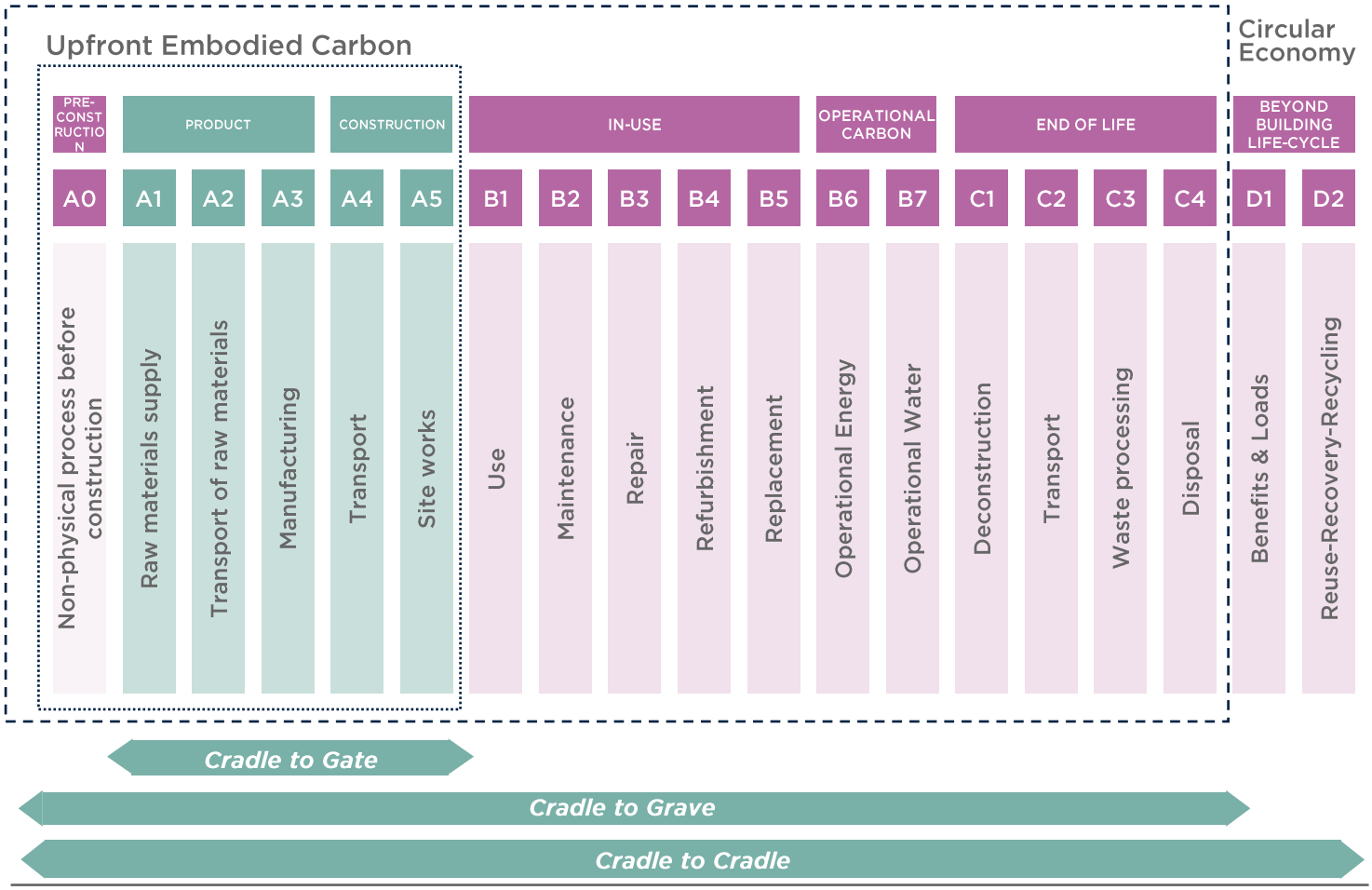
- Module A1-A5: Product sourcing and construction phase;
- Module B1-B5: Use stage;
- Module B6-B7: Operational energy and water. B7 water use is outside the current scope of the assessment given the early stage of design.
- Module C1- C4: End of life stage;
- Module D: Benefit and loads beyond the system boundary.

Depending on the life cycle stages included in the study, the assessment describes the following three scenarios:

- 'Cradle to Gate': Manufacturing and construction.
- 'Cradle to Grave': Manufacturing products, Construction, Use, and End of life stages of the building which also defines Embodied Carbon Emissions (excluded operational emissions).
- 'Cradle to Cradle': It represents the Whole Life carbon of the building including operational emissions and any benefits from circular economy principles over its lifetime. Module D is often used to support circular economy principles but not included in development emissions.

This WLC assessment reports cradle-to-grave embodied carbon and operational carbon.

Whole Life-Cycle Carbon



The detailed description of each of the life cycle stages and analysis scope are provided in the table below.

Life Cycle Stage	Analysis scope
A1-A3 Construction Materials	Raw material supply (A1) includes emissions generated when raw materials are taken from nature, transported to industrial units for processing and processed. Loss of raw material and energy are also taken into account. Transport impacts (A2) include exhaust emissions resulting from the transport of all raw materials from suppliers to the manufacturer's production plant as well as impacts of production of fuels. Production impacts (A3) cover the manufacturing of the production materials and fuels used by machines, as well as handling of waste formed in the production processes at the manufacturer's production plants until end-of-waste state.
A4 Transportation to site	A4 includes exhaust emissions resulting from the transport of building products from manufacturer's production plant to building site as well as the environmental impacts of production of the used fuel.
A5 Construction / Installation process	A5 covers the exhaust emissions resulting from using energy during the site operations, the environmental impacts of production processes of fuel and energy and water as well as handling of waste until the end-of-waste state.
B1 In-Use	B1 captures the emissions arising during the life of a building from its components, e.g. the leakage of refrigerant from heat pumps. Additionally, B1 includes removal of CO_2 through carbonation of concrete. Please note refrigerant selection will be crucial later in the design process, given the building use.
B2 Maintenance	B2 accounts for the carbon emissions arising from any activities relating to maintenance processes, including cleaning.
B3 Repair	B3 must take into account the carbon emissions arising from all activities that relate to repair processes. B3 is considered is 25% of module B2.
B4 Material replacement	The environmental impacts of material replacements (B4) includes environmental impacts from replacing building products after they reach the end of their service life. The emissions cover impacts from raw material supply, transportation and production of the replacing new material as well as the impacts from manufacturing the replacing material as well as handling of waste until the end-of-waste state.
B5 Refurbishment	B5 takes into account any carbon emissions associated with any building components used in a refurbishment, including any emissions from refurbishment activities. In this WLC study B4 and B5 figures are all accounted under module B4.

Life Cycle Stage	Analysis scope
B6 Energy use	The considered energy consumption (B6) impacts include exhaust emissions from any building level energy production as well as the environmental impacts of production processes of fuel and externally produced energy. Energy transmission losses are also taken into account.
B7 Operational water use	All carbon emissions related to water supply and wastewater treatment, over the life cycle of the building (excluding water use during maintenance, repair, replacement and refurbishment that are reported elsewhere). Out of scope for this assessment given water calculations can vary widely depending on the finalised cooling system of the data centre.
C1-C4 Deconstruction	The impacts of deconstruction include impacts for processing recyclable construction waste flows for recycling (C3) until the end-of-waste stage or the impacts of pre-processing and landfilling for waste streams that cannot be recycled (C4) based on type of material. Additionally, deconstruction impacts include emissions caused by waste energy recovery. The proposed development is a strategic digital infrastructure asset that is expected to operate for the foreseeable future, with equipment, plant and building components refurbished, upgraded, replaced and maintained throughout its operational life as required. Whilst decommissioning is not anticipated within the assessment period, end of life impacts remain part of the asset's whole life carbon performance and have therefore been included within the assessment boundary. Given the uncertainty associated with future deconstruction methods, waste treatment processes and recovery routes, Module C emissions have been assessed using industry standard assumptions and available guidance.
D External impacts / end-of-life benefits	The external benefits include emission benefits from recycling recyclable building waste. Benefits for re-used or recycled material types include positive impact of replacing virgin-based material with recycled material and benefits for materials that can be recovered for energy cover positive impact for replacing other energy streams based on average impacts of energy production.

Key Assumptions

Construction materials (A1–A4) have been modelled using representative One Click LCA EPD and generic datasets. Default or RICS service lives are applied where product-specific lifespans are unavailable. AECOM identifies an intention to use electric-arc-furnace hot-rolled structural steel; the final specification and product EPD remain to be confirmed.

As exact products/specifications have not been finalised, the emissions resulting from the transport of building products from the manufacturers to site (module A4) have been estimated based on typical average transport distances provided by OneClick LCA.

Construction and installation process has been estimated using the OneClick LCA average based on the location and size of the development.

Existing timber structures and modular units will be assessed for reuse during the planned pre-demolition and pre-redevelopment audits. No unverified sequestration benefit is assumed for the new data centre structure.

Please note the following exclusions from the model:

- In line with standard industry practice, the embodied carbon of IT equipment has been excluded at this stage. The specification and quantity of IT equipment are typically determined by future end users and can vary significantly.
- While the external plant has been represented in the model, the substation is not included at this stage but can be included in the final once robust quantities are available.
- As water consumption varies significantly dependent on confirmed cooling system, B7 Water Use has been excluded at this stage.

Data Sources

The following data sources were used in the OneClick LCA model:

- AECOM completed embodied carbon RFI (RIBA Stage 2): indicative material types and quantities for substructure, frame, roof, external works and services for the Virtus outline design.
- Conceptual masterplan for areas, provided July 2026.
- One Click Carbon Designer: estimates for elements and services that could not yet be quantified from the emerging design. These assumptions will be reviewed at Reserved Matters.
- AECOM Energy Inputs: indicative electricity and generator-fuel consumption and potential solar generation.

The OneClick LCA model was undertaken using all the data sources listed above and the level of detail corresponds to the current stage of the design.

Coverage by cost and final manufacturer EPD selection will be finalised at Reserved Matters.

- Material volumes, where known, have been provided by the relevant professional team member.
- Where information is not known we have used OneClick's library of elements which provide suitable coverage for the stage of the project. These elements will be developed in more detail based on a suitable professional's advice, once known.
- OneClick LCA includes validity checks to ensure suitable coverage of materials and material volumes. Our assessment meets all validity checks within the tool.

04. WLC Reduction Principles

Circular economy principles have been embedded into the emerging design to minimise the whole life carbon footprint of the proposed Virtus data centre.

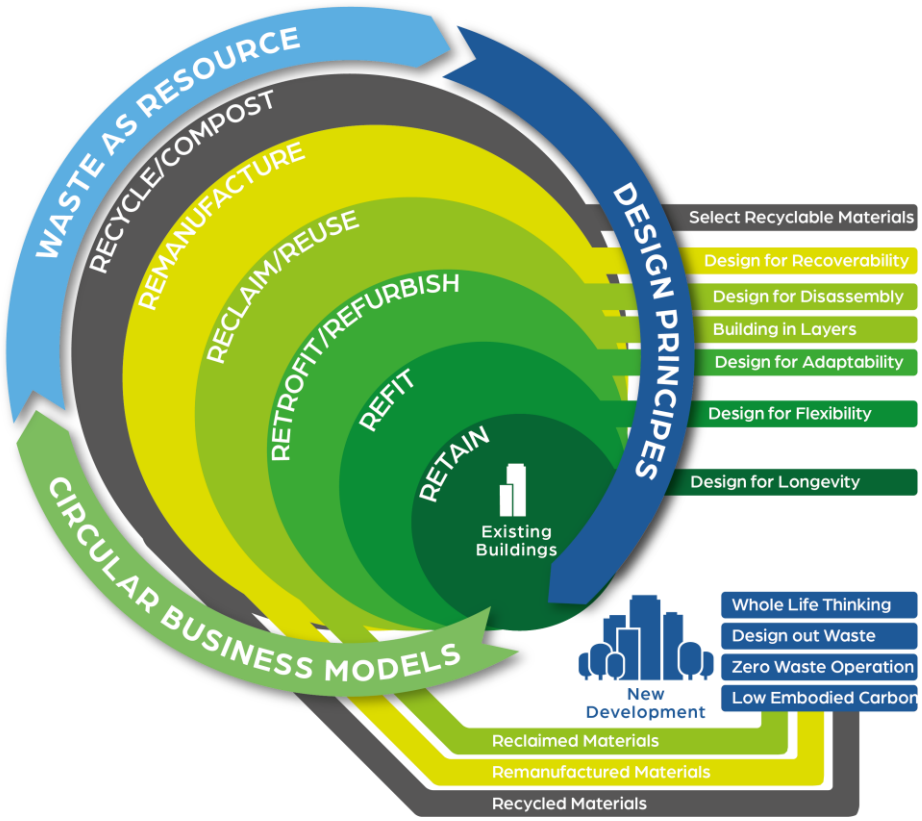
In a circular economy, waste is no longer disposed of - it becomes the resource for future production processes. In order to facilitate the re-use of building materials in the future, this has to be considered during the design stages of new buildings. In response to this need, the proposed development has adopted core circular economy principles that focus on conservation of virgin resources, designing to eliminate waste and managing unavoidable waste sustainably to maintain waste and resources at their highest value.

The following are some of the principles that the project has considered in trying to reduce the proposed development's whole life carbon footprint:

• Minimise the quantity of materials used and prioritise lower-carbon alternatives as the structural frame, substructure and envelope are developed.

• Confirm the cement replacement and proposed electric-arc-furnace steel route, then test options against the outline carbon model.

• Apply the commitments set out in the accompanying Circular Economy Statement, including adaptability, material recovery and waste management at Reserved Matters stage.



Circular economy hierarchy

WLC Reduction Principles

1	Reuse and retrofit of existing buildings	
Key benefits	Significant retention and reuse of structures is carbon efficient and reduces costs.	
Has this principle been adopted?	N/A	
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	Confirmation that options for retaining existing buildings and structures have been fully explored before considering substantial demolition	The former garden centre building has already been demolished, but some timber-frame buildings and modular units remain. The pre-demolition and pre-redevelopment audits will identify reuse or recovery opportunities.
	Carbon emissions associated with pre-construction demolition (kgCO2e)	N/A
	Estimate of the percentage of the new build development which will be made up of existing elements	N/A

2	Use repurposed or recycled materials
Key benefits	Using repurposed or recycled or materials, as opposed to newly sourced materials, typically reduces the carbon emissions from constructing a new building and reduces waste. This process would start by reviewing the materials already on site for their potential for inclusion into the proposed scheme. Many of the currently available standard products already include a degree of recycled content. Reduces carbon emissions and reduces waste.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	AECOM identifies concrete mixes with 35–50% cement replacement for key substructure elements and an intention to specify electric-arc-furnace steel. Final mixes and suppliers will be confirmed at Reserved Matters.
3	**Material selection**
Key benefits	Appropriate material choices are key to carbon reduction. Ensuring that materials are selected with consideration of the planned life expectancy of the building reduces waste, the need for replacements and the in-use costs.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	All materials selected will be sourced from reputable suppliers. Materials specification will be based on fit for purpose, robustness and life cycle costs. Suppliers will be required to provide an EPD certificate for materials ordered, where feasible. This will be explored further as the detailed design develops. Where specific products are not yet selected, the model uses representative datasets. Product EPDs will be requested as specifications are confirmed.

4	Minimise operational energy use
Key benefits	A 'fabric first' approach should be prioritised to minimise energy demand and reduce carbon and in-use costs.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	A fabric first approach has been used to minimise energy demand and reduce carbon and in-use costs. Please refer to Energy Statement for further information on carbon reduction in operational use as a result of building fabric design, such as the U values to be beyond minimum Part L requirements. Operational energy reduction will focus on efficient data-hall cooling, plant and power use. A PUE of 1.2 is proposed, which is efficient for a data centre.
5	**Minimise the carbon emissions associated with operational water use**
Key benefits	Choice of materials and durability of systems, which help to avoid leakage and subsequent building damage, contribute to reducing the carbon emissions of water use.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	Water use depends on the final cooling strategy. B7 water carbon is outside the present assessment and may be added once reliable consumption data is available.
6	**Disassembly and reuse**
Key benefits	Designing for future disassembly ensures that products do not become future waste and that they maintain their environmental and economic value.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	The rationalised steel frame and accessible, replaceable services support future disassembly. Detailed connection methods and recovery routes will be confirmed at Reserved Matters. Wherever possible, systems will be mechanically fixed, rather than using adhesive fix, to facilitate these being demounted and re-used or recycled - supporting a circular economy.

7	Building shape and form
Key benefits	Compact efficient shapes help minimise both operational and embodied carbon emissions from repair and replacement for a given floor area. This leads to a more efficient building overall resulting in lower construction and in use costs.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	The data centre uses a rationalised grid and efficient envelope. Structural and façade quantities will be refined as the outline parameters develop.
8	**Regenerative design**
Key benefits	Removing carbon emissions from the atmosphere through materials and systems absorbing it makes a direct contribution to carbon reduction.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	Site landscaping is detailed within the Design and Access Statement submitted for planning. No landscaping carbon-removal benefit has been credited in this WLCA.
9	**Designing for durability and flexibility**
Key benefits	Durability means that repair and replacement is reduced which in turn helps reduce life-time building costs. A building designed for flexibility can respond with minimum environmental impact to future changing requirements and a changing climate, thus avoiding obsolescence which also underwrites future building value.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	The proposed structure has a 60-year design life, with shorter-life plant intended to be accessible for maintenance and replacement.

10	Optimisation of the relationship between operational and embodied carbon
Key benefits	Optimising the relationship between operational and embodied carbon contributes directly to resource efficiency and overall cost reduction.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	The team will assess the balance between building fabric, cooling energy, plant and refrigerant impacts as the data-centre energy strategy develops. As much as possible, materials will be sourced that have an EPD certificate.
11	**Building life expectancy**
Key benefits	Defining building life expectancy gives guidance to project teams as to the most efficient choices for materials and products. This aids overall resource efficiency, including cost efficiency and helps future proof asset value.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	The model uses a 60-year reference period. Clear-span halls, accessible plant and durable structure support adaptation over that period. Care and maintenance procedures will be in place in order to retain the systems, components and materials as fit for purpose to maximise the developments useful life.

12	Local sourcing
Key benefits	Sourcing local materials reduces transport distances and supply chain lengths and has associated local social and economic benefits.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	The design team will demonstrate best endeavours to explore the opportunity of identifying locally sourced suppliers with ISO 14001/BES 6001 certification that could be requested to quote and potentially supply materials. Module A4 transport currently uses representative distances. Supplier locations and delivery routes will be confirmed at procurement. A Sustainable Procurement Plan will be carried out in the next design stage and will include sustainability aims, objectives and strategic targets to guide procurement activities. It will also include a requirement for assessing the potential to procure construction products locally. Materials with low embodied carbon will be given preference.
13	**Minimising waste**
Key benefits	Waste represents unnecessary and avoidable carbon emissions. Buildings should be designed to minimise construction waste, and to ease repair and replacement with minimum waste, which helps reduce initial and in-use costs.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	The CES commits to pre-demolition and pre-redevelopment audits and to a site waste management plan. Reuse of site hardstanding depends on contamination testing. The proposed efficient design and layouts ensure that constructions and material use is minimised and priority will be given to sustainably sourced and local materials. A Site Waste Management Plan and an Operational Waste Management Plan will be produced to ensure that sustainable practices of operation are adopted and that waste reducing strategies are incorporated to further reduce operational carbon emissions.

14	Efficient construction
Key benefits	Efficient construction methods (e.g. modular systems, precision manufacturing and modern methods of construction) can contribute to better build quality, reduce construction phase waste and reduce the need for repairs in the post completion and the defects period (snagging).
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	A standardised structural grid and coordinated MEP systems will be investigated to reduce over-ordering and construction waste. Prioritising the specification of modular components will also allow for easy disassembly and reassembly, promoting reusability and adaptability, and enable future expansions or modifications without major disruptions.
15	**Lightweight construction**
Key benefits	Lightweight construction uses less material which reduces the carbon emissions of the building as there is less material to source, fabricate and deliver to site.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	The primary structural scheme is a hot-rolled steel frame with composite metal-deck slabs. Concrete mix and steel tonnage optimisation will be tested as design advances.
16	**Circular economy**
Key benefits	The circular economy principle focusses on a more efficient use of materials which in turn leads to carbon and financial efficiencies.
Has this principle been adopted?	Yes
Provide examples of how reduction principle has been used, or give reasons why it cannot be used.	A project-specific Circular Economy Statement accompanies the outline application to the London Borough of Hillingdon.

Operational Energy

An energy assessment has been undertaken for the proposal by AECOM. The final figures have informed the B6 Operational Energy stage, which considers sitewide operational emissions over the standard 60 year period.

AECOM has supplied preliminary energy inputs for the data centre, indicating 566,515 MWh/year of electricity and 950 MWh/year of diesel for backup generation. The energy split is predicted to be 88% unregulated energy and 12% regulated energy.

Using reducing electricity carbon factors to reflect anticipated decarbonisation of the UK electricity grid based on the National Grid Future Energy Scenarios (FES) Falling Short pathway, site wide operational carbon emissions at 2,686,187 tonnes CO_2 as demonstrated by the table on the right. No contingency factor is applied for the energy stage.

The impact of on-site electricity generation from a potential solar array has also been estimated which would reduce operational carbon from baseline by 1,235 tonnes CO_2.

For the detailed energy approach, refer to the AECOM energy information and accompanying Energy and Sustainability Statement.

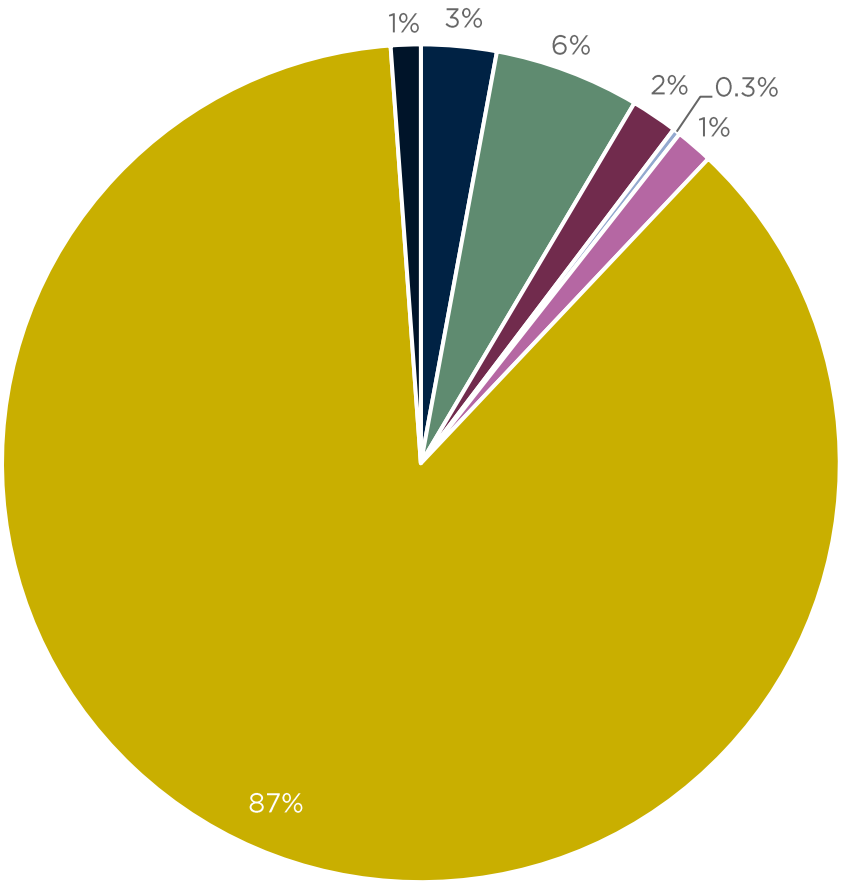
Site wide carbon emissions under the decarbonising scenario

Site wide Proposed Demand	Regulated Energy Emissions (tCO_2)	Unregulated Energy Emissions (tCO_2)	Total Operational Emissions (tCO_2)
Baseline Electricity Demand	320,423	2,349,770	2,670,193
Generator Testing	-	15,994	2,686,187
Potential PV Reduction	-1,235	-	2,684,952

05. Results

Individual manufacturers' EPDs are not yet available at this stage of design, so the current WLC analysis uses representative One Click LCA data. Preliminary calculations record embodied carbon (A-C excluding B6) of 3,868 $kgCO_2e/m^2$ based on an indicative building GIA of 22,337 m^2, including the 15% stage allowance under the non-decarbonised scenario. This is reflected in the chart and table below.

B1 use-phase emissions are 43% of embodied carbon, driven by refrigerant leakage from the VRF systems and chillers: a large installed charge, high-GWP refrigerants, and annual leakage plus end-of-life losses over 60 years. Low-GWP refrigerant selection and leak detection are therefore key reduction levers.



	OneClickLCA (A1-A5, B1-B5, C1-C4)	
	Total ($kgCO_2e$)	Total ($kgCO_2e/m^2$)
1 Substructure	2,513,140	113
2.1-2.4 Superstructure (frame, upper floors, roof, stairs & ramps)	4,845,335	217
2.5-2.6 Superstructure (ext walls, windows & ext doors)	1,554,448	70
2.7-2.8 Superstructure (int wall & partitions and int doors)	244,881	11
3 Finishes	1,245,893	56
5 Services (MEP)	74,996,818	3,358
Other or overall site construction	996,537	45
Total	86,397,365	3,868

- 1 Substructure
- 2.1-2.4 Superstructure (frame, upper floors, roof, stairs & ramps)
- 2.5-2.6 Superstructure (ext walls, windows & ext doors)
- 2.7-2.8 Superstructure (int walls, partitions, & int doors)
- 3 Finishes
- 5 Services (MEP)
- Other

WLC results per category and life-cycle stage per RICS v2 methodology

	Sequestered carbon	A1-A3	A4	A5	B1	B2 & B3	B4 & B5	C1-C4	D
		Product Stage	Transportation to site	Site Operations	Use	Maintenance	Replacement	End of Life	External Impacts
1 Substructure	-	1,880,572	127,936	119,673	-	-	-	384,959	-780,024
2.1 Frame	-	1,715,407	120,123	19,052	-	-	-	69,641	-1,420,682
2.2 Upper Floors	-38	1,362,742	32,257	55,830	-	-	102,106	82,231	-505,767
2.3 Roof	-2,423	921,854	19,354	30,529	-	-	-	35,205	-256,416
2.4 Stairs & Ramps	-	241,993	7,293	13,119	-	-	-	19,060	-45,265
2.5 Ext. Walls	-11,096	1,381,482	67,291	26,010	-	-	-	35,906	-294,678
2.6 Windows & Ext. Doors	-	24,768	2,542	-	-	-	27,427	117	-25,176
2.7. Int. Walls & Partitions	-9,201	131,679	7,571	2,808	-	-	95,349	16,674	-77,507
2.8 Internal Doors	-	-	-	-	-	-	-	-	-
3 Finishes	-	710,624	21,750	62,179	-	-	378,805	72,534	-18,182
4 Fittings, furnishings & equipments	-	1,633	194	-	-	-	-	11	-3
5 Services (MEP)	-202	14,183,379	915,045	238,128	36,806,898	1,418,338	20,178,803	1,256,430	-11,440,653
Unclassified / Other	-16,175	279,838	61,089	32,309	-	321,094	256,120	60,424	-373,108
TOTAL kg CO2e	-39,135	22,835,971	1,382,445	599,637	36,806,898	1,739,432	21,038,610	2,033,194	-15,237,463

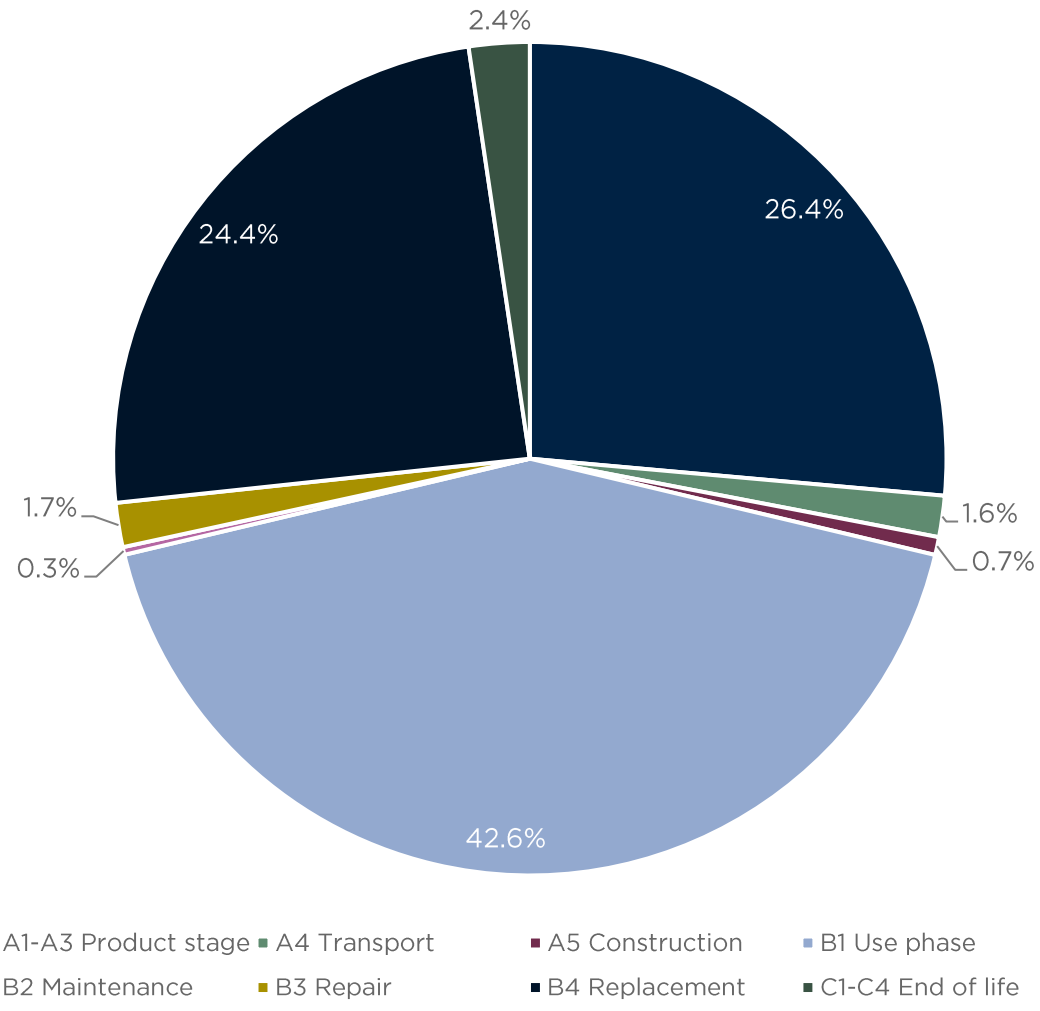
06. Conclusion

The LCA model has been based on the limited construction materials and quantities available at this outline design stage. As design progresses, the team can use the model to test alternative material specifications, quantities, plant selections and service lives.

The model estimates A-C embodied carbon at 86,397 tCO_2e (3,868 $kgCO_2e/m^2$) over 60 years.

The added operational emissions of 2,686,187 tCO_2e (97% of the total over a 60 year period) brings the whole life carbon to 2,772,584 tCO_2e or 124,125 $kgCO_2e/m^2$.

The chart below displays embodied carbon by stage.



Next steps

The assessment reflects the information available at this outline design stage, based on provisional quantities and representative data. The following should be confirmed and finalised as the design develops.

MEP services and refrigerants

On current information, MEP accounts for approximately 87% of embodied carbon and B1 refrigerant leakage for around 43%. Low-GWP refrigerant, leak detection and end-of-life recovery should be prioritised in the next design stage.

Operational energy (B6)

Operational emissions are estimated at approximately 97% of whole life carbon using early-stage energy figures. This should be confirmed once the energy model matures.

Structure, envelope and materials

Structural quantities, concrete mixes, steel sourcing, facade build-ups, finishes and plant replacement cycles should be further optimised as the design and specification are developed.

Data quality

Representative One Click LCA data has been used in the absence of project-specific EPDs. Manufacturers' EPDs should replace this as procurement progresses, and the 15% early-stage allowance removed once quantities are fixed.

Assessment updates

At Reserved Matters and after construction, the WLC assessment should be updated using the actual products, quantities and systems, including a final B6 calculation and a separate Module D disclosure. A Post-Construction Assessment prior to occupation can confirm the figures for all life-cycle modules.

07. Appendix 01

Results per RICS v1 methodology

This appendix summarises the same carbon model through RICS v1 methodology in line with GLA guidance.

The main difference is that the operational carbon using a stable electricity carbon factor instead of a decarbonising scenario, which reflects significantly higher operational emissions. This is not representative of the latest RICS prediction of decarbonisation of the national grid over the next 60 years, which is why the decarbonised scenario under RICS v2 has been used in the report.

Otherwise the same model under RICS v1 results in a slightly lower overall total in embodied carbon (approximately 500 $kgCO_2e/m^2$) mostly due to not using a contingency factor. This means that the main report provides a more conservative scenario which is appropriate given the early design stage and inherently high carbon use.

These results will be further refined at the Reserved Matters stage.

Key Results	$KgCO_2e$	Tonnes CO_2e	$KgCO_2e/ m^2$
Upfront Carbon excl. biogenic carbon	23,297,119	23,297	1,043
Embodied Carbon excl. biogenic carbon	75,240,447	75,240	3,368
Operational Carbon	9,033,233,935	9,033,234	404,407
Whole Life Carbon	9,108,474,383	9,108,474	407,775

WLC results per category and life-cycle stage per RICS v1 methodology

	Sequestered carbon	A1-A3	A4	A5	B1	B2 & B3	B4 & B5	C1-C4	D
		Product Stage	Transportation to site	Site Operations	Use	Maintenance	Replacement	End of Life	External Impacts
1 Substructure	-	1,635,083	280,087	112,494	-	-	-	334,713	-678,331
2.1 Frame	-	1,491,659	873,423	24,256	-	-	-	60,538	-1,129,116
2.2 Upper Floors	-	1,180,765	109,653	50,744	-	-	76,917	69,020	-420,996
2.3 Roof	-	800,016	84,722	25,696	-	-	-	30,610	-214,773
2.4 Stairs & Ramps	-	210,375	22,031	12,182	-	-	-	16,572	-39,131
2.5 Ext. Walls	-	1,200,281	159,989	13,970	-	-	-	31,220	-247,590
2.6 Windows & Ext. Doors	-	63,277	3,950	-	-	-	67,433	206	-49,119
2.7. Int. Walls & Partitions	-8,001	51,024	9,218	2,663	-	-	17,831	14,293	-17,090
2.8 Internal Doors	-	21,522	1,955	-	-	-	23,578	102	-21,877
3 Finishes	-	615,365	19,442	53,852	-	-	345,478	65,545	-15,814
4 Fittings, furnishings & equipments	-	-	-	-	-	-	-	-	-
5 Services (MEP)	-	12,310,470	815,566	206,175	33,006,186	-	17,076,961	92,353	-9,849,518
Unclassified / Other	-	242,122	77,582	523,513	-	279,213	206,075	128,485	-321,183
TOTAL kg CO_2e	-8,001	19,821,959	2,457,618	1,025,545	33,006,186	279,213	17,814,273	843,657	-13,004,538

08. Appendix 02

Environmental Product Declaration (EPD) Sources

Name	Technical specification	Product	Manufacturer	EPD program	Environment Data Source	Standard	Verification	Year	Country
Aggregate from medium-sized mobile crushing plant	Sub base (0/125, 0/150), rock 80/150		NCC	International EPD System	EPD aggregates from Sundsvall quarry – Råsta	EN15804+A2	Third-party verified (as per ISO 14025)	2022	sweden
Air circuit breaker switchgear panel for low-voltage systems, ACB panel	0.4 kV nominal voltage, 1000–4000 A nominal current, 300 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Air handling unit (AHU), large commercial grade	16000 m3/h (565000 cuft), 2400 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Air-insulated flat busbar, copper	220 V-33 kV rated voltage, 20 x 5 mm, 275 A, 100 mm2 area, 0.89 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Air-insulated tubular busbar, aluminium	33 kV rated voltage, d in- 38.1 mm , d out - 48.2 mm, 1335 A, 699 mm2 area, 1.8 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Aluminium framed unitized curtain wall system with laminated glass insulating unit, double glazed	4.76-16-4.76, 50.3 kg/m2, 0% recycled aluminium		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Asphalt for roads	5 % bitumen content, 2360 kg/m3, RICS UK baseline dataset		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Autonomous position sensor	0.086 kg/unit	7717301-CAPTEUR DE POSITION AUTONOME RENOVATION 7717302-CPA ELECTRONIQUE 7717301-CAPTEUR DE POSITION AUTONOME RENOVATION 7717302-CPA ELECTRONIQU	Delta Dore	PEP-ecopassport	PEP	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france
Autonomous sound and flash fire alarm	0.604 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Ball fitting and manifolds	DN 65, 2.4 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Ball fitting and manifolds	DN 100, 4.5 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Brick-faced precast cladding panel	C16/20, 481.4 kg/m2, 0% recycled binders, RICS UK		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL

panel	RICS UK baseline dataset								
Brick-faced precast cladding panel, for UK (RICS v2-aligned)				One Click LCA	One Click LCA generic construction definitions				unitedKingdom
Building installation cable, 1-core, PVC insulated	1x16 mm2, NYM-J type, outer diameter 9.3 mm, 76A, rated voltage 300/500 V, test voltage 2kV, 250 g/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Building installation cable, 2-core, PVC insulated	2x2.5 mm2, NYM-J type, outer diameter 9.5 mm, 24A, rated voltage 300/500 V, test voltage 2kV, 167 g/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Building installation cable, 2-core, PVC insulated	2x1.5 mm2, NYM-J type, outer diameter 8.2 mm, 17.5A, rated voltage 300/500 V, test voltage 2kV, 123 g/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Building installation cable, 4-core, PVC insulated	4x6 mm2, NYM-J type, outer diameter 14.7 mm, 41A, rated voltage 300/500 V, test voltage 2kV, 467 g/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Building installation cable, 4-core, PVC insulated	4x4 mm2, NYM-J type, outer diameter 13.7 mm, 32A, rated voltage 300/500 V, test voltage 2kV,346 g/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Building installation cable, 4-core, PVC insulated	4x1.5 mm2, NYM-J type, outer diameter 9.8 mm, 17.5A, rated voltage 300/500 V, test voltage 2kV, 170 g/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Cast iron part			One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Chiller	1125 kW, 11200 kg/unit	FIZ110	Vertiv Energy Pvt. Ltd	CIBSE TM65	Mid-level report for Vertiv™ Liebert® AFC Chiller, FIZ110	CIBSE TM65 Methodology	Self declared	2025	unitedKingdom
Circuit breaker	2P-16A, 230V, 0.21 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL

Combined type-1+2 AC surge protective device (SPD) for coordinated surge protection	230/400 V, 25 kA, 50 kA, 0.60 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Communication cable	LAN Category 6A F/UTP 2x4 pairs L 500 m LSZH, 0.144 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Concrete assembly for stairs and elevator shafts per one metre height, incl. railing, for UK (RICS v2-aligned)				One Click LCA	One Click LCA generic construction definitions				unitedKingdom
Concrete paving block for outdoor surfaces	80 mm, 184 kg/m2	Modal X	Marshalls Plc	EPD Hub	EPDModal X – All colours, all sizes and all finishes	EN15804+A2	Third-party verified (as per ISO 14025)	2025	unitedKingdom
Copper patch panels, unloaded and shielded	1.45 kg/unit	NETCONNECT NPP	CommScope, Inc.	ASTM	EPD Unloaded Unshielded Uniprise UNP NETCONNECT NPP CommScope CPP Discrete Distribution Module DDM Patch Panels	ISO 14040, EN15804+A1, EN15804+A2	Third-party verified (as per ISO 14025)	2025	northCarolina, USA
Copper pipes	Type L, DN 100 mm, (4 in), 8.02 kg/m, wall thickness: 2.80 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Copper pipes	Type L, DN 13 mm, (1/2 in), 0.42 kg/m, wall thickness: 1.02 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Copper pipes	Type L, DN 50 mm, (2 in), 2.61 kg/m, wall thickness: 1.78 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Copper pipes	Type L, DN 65 mm, (2 1/2 in), 3.70 kg/m, wall thickness: 2.03 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL

Copper wire rod	8960 kg/m3, 50% recycled		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Corrugated plastic pipes	0.138 kg/m	FFKuS-EM-F-105 co2ntrol	Fränkische Rohrwerke Gebr. Kirchner GmbH & Co.	IBU	EPD FFKuS-EM-F-105 co2ntrol® FRÄNKISCHE Rohrwerke Gebr. Kirchner GmbH & Co. KG	EN15804+A1	Third-party verified (as per ISO 14025)	2020	germany
DIN-rail DC power supply for low-power DC applications	230 V, 24 V, 2.5 A, 0.30 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Data centre UPS systems and batteries, per m2 GFA				-	One Click LCA				world
Data centre bus cables and conduits, per m2 GFA				-	One Click LCA				world
Data centre bus ducts, per m2 GFA				-	One Click LCA				world
Data centre lighting (general and emergency), per m2 GFA				-	One Click LCA				world
Data centre power distribution units, per m2 GFA				-	One Click LCA				world
Data centre switchboards and switchgear, per m2 GFA				-	One Click LCA				world
Data centre transfer switches (ATS/STS), per m2 GFA				-	One Click LCA				world
Data centre transformers, per m2 GFA				-	One Click LCA				world
Diesel (100% mineral diesel), kWh (Net CV)	accounted for the WTT and decarbonization of WTT impacts								unitedKingdom
Diesel generator set	31785.0 kg/unit	Genset mtu 16V4000 DS2500	Rolls-Royce Power Systems AG	International EPD System	EPD Genset mtu 16V4000 DS2500	EN15804+A2	Third-party verified (as per ISO 14025)	2025	germany, spain
Differential circuit breaker	3P+N, 16A, 400 V, 0.55 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Double two-way light switch	0.036 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL

Downlight cabinet	18W (CFL, G24D), EN15804+A1, ref. year 2018			OKOBAUDAT	ÖKOBAUDAT 2021-II (25.06.2021)	EN15804+A1	Third-party verified (as per ISO 14025)	2020	germany
Elastomeric rubber foam pipe insulation	L=0.035 W/mK, R=4.2 m2K/W, 25 mm, D=54 mm, 0.4 kg/m, 61 kg/m3, Lambda=0.035 W/(m.K)		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Electrical junction box, French average		Boîte de dérivation	DONNEE ENVIRONNEMENTALE GENERIQUE PAR DEFAUT	INIES	MDEGD_FDES	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france
Electricity, UK 2025	based on DEFRA electricity profile and energy supplementary table of Whole life carbon assessment RICS, 2nd edition								unitedKingdom
Electrification system for data centres, with updated One Click LCA generic data (2025)				-	One Click LCA generic construction definitions				europe
Elevator				One Click LCA	One Click LCA generic construction definitions				europe
Elevator hoistway with floor door per floor, traction (cable) type	251.36 kg/unit (USE ONLY WITH Passenger elevator car)		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Emergency light	2W, 600 MA, 200 lm, 0.55 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Emergency power supply source, wall mounted, French average	400 W 24 à 48 VCC	Source centrale murale	DONNEE ENVIRONNEMENTALE GENERIQUE PAR DEFAUT	INIES	MDEGD_FDES	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france
Exterior lighting pole, LED	24.1 kg/unit	Colonnes lumineuses extérieures décoratives 23W 2041lumen	DONNEE ENVIRONNEMENTALE GENERIQUE PAR DEFAUT	INIES	MDEGD_FDES	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france
Extruded aluminium profiles for window and door frames, generic	31% recycled content, RICS UK baseline dataset		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL

FGD gypsum plasterboard	12.5 mm, 10.8 kg/m2, 864 kg/m3, RICS UK baseline dataset		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Fin facade	33.5704 kg/m2	Infiniti and Vector	Maple Façades Ltd.	EPD Hub	EPD Infiniti and Vector Fin Façades	EN15804+A1, EN15804+A2	Third-party verified (as per ISO 14025)	2024	unitedKingdom
Fire suppression system for data centres, with updated One Click LCA generic data (2025)				-	One Click LCA generic construction definitions				europe
Fire-rated and security steel doors, calculated average for United Kingdom	61.58 kg/m2	Generic Construction Data (GCD)	One Click LCA	One Click LCA	One Click LCA	EN15804+A2	Internally verified	2026	unitedKingdom
Flame retardant single-core earthing cable with copper conductor and EVA insulation	1x120 mm2, 1000V, test voltage 8.4 kV, P15/P108, 1.2 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Flashing signal light	0.55 kg/unit	ORANGE LIGHT MASTERPRO 24V RTS, 5154577A ORANGE LIGHT MASTERPRO 24V io, 5154603A ORANGE LIGHT ECOPRO 24V, 5139073B ORANGE LIGHT MASTERPRO 24V RTS, 9026384A ORANGE LIGHT MASTERPRO 24V io, 9026830A ORANGE LIGHT ECOPRO 24V, 9026385A ORANGE LIGHT MASTERPRO 24V RTS, 5154577A ORANGE LIGHT MASTERPRO 24V io, 5154603A ORANGE LIGHT ECOPRO 24V, 5139073B ORANGE LIGHT	SOMFY	PEP-ecopassport	PEP	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france
Fluorescent lamp	T8-36W, 0.146805 kg/unit, EN15804+A1, ref. year 2018			OKOBAUDAT	ÖKOBAUDAT 2021-II (25.06.2021)	EN15804+A1	Third-party verified (as per ISO 14025)	2020	germany

Fresh water distribution system for data centres, with updated One Click LCA generic data (2025)			-	One Click LCA generic construction definitions				europe
Galvanised profiled sheet	1 mm, 60 mm deep, 11.62 kg/m2, RICS UK baseline dataset	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Galvanized steel T-shape piece for ventilation ducts, circular	d1-d2: 400-250 mm, (16-10 in), 3.7 kg/unit	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Galvanized steel chain-link fence	15 kg/m	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2026	LOCAL
Galvanized steel electrical junction box, wall-mounted	IP20, HxWxD:406x406 x203 mm, 7.26 kg/unit	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Galvanized steel flat grounding conductor for lightning protection and earthing systems	wall thickness: 3 mm, width: 25 mm, 0.597 kg/m	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Galvanized steel stud	500 mm centre, 6.5 kg/m, RICS UK baseline dataset	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Galvanized steel ventilation duct, circular	DN 100 mm, (4 in), 1.3 kg/m, wall thickness: 0.5 mm	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Galvanized steel ventilation ducting bend, circular	DN 500 mm, (26 in), 10.1 kg/unit, 90° degree bend	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Glass fiber filter fabric, N3, per m2	0.25 kg/m2, 1-5 µm pore size	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL

Glass wool insulation for pipes, unfaced, per meter	L = 0.035 W/mK, d= 6 inch, 50 mm, 1.4 kg/m, 65 kg/m3, (Range: 50-80kg/m3), 50% recycled glass content		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Green roof extensive (without stainless steel railing)	113 kg/m2, EN15804+A2, ref. year 2023			OKOBAUDAT	ÖKOBAUDAT 2023	EN15804+A2	Third-party verified (as per ISO 14025)	2023	germany
HVAC system for data centres, with updated One Click LCA generic data (2025)				-	One Click LCA generic construction definitions				europe
High current cable	35 mm2, 1 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
High current cable	70 mm2, 2 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
High-density polyethylene (HDPE) pipe for drainage and sewerage networks	DN 50 mm (2 in), 0.65 kg/m, wall thickness: 4.6 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Horn speaker	15 W, 1.9 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Hot dip galvanized steel	0.73 mm, 5.72 kg/m2, EN15804+A1, ref. year 2018			OKOBAUDAT	ÖKOBAUDAT 2021-II (25.06.2021)	EN15804+A1	Third-party verified (as per ISO 14025)	2020	germany
I/O link master module with 4 ports for intelligent field device connection	0.21 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Indoor downlights for accent lighting (spotlights)	P=6 W, 1.44 kg/unit	Encastrés intérieurs pour éclairage d`accentuation (spots) P=6W	DONNEE ENVIRONNEMENTALE GENERIQUE PAR DEFAUT	INIES	MDEGD_FDES	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france
Intercom speaker	11 W, 2.1 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL

Interior LED projector	P= 14 à 30 W	Projecteur intérieur LED	DONNEE ENVIRONNEMENTALE GENERIQUE PAR DEFAUT	INIES	MDEGD_FDES	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france
Interior projector LED 14 W		Projecteur intérieur LED 14W	DONNEE ENVIRONNEMENTALE GENERIQUE PAR DEFAUT	INIES	MDEGD_FDES	EN15804+A1	Third-party verified (as per ISO 14025)	2019	france
LED downlight luminaire	IP54, 94xØ220 mm, 13.2 W, 1440 lm, 0.92 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
LED lighting	P = 40W	Réglette LED	DONNEE ENVIRONNEMENTALE GENERIQUE PAR DEFAUT	INIES	MDEGD_FDES	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france
LED office lighting	5.95 kg/unit, EN15804+A1, ref. year 2018			OKOBAUDAT	ÖKOBAUDAT 2021-II (25.06.2021)	EN15804+A1	Third-party verified (as per ISO 14025)	2020	germany
Levelling screeds, all product types, calculated average for United Kingdom	2060 kg/m3	Generic Construction Data (GCD)	One Click LCA	One Click LCA	One Click LCA	EN15804+A2	Internally verified	2026	unitedKingdom
Light switch	0.113 kg/unit	077001L (mécanisme) / 078801L (plaque) / 080250 (support) mécanisme : 077001L - 079201L - 079101L - plaque : 078801L - 079301L - support : 080250	LEGRAND	PEP-ecopassport	PEP	EN15804+A1	Third-party verified (as per ISO 14025)	2020	france
Light switch	91 g/unit	Double bouton poussoir éclairage & volet roulant EnOcean NFC, couleur Alu (27331304) Boutons poussoirs EnOcean, simple ou double, toutes les couleurs (27311104; 27321104; 27331304; 27341204; 27351204; 27311189; 27321189; 27331389;	Hager SE	PEP-ecopassport	PEP	EN15804+A1	Third-party verified (as per ISO 14025)	2020	germany
Lighting system for office buildings per m2				-	One Click LCA				world
Linear LED luminare for industrial use	IP66, IK10, 1200xØ75 mm, 33W, 3950 lm,		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL

industrial use	3.27 kg/unit									
Long hot rolled non alloy steel construction products from electric furnace, structural sections, bars and commercial sections	7850 kg/m3		ASOCIACIÓN SOSTENIBILIDAD SIDERÚRGICA	AENOR	EPD Productos largos de acero no aleado para construcción laminados en caliente procedentes de horno eléctrico: perfiles estructurales de uso general, barras y perfiles comerciales	EN15804+A1	Third-party verified (as per ISO 14025)	2020	spain	
Low voltage cable	Section conductrice de 5 mm2 à 120 mm2	Câble basse tension 0,6/1kV	DONNEE ENVIRONNEMENTALE GENERIQUE PAR DEFAUT	INIES	MDEGD_FDES	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france	
Low voltage stranded single core cables with PVC insulation	1X16 mm2, 450/750V, 0.1626 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL	
Low voltage stranded single core cables with PVC insulation	1X240 mm2, 450/750V, 2.2992 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL	
Low-voltage power quality device for switchboard applications	3PH, static transfer switch 160 A, 10.00 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL	
Luxury vinyl flooring tile	2.5 mm, 4.3 kg/m2, wear layer: 0.5 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL	
Manual fire alarm	0.382 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL	
Masonry mortar	silica sand based		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL	
Matt emulsion for interior walls and ceilings	17.2 m2/L, 0.02 g/L	Crown Trade Matt Vinyl Emulsion	Crown Paints	BRE	EPD Crown Trade Matt Vinyl Emulsion	EN15804+A2	Third-party verified (as per ISO 14025)	2022	unitedKingdom	

Mechanical systems pipe insulation for data centre per m2			-	One Click LCA			world
Mechanical systems pipe network and ancillaries for data centre per m2			-	One Click LCA			world
Mechanical water meter	DN 25 mm, max flow rate 5 m3/h, max operating pressure upto 10 bar, 0.65 kg/unit	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified 2025	LOCAL
Medium duty perforated hot-dip galvanized steel cable tray	H:50 mm, W:200 mm, 1.74 kg/m	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified 2024	LOCAL
Medium voltage three-core underground power cable	3x240 mm2, AC, 24 kV, 4.64 kg/m	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified 2025	LOCAL
Medium-power cable	H07RN-F, 3x35 mm2, 4.48 kg/m	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified 2025	LOCAL
Medium-power cable	H07RN-F, 3x95 mm2, 7.3 kg/m	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified 2025	LOCAL
Medium-power cable	H07RN-F, 3x50 mm2, 3.76 kg/m	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified 2025	LOCAL
Medium-power cable	H07RN-F, 3x25 mm2, 3.21 kg/m	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified 2025	LOCAL
Metal-concrete composite decking, with 150 mm In situ concrete C32/40, excluding the structural frame, for UK (RICS v2-aligned)			One Click LCA	One Click LCA generic construction definitions			unitedKingdom

Metal-concrete composite decking, with 200 mm In situ concrete C32/40, excluding the structural frame, for UK (RICS v2-aligned)			One Click LCA	One Click LCA generic construction definitions				unitedKingdom
Miniature circuit breaker	230 V rated voltage, 16 A rated current, 6-10 kA breaking capacity, 1-pole, 0.12 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Miniature circuit breaker	400 V rated voltage, 100 A rated current, 10 kA breaking capacity, 3-pole, 0.45 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Miniature circuit breaker	400 V rated voltage, 32 A rated current, 10 kA breaking capacity, 3-pole, 0.38 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Miniature circuit breaker	230 V rated voltage, 63 A rated current, 10 kA breaking capacity, 1-pole, 0.14 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Nickel plated brass cable gland, industrial	Thread: M20 (metric), cable range: 8.5–13.5 mm, material: nickel-plated brass, ingress protection: IP66, 0.0188 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Non-motorized brass valves	DN 15, 0.145 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Oil-immersed distribution transformer	800 kVA power, 20 kV operating voltage, 2450 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Outlet cover for sockets and switches	0.0163 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
PV string switch disconnector	32 A, 1000 V DC, IP65, 0.42 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2026	LOCAL

Passenger elevator car , electrical controls, counter weight, drive and motor of traction (cable) type	630 kg (8 persons) load capacity, 1.0 m/s speed, 1587.7 kg/unit (USE ONLY WITH Elevator hoistway)		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Perforated hot-dip galvanized steel cable ladder	H:50 mm, W:600 mm, 3.13 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Perforated hot-dip galvanized steel cable ladder	H:100 mm, W:600 mm, 4.19 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Perforated hot-dip galvanized steel cable tray	H:100 mm, W:100 mm, 1.33 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Photovoltaic monocrystalline panel, per m2	14.5 kg/m2, 224 Wp		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2022	LOCAL
Plastic access panel made from high-impact polystyrene	115-470x165-470 mm		Timloc Building Products	EPD Hub	EPD Timloc Plastic Access Panels	EN15804+A1, EN15804+A2	Third-party verified (as per ISO 14025)	2025	unitedKingdom
Plastic cable tray system	3.99 kg/m2	FiberGuide®	CommScope	ASTM	EPD FiberGuide® Fiber Cable Management Raceways	ISO 14040, EN15804+A1, EN15804+A2	Third-party verified (as per ISO 14025)	2024	northCarolina, USA
Polypropylene (PP) pipe for drainage and sewerage networks	DN 65 mm (2 1/2 in), 1.41 kg/m, wall thickness: 6.8 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Polypropylene (PP) pipe for drainage and sewerage networks	DN 200 mm (8 in), 9.95 kg/m, wall thickness: 18.2 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Polypropylene grease interceptor	1.5 l/s flow rate, 22 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Polyvinyl chloride (PVC) pipe for drainage and sewerage networks	DN 200 mm (8 in), 12.68 kg/m, wall thickness: 12.7 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL

Polyvinyl chloride (PVC) pipe for drainage and sewerage networks	DN 20 mm (3/4 in), 0.43 kg/m, wall thickness: 3.91 mm	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Polyvinyl chloride (PVC) pipe for drainage and sewerage networks	DN 80 mm (3 in), 2.99 kg/m, wall thickness: 7.62 mm	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Polyvinyl chloride (PVC) pipe for drainage and sewerage networks	DN 100 mm (4 in), 4.37 kg/m, wall thickness: 8.56 mm	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Polyvinyl chloride (PVC) pipe for drainage and sewerage networks	DN 50 mm (2 in), 1.46 kg/m, wall thickness: 5.54 mm	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Polyvinyl chloride (PVC) pipe for drainage and sewerage networks	DN 500 mm (20 in), 61.98 kg/m, wall thickness: 26.19 mm	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Polyvinyl chloride (PVC) pipe for drainage and sewerage networks	DN 25 mm (1 in), 0.63 kg/m, wall thickness: 4.55 mm	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Ready-mix concrete, generic	C32/40 (4600/5800 PSI), XC1, 25% GGBS in cement, CEM II/B-S portland-slag cement, 2389 kg/m3, RICS UK baseline dataset, (version 2024)	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Ready-mix concrete, normal-strength, generic	C32/40 (4640/5800 PSI), XC1, 50% GGBS in binder (372 kg/m3 binder, CEM I + additions), 2366 kg/m3, (version 2026)	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2026	LOCAL
Ready-mix concrete, normal-strength, generic	C32/40 (4640/5800 PSI), XC1, 35% GGBS in binder (372 kg/m3 binder, CEM I + additions), 2370 kg/m3, (version 2026)	One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2026	LOCAL
Rectangular flush mounting	IK07, IP40							

flush mounting electrical junction box for masonry walls, plastic	[illegible] 195x154x70 mm, 235.1 g/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Reinforcement steel (rebar), generic	97% recycled content (typical), A615, RICS UK baseline dataset		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Renewable energy generated that is used on site									unitedKingdom
Renewable energy system (roof PV) for commercial buildings, for UK (RICS v2-aligned)				One Click LCA	One Click LCA generic construction definitions				unitedKingdom
Resin based paints and coatings, calculated average for United Kingdom	0.193 mm, 0.28 kg/m2		One Click LCA	One Click LCA	Calculated average for resin based paints and coatings	EN15804+A2	Internally verified	2025	unitedKingdom
Riser fibre optic cables	Simplex, duplex and quad, 2.9 mm, 0.02121 kg/m		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Sandwich panel with insulation foam core and double steel siding	L = 0.18 W/m2k, 100 mm, 10.84 kg/m2	QuadCore AWP LEC Wall Panel	Kingspan Insulated Panels	EPD Hub	EPD Kingspan QuadCore AWP LEC Kingspan Insulated Panels	EN15804+A1, EN15804+A2	Third-party verified (as per ISO 14025)	2023	unitedKingdom
Sanitaryware and plumbing fixtures, calculated average for United Kingdom	30 kg/unit		One Click LCA	One Click LCA	Calculated average for sanitaryware and plumbing fixtures	EN15804+A2	Internally verified	2025	unitedKingdom
Single pole double throw (SPDT) switch	10 A, 250 V AC, 0.065 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Single pole single throw (SPST) switch	20 A, 250 V AC, 0.095 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Stainless steel nitrogen pressure vessel	height: 7 m, diameter: 2.2 m, 16000 kg/unit	64VL001	Tratec Halvorsen AS	EPD Norge	EPD 64VL001-Nitrogen Receiver	EN15804+A1, EN15804+A2	Third-party verified (as per ISO 14025)	2025	norway

pressure vessel	16000 kg/unit				Receiver		ISO 14025)		
Stainless steel pipes	SCH 40S, DN 20 mm, (3/4 in), 1.71 kg/m, wall thickness: 2.87 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Stainless steel stair handrail	1.15 kg/m	Main courante d`escaliers en acier inoxydable diam = 45mm	DONNEE ENVIRONNEMENTALE GENERIQUE PAR DEFAUT	INIES	MDEGD_FDES	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france
Steel door with mineral wool core, fire rated	900x2000 mm, 74 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Steel electrical equipment enclosure with hinged door	IP66, HxWxD:508x508x152 mm, 13.61 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Steel external door, for UK				One Click LCA	One Click LCA generic construction definitions				unitedKingdom
Steel façade cladding panel, powder coated	9.5 kg/m2, 0% recycled content		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Steel open grid flooring		Safegrid	Lionweld Kennedy	BRE	EPD One metric tonne of Safegrid Open Grid Flooring	EN15804+A2	Third-party verified (as per ISO 14025)	2023	unitedKingdom
Steel pipes	STD, DN 300 mm, (12 in), 73.88 kg/m, wall thickness: 9.53 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Steel pipes	STD, DN 200 mm, (8 in), 42.55 kg/m, wall thickness: 8.18 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Steel pipes	STD, DN 400 mm, (16 in), 93.27 kg/m, wall thickness: 9.53 mm		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL

Steel stud internal wall assembly, 100 mm, incl. mineral wool insulation, for UK (RICS v2-aligned)				One Click LCA	One Click LCA generic construction definitions				unitedKingdom
Stone wool insulation	L= 0.037 W/mK, R= 5.41 m2K/W, 200 mm, 10 kg/m2, 50 kg/m3, RICS UK baseline dataset		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Surface-mounted rectangular electrical junction box with 7 inlets, plastic	IK07, IP55, 80x80x45 mm, Ø20, 87.8 g/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Switch disconnector	Rated current: 160 A, poles: 4, voltage: up to 690 V AC, dimensions: 145 × 120 × 88 mm, 1.166 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Telecom shielded jacks	0.0176 kg/unit	ATLAS-X1, AX0	Leviton Network Solutions	UL Environment	EPD Leviton Copper Connectivity	EN15804+A1, EN15804+A2	Third-party verified (as per ISO 14025)	2023	washington, USA
Telecommunication system for data centres, with updated One Click LCA generic data (2025)				-	One Click LCA generic construction definitions				europe
Terminal block, electrical, French average		Bloc de jonction, electrique	DONNEE ENVIRONNEMENTALE GENERIQUE PAR DEFAUT	INIES	MDEGD_FDES	EN15804+A1	Third-party verified (as per ISO 14025)	2022	france
Three-phase type-2 AC surge protective device (SPD) for high-capacity AC protection	230/400 V, 40 kA, 80 kA, 0.55 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Tufted carpet tile with nylon 6.6 pile material and bitumen backing	4.4 kg/m2, maximum surface pile weight 400 g/m2		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Type-2 AC surge protective device (SPD) for three-phase protection	230/400 V, 20 kA, 40 kA, 0.45 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL

Uninterruptible power supply for critical IT and control loads	40 kVA, 40.0 kW, 3PH, on-line modular, 673.90 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Upright fire sprinkler with glass bulb for industrial facilities	K-factor: 11.2, max working pressure: 12 bar (175 psi), thread size: 3/4 in (19.05 mm) NPT, 109 g/unit, 9.6 % recycled material		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2024	LOCAL
Utility pole for power transmission, galvanized steel	7 m length, 5.75 m height above ground, 1.25 m setting depth, 415 V line voltage, 75 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
VRF system	22.4 / 13.7 kW (cooling / heating), 198 kg/unit, refrigerant charge 5.9 kg (R410A / 2088)	RXYQ8U7Y1B	Daikin	CIBSE TM65	VRV IV+ H/P RXYQ8U7Y1B	CIBSE TM65 Embodied Carbon Mid-level Calculation	Self declared	2022	belgium
Vacuum circuit breaker	12 kV voltage class, 630-800 A rated current, 15 kA breaking capacity, 3-pole, 180 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2025	LOCAL
Ventilation system for office and care buildings, with updated One Click LCA generic data (2025)				-	One Click LCA generic construction definitions				LOCAL
Vinyl floor covering, with updated One Click LCA generic data (2025)				One Click LCA	One Click LCA generic construction definitions				europe
Wafer-style butterfly valves, bare shaft	DN 300, 12.614 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Wafer-style butterfly valves, bare shaft	DN 250, 8.837 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Wafer-style butterfly valves, lever actuated	DN 65, 1.542 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Wafer-style butterfly valves, lever actuated	DN 125, 3.086 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Wall socket (electrical outlet)	2P+T-16A, 0.142 kg/unit		One Click LCA	One Click LCA	One Click LCA	EN15804+A1, EN15804+A2	Internally verified	2023	LOCAL
Wastewater and rainwater drainage system for data centres, with updated One Click LCA generic data (2025)				-	One Click LCA generic construction definitions				europe

Savills Earth

Savills Earth provides a full suite of energy and sustainability services across both the built and natural environments. Savills Earth consolidates our established lines of business and expertise to deliver the very best sustainability, energy and carbon strategies on behalf of our clients. With over 100 specialists in the team, Savills Earth turns client sustainability and energy aspirations into a reality.

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