SUSTAINABILITY BRIEF: OFFICE FIT OUT

GREENER SPACES

THRIVING PLACES

RESPONSIBLE CHOICES

British Land

ABOUT THIS BRIEF

This is a British Land policy document that is supplementary to the British Land Sustainability Brief for Our Places, specifically providing clear guidance to our local teams and suppliers on our sustainability requirements for our fit outs. We also address how we put our 2030 Sustainability Strategy into practice within fit out and have aligned it to our key pillars, **Greener Spaces**, **Thriving Places** and **Responsible Choices**.

These requirements apply to our **Work Ready** and **Storey fit out** projects over the value of £2 million. The principles should also be used as guidance on any fit out refresh or fit out of landlord spaces.

Part 1 of this Brief contains the key deliverables for our projects by way of roles, responsibilities and requirements with targets.

Part 2 contains 'how to' guidance on how we're currently tackling the requirements. We also include insights on our progress that we want to share with our suppliers, customers and the fit out sector.

Our **Sustainability Tracker** accompanies the Brief to monitor and drive progress and should be developed from RIBA Stage 0 to help refine specific project requirements and report on progress throughout.

HOW THE BRIEF WORKS

Every fit out is different with unique opportunities. Therefore, our Brief is designed to be tailored depending on the scope and nature of the work using a three-tiered approach to target setting.

TIER	APPLICATION
CORE	These requirements and targets are a minimum requirement for all of our fit out projects.
STRETCH	These requirements and targets are for all projects to aspire towards, however there will be instances where they become mandated for the project. The Project Manager will agree and set stretch targets where they are required to be achieved for a given project.
2030+	These provide direction to our supply chain on where British Land wants to get to by 2030 and beyond with fit out.

Speak to the Project Manager and read the project Sustainability Tracker for information on how and when the 'stretch' targets may apply to your project.

ABOUT THIS BRIEF

Additional guidance

For our core policies, visit: www.britishland.com/policies

If you are a British Land supplier and want access or more information, contact: **sustainability@britishland.com**

Cover: Broadgate Tower Storey
Above: Norton Folgate Loom Court

VERSIONS
Version 1: 2025

SUSTAINABILITY IN FIT OUT 'A CALL TO ACTION'

Driven by growing understanding around the sustainability impact of office fit out and the increasing demand from ESG conscious customers for actionable insights, we've developed this Sustainability Brief to help organisations take meaningful steps towards managing their sustainability impact.

Based on extensive data collection and engagement with fit out professionals, this guidance is designed to accelerate progress and empower the sector to make measurable, lasting change. We invite stakeholders across the built environment to use this Brief as a catalyst for collaboration, innovation, and tangible improvements."

Matthew Webster
Britsh Land Head of Sustainability

WHAT IS THE IMPACT OF FIT OUT?

The first fit out of space can contribute **20-30%** of a building's upfront embodied carbon emissions when compared to base build and Cat A works.[1]

If we consider a building's life cycle, fit out contributes over **60-80%** of the whole life embodied carbon emissions.[1]

The average upfront embodied carbon impact of Cat B fit out is **190kgCO_2e/sqm**.[2]

Offices across the UK send **300 tonnes** of furniture to landfill every day.[3]

1 Based on a selection of British Land projects including new build and refurbishments with calculation following RICS Whole life carbon methodology.
2 Overbury Counting the upfront Carbon in Cat B office fit out.
3 Rype Office calculated impact.

OUR JOURNEY TO CREATING THE SUSTAINABILITY BRIEF: OFFICE FIT OUT

2023

Our first **Storey** embodied carbon assessment provided our first insights on the impact of fit out and set our baseline for action.

Norton Folgate sustainability deepdive on the impact of our furniture procurement and delivery of modular joinery units for disassembly with Benchmark.

2024

Adaptavate Breathaboard trial at **1 Triton Square** – trialling the use of bio-based gypsum board alternative.

Breathaboard trial at 1 Triton Square

30 Brock Street
Reuse Strategy employed leading to 80% retention of materials from Cat A and B.

1 Triton Square
Execution of 12 tonnes reclaimed steel procurement, the first of its kind on a fit out. Resulting in a 16% reduction in steelwork emissions.

2025

1 Triton Square
Our first fit out project implementing material passports with Material Index.

Broadgate Tower delivers record British Land embodied carbon of 44kgCO_2e/sqm for a fit out. The result of a high retention strategy.

Storey task furniture strategy delivering 57% carbon reduction on chairs and 51% reduction on desks.

2025 AND BEYOND...

Sustainability Brief: Office Fit Out launched!

Broadgate Tower – Storey
Showcasing Corkform flooring and Smile plastics around the planter.

PART 1:
FIT OUT EMPLOYER'S REQUIREMENTS

Roles, responsibilities and sustainable fit out requirements.

KEY ACTIONS, ROLES AND RESPONSIBILITIES

The following outlines the main actions, roles and responsibilities that require fulfilling by the respective parties on a British Land fit out. These are for general awareness and should be read alongside the Sustainability Tracker for the project.

	0-1 STRATEGIC DEFINITION, PREPARATION & BRIEF					2 CONCEPT DESIGN				3-4 DEVELOPED DESIGN & TECHNICAL DESIGN					5-6 CONSTRUCTION, HANDOVER & CLOSE OUT			
ROLE / **DELIVERABLE**	Confirm Sustainability Brief	Develop Reuse Strategy	Appoint material mapping[2]	Stage 1 Sustainability Review	Agree Sustainability tender pack and evaluation weighting	Appoint Sustainability Consultant[3]	Carbon Workshop	Stage 2 Presentation	Carbon options appraisal	Sustainability Brief progress review	Initiate material brokering (if applicable)	Model operational energy	Implement Carbon Workshop into procurement	Agree Thriving Places deliverables with the Social Impact Manager	Conduct as-built embodied carbon assessment	As-built Sustainability report	Handover of O&M/material schedules	Appoint digital inventory of fit out with digital product passports
British Land Development Lead	●	●	○	●	●	●	○	○	○	○		○	○		○	○	○	○
British Land Sustainability	●	●		○	○	○	○	○		○		○		○	○	○		
Project Manager	●	●	●	●	●	●	○	●	●	●	●	○	●	●	●	●	●	●
Designer[1]							●	●	●	●		●						
Contractor							●	●	●	●	●	●	●	●	●	●	●	
Furniture Supplier							●			●					●	●	●	
Sustainability Consultant							●								●			

● Primary responsibility ● Secondary responsibility ○ Review

1 Designer appointment is where appointed by the Employer. Under a D&B contract these responsibilities would fall to the Contractor.
2 Reclaimation Audit is required where a high percentage of materials and products from a previous fit out require diverting for reuse and cannot be reused in the scheme.
3 Engage with the Employer on the scope of this appointment which is primarily around facilitating the carbon workshop and carrying out the as-built embodied carbon assessment.

SUSTAINABLE FIT OUT REQUIREMENTS

The following table defines the overarching KPIs for British Land fit out and the targets that shall be achieved. The British Land Sustainability Tracker shall be used for each project to determine full project scope, specific risks and opportunities and to track progress with the Employer.

GREENER SPACES

WHOLE LIFE CARBON		Responsible	CORE	STRETCH	2030+
GS-01	Embed the principles of low carbon and circular design within Stage 1 report, highlighting progress with: 1. Low carbon design 2. Prioritising existing materials and products 3. Utilising materials passports 4. Coordination with basebuild/ Cat A works to avoid wastage.	Designer	✓	✓	✓
GS-02	Include a costed embodied carbon options appraisal within tender submission for no less than 5 material categories including but not limited to joinery, floor finishes, ceiling finishes, partitioning and MEP.	Contractor	✓	Target 10 material categories	Apply to all material categories and demonstate integration of carbon within material selection
GS-03	Achieve upfront (A1-A5) embodied carbon[1] emissions.	Designer/ Contractor	≤ 100kgCO_2e/sqm GIA	≤ 80kgCO_2e/sqm GIA[2]	≤ 65 kgCO_2e/sqm GIA
GS-04	Achieve embodied carbon emissions (B-C) over a 20yr life cycle.	Designer/ Contractor	≤ 75kgCO_2e/sqm GIA	≤ 70kgCO_2e/sqm	≤ 65kgCO_2e/sqm
GS-05	Achieve the following requirements for materials and products specified with an Environmental Product Declaration (EPD).	Designer/ Contractor	≥ 50% (by value)	≥ 75% (by value)	≥ 90% (by value)
GS-06	Specify materials and products that comply with the following carbon factors per element.	Designer/ Contractor	Refer to Appendix A	Refer to Appendix A	These will be developed once we have more data
GS-07	Review material specification to identify alternative options for biobased[3] materials for each of the following material types: drylining, acoustic material, flooring or insulation.	Designer/ Contractor	Achieve ≥ 10% biobased materials (by value)	Achieve ≥ 30% biobased materials (by value)	Achieve ≥ 50% biobased materials (by value)

1 In line with RICS whole life carbon methodology v2.
2 This target is mandatory for fit out projects where an existing fit out is in place including elements of FF&E and on floor services distribution.
3 Biobased definition: products that are wholly or partly derived from materials of biological origin, excluding materials embedded in geological formations and/or fossilised.

CIRCULAR ECONOMY		Responsible	CORE	STRETCH	2030+
	All fit outs				
GS-08	Develop a Reuse Strategy at RIBA Stage 0 before any strip out activity using the asset inventory and materials passports (where available), prioritising the retention of existing materials and products. Include the Strategy in consultant and contractor scopes.	Project Manager/ BL lead	✓	✓	✓
	Existing fit outs prioritising existing materials				
GS-09	Achieve the following material retention targets as determined by the Reuse Strategy.	Designer/ Contractor	≥ 50% of MEP[1] ≥ 50% of architectural materials ≥ 30% of furniture	≥ 75% of MEP ≥ 75% of architectural materials ≥ 50% of furniture	≥ 90% of MEP ≥ 90% of architectural materials ≥ 75% of furniture
	Where specifying new materials				
GS-10	Source the following products and materials as reused or remanufactured, either brokered from other projects, direct from manufacturer takeback or via material brokering platforms.	Contractor & Furniture Suppler	≥ 25% of sanitaryware ≥ 25% of furniture (excl.task) ≥ 25% of ironmongery	≥ 50% of sanitaryware ≥ 50% of furniture (excl.task) ≥ 50% of glazed partitions ≥ 50% lighting ≥ 50% ceiling tiles or panels	≥ 50% of sanitaryware ≥ 50% of furniture ≥ 80% of glazed partitions ≥ 50% soft and hard flooring ≥ 50% cable trays & ductwork
GS-11	Target recycled content of materials and products, (by value and excluding MEP).	Designer/ Contractor	≥ 30%	≥ 50%	≥ 70%
GS-12	Apply Circular Design principles, specifying the following material categories that can be disassembled with no chemical fixings (glues) that risk damaging other materials.	Designer/ Contractor	Flooring (soft and hard)[2] Glazed partitions Ceiling finishes Lighting	Joinery Wall finishes	All other material categories, including: Solid partitions
	Material passports and material longevity				
GS-13	Incorporate material warranty, performance criteria, manufacturer digital product passports, takeback scheme details and disassembly instructions within O&M manuals.	Contractor & Furniture Suppler	✓	10% of materials (by value) with a digital product passport	50% materials (by value) with a digital product passport
GS-14	Consolidate project information into a digital fit out inventory with links to digital product passports.	Project Manager	Projects ≥ £10m	Projects ≥ £5m	All projects

OPERATIONAL CARBON					
GS-15	Review the asset's Net Zero Carbon pathway and ensure required improvements relevant to the nature of the project are incorporated into the project brief.	Project Manager	✓	✓	✓
GS-16	Refer to the building's Tenant Fit Out Guide and ensure alignment with the basebuild energy and NABERS rating strategy.	Contractor	✓	✓	✓
GS-17	Complete the Lean Design Checklist.	Project Manager	✓	Undertake an assessment during RIBA Stage 1 to develop a Lean Design Strategy	Undertake an assessment during RIBA Stage 1 to develop a Lean Design Strategy

1 MEP reuse where it does not detract from the basebuild or tenant energy strategy, including energy use intensity and EPC ratings.
2 Plywood subbase glued to the Raised Access Flooring shall not be used and alternatives proposed for this material category.

OPERATIONAL CARBON *continued*		Responsible	CORE	STRETCH	2030
GS-18	Model the operational energy use of the project at RIBA Stage 3.	Contractor	Undertake steady-state calculations for small power, lighting and additional tenant uses	Undertake advanced dynamic simulation modelling with ApacheHVAC.	Undertake dynamic simulation modelling using a NABERS DfP approved software.
GS-19	Comply with the British Land metering strategy, as a minimum ensure that landlord energy, as defined by NABERS, can be split out from tenant energy.	Contractor	✓	✓	✓
GS-20	Achieve fit out energy use intensities.[1]	Contractor	45 kWhe/sqm/year NLA	40 kWhe/sqm/year NLA	35 kWhe/sqm/year NLA
GS-21	Implement the BL Soft Landings process to focus design on operation from the outset.	Contractor	✓	✓	✓
GS-22	Undertake commissioning for the fit out building services installation.	Contractor	Refer to the Tenant Fit Out Guide for commissioning requirements	Appoint an independent specialist commissioning manager to witness all commissioning activities prior to handover	Appoint an independent specialist commissioning manager to witness all commissioning activities prior to handover
GS-23	Refer to the Smart Fit Out Guidelines.[2]	Contractor	✓	✓	✓
GS-24	Specify refrigerants with low Global Warming Potential (GWP kgCO_2e).	Contractor	GWP < 675kgCO_2e (e.g. R32)	GWP < 300kgCO_2e (e.g. R-454C)	GWP < 10kgCO_2e (e.g. R-744, R-600a, R-290, HFO-1234yf)
NATURE					
GS-25	Where present, explore opportunities in external areas to implement greening and biodiversity measures. Refer to the British Land Biodiversity Framework to implement initiatives that are relevant for the local area.	Designer & Contractor	✓	✓	✓
WATER					
GS-26	Where water fittings are being installed, specify fittings that limit consumption.	Contractor	Toilets: ≤4.5l/ effective flush Urinals: ≤1.2l/flush Handwashing taps: ≤5l/min Kitchenette taps: ≤6l/min Showers: ≤6l/min Dishwashers: ≤12l/cycle	Toilets: ≤3l per effective flush Urinals: waterless with maintenance plan Handwashing taps: ≤4l/min and automatic control Kitchenette taps: ≤5l/min Showers: ≤3.5l/min Dishwashers: ≤10l/cycle	Handwashing taps: ≤3l/min and automatic control Showers: ≤2-3l/min Dishwashers: ≤6-7l/cycle
HEALTH & WELLBEING					
GS-27	Explore and specify the inclusion of biophilia principles aligned to natural materials, shapes, images, patterns and include planting schemes to foster connection to nature and improve indoor air quality.	Contractor	✓	✓	✓
GS-28	Comply with the British Land Materials Schedule.	Contractor	✓	✓	✓

1 See our approach to Operational Energy section for guidance on how to achieve the energy use intensities.
2 As a minimum ensure any new metering are capable of providing data to British Land's designated cloud platform in an agreed format.

HEALTH & WELLBEING *continued*		Responsible	CORE	STRETCH	2030+
GS-29	Explore how health and wellbeing certification schemes might apply to the project scope and support the project in improving the working environment, user experience, air quality, wellbeing facilities.	Contractor	✓	✓	✓
GS-30	Refer to Wellbeing principles for British Land and incorporate requirements into the fit out design.	Designer & Contractor	✓	✓	✓

THRIVING PLACES

Liaise with British Land's Social Impact Manager to align delivery with campus programmes and Local Authority priorities.

EDUCATION		Responsible	CORE	STRETCH	2030+
TP-01	Deliver impactful education initiative, by:	Contractor	Partner with a local school to host at least one workplace visit for groups of up to 20 people	Deliver at least one education session at a local school or community group to support curriculum learning and raise awareness of careers in our sectors	Support curriculum learning, grow a local talent pool, raise awareness of careers in our sectors and support young people at risk
EMPLOYMENT					
TP-02	Hours worked on site by staff undertaking apprenticeships, training or work experience.	Contractor	≥ 5% of all hours, prioritising the employment of local people	≥ 10% of all hours	≥ 10% of all hours, by people from the local community
COMMUNITY ENGAGEMENT					
TP-03	Design and project team volunteering on initiatives that support agreed local[1] organisations and initiatives, in line with British Land's strategy.	Project Manager Contractor	≥ 20% of team, ≥4 hours		≥ 20% of team, ≥4 hours to focus on expert volunteering to leverage specialist skillset and enable local people and businesses to access new opportunities
TP-04	Propose opportunities and integrate design elements that celebrate the local area and community, engaging with local[1] community groups, artists or social enterprises.	Designer, Contractor	≥ 1	≥ 2	Integrated into all project briefs

1 'Local' defined in s106 planning agreements or within local authority areas where no s106 is in place, prioritise the immediate ward where possible. For more detail, colleagues and suppliers to refer to our 'How to Guide'.

RESPONSIBLE CHOICES

	DIVERSITY, EQUALITY AND INCLUSION (DE&I)	Responsible	CORE	STRETCH	2030+
RC-01	Include DE&I objectives and initiatives in project planning, and deliver initiatives to promote a representative and inclusive workforce, prioritising initiatives that focus on the local community.	Contractor	✓	✓	✓
	HEALTH, SAFETY AND WORKFORCE WELLBEING				
RC-02	Fulfil all relevant British Land Health & Safety policies at all times.	Contractor	✓	✓	✓
RC-03	Plan for and implement health and wellbeing initiatives throughout construction that support and target all site-based personnel.	Contractor	✓	✓	✓
	RESPONSIBLE PROCUREMENT				
RC-04	Achieve local and SME spend during construction.	Contractor	≥ 10% local, ≥ 20% SME	≥ 20% local, ≥ 40% SME	≥ 40% local, ≥ 60% SME
RC-05	Products procured (excluding MEP), including component parts, are manufactured and assembled within the UK and/ or EU.	Contractor	✓	Apply local reuse/ urban mining of MEP as priority	Baseline travel mileage and target % reduction
RC-06	Align procurement and procedures with ISO 20400:2017 sustainable procurement standard.	Contractor	✓	✓	✓
RC-07	All materials and products procured shall be sourced ethically and sustainably, in alignment with the Materials Schedule.	Contractor	✓	✓	✓
RC-08	All contractors and suppliers to comply with our Supplier Code of Conduct.	Contractor	✓	✓	✓
RC-09	Demonstrate compliance with the Common Assessment Standard, using a recognised assessment body such as Achilles Building Confidence, to a certification level appropriate to the nature and scale of the business.	Contractor	✓	✓	✓
RC-10	Have a certified Environmental Management System (EMS) appropriate to the nature and scale of the project (e.g. ISO 14001, BS 8555 or EMAS).	Contractor	✓	✓	✓
	REAL LIVING WAGES				
RC-11	All suppliers, including contractors and subcontractors, to pay all employees at our places the Real Living Wage (outside London) or London Living Wage (within London).	Contractor	✓	✓	✓

1 As a minimum ensure any new metering are capable of providing data to British Land's designated cloud platform in an agreed format.

REPORTING

The Contractor is required to provide the following reporting outputs for each project. These reporting actions are essential to British Land's reporting requirements and help to provide accurate and transparent information about project performance. More information about reporting can be found in the project Sustainability Tracker.

		Responsible	CORE
RP-01	For all projects above £300,000, report health, safety and sustainability performance monthly, on our online reporting portal Credit 360.	Contractor	✓
RP-02	Incorporate reporting against sustainability requirements within monthly reports and project progress meetings.	Contractor	✓
RP-03	Record and share Thriving Places social value initiatives and data for projects over £5m.	Contractor	✓
RP-04	Report on compliance with our Materials Schedule and Materials Component Specification.	Contractor	✓
RP-05	Align with Construction Logistics and Community Safety (CLOCS) standard.	Contractor	✓
RP-06	Complete an embodied carbon Request for Information and supply Environmental Product Declarations to facilitate embodied carbon quantification, report transport movements (materials to and waste from) and site CO_2 emissions.	Contractor	✓
RP-07	Issue as-built sustainability report, summarising project performance against our Sustainability Brief and outlining innovation and best practice initiatives implemented on site.	Contractor	✓

Broadgate Tower fit out achieving 44kgCO_2e/sqm through high retention and reuse.

Canada Water Project Hub – furniture procurement through London Reclaimed, an organisation supporting young people into employment in Bermondsey.

PART 2:
HOW TO APPROACH THE BRIEF

What we're doing to continually drive improvements on embodied carbon, circular economy, operational energy and social impact.

APPROACH TO EMBODIED CARBON

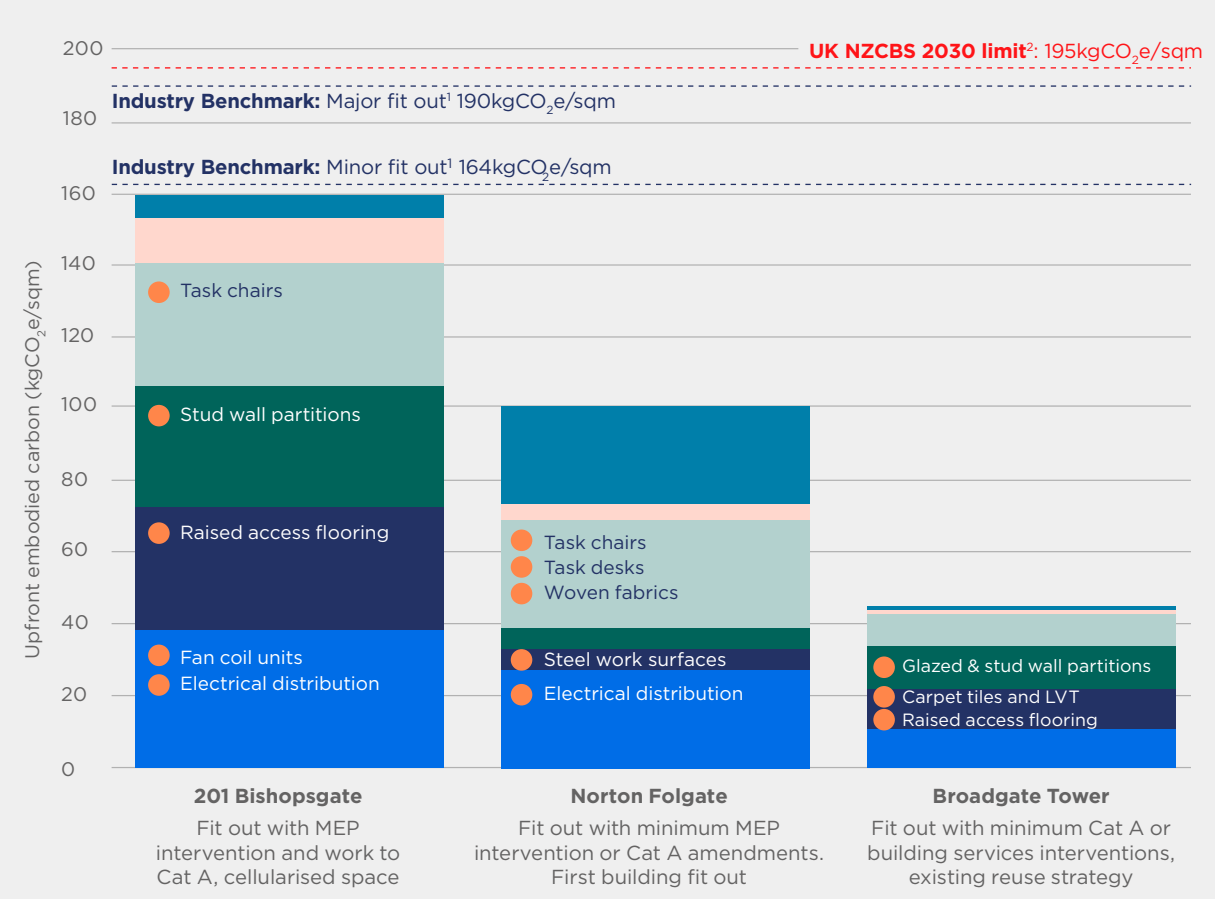
WHAT IS EMBODIED CARBON?

Embodied carbon refers to the greenhouse gas emissions generated from the extraction, manufacturing, transportation, construction, maintenance, and disposal of building materials. Upfront embodied carbon refers only to the extraction, manufacturing, transportation and construction stages.

HOW WE'RE MANAGING EMBODIED CARBON IN FIT OUT

One of the early challenges we faced was how to conduct embodied carbon assessments for fit out given the fast paced nature of their delivery. We've developed a pool of data on embodied carbon hotspots which we put to use during design in a series of workshops. Plans to tackle known hotspots are then put into action ready for procurement. A final as-built assessment is then conducted to measure performance, grow our data set and drive holistic decision making.

For the first time we're setting carbon factor limits to guide specification. Carbon factors are based on material and product carbon emissions (A1-A3) and were developed using our project data set and access to industry Environmental Product Declarations. The carbon factors will help us to better specify and avoid high embodied carbon materials being used where they could be easily improved.



Key:

- Building services
- Finishes
- Partitions/Internal walls
- FF&E
- Waste
- Site Operations
- Carbon hotspots

In 2023 we conducted our first embodied carbon assessment on a fit out in 201 Bishopsgate, which established our embodied carbon baseline of 159kgCO_2e/sqm.

We began to address our baseline by focusing on materials and products with the highest impact, known as our carbon hotspots. We then prioritised our improvement actions based on those hotspots that could be easily and quickly managed, task furniture being our starting point.

Over time, we've begun to integrate more circular thinking within our designs, which is helping us to address the impact of raised access flooring and woven fabrics. We're also making simple switches to new suppliers that are more aligned with our aspirations on embodied carbon, with the benefits proven in our next fit out of Norton Folgate which was measured at 100kgCO_2e/sqm.

Since then we have gone on to embrace retention of existing tenant fit outs. The Broadgate Tower project managed to reuse much of the Cat A, alongside existing fixtures, task furniture, lighting, WC elements, ziptaps, sprinker system and ductwork. Having access to remanufacturers was crucial to the success of this project. The result of this project was a measured 44kgCO_2e/sqm.

1 Counting the upfront carbon of Cat B in office fit out report. Overbury.
2 UK Net Zero Carbon Building Standard Reportable works limit for 2030.

HOW WE'RE ADDRESSING EMBODIED CARBON HOTSPOTS

THE EMBODIED CARBON COST OF FURNITURE

One of our early learnings was around the carbon impact of task furniture, with our task chairs on Norton Folgate representing 58% of the furniture upfront embodied carbon. We were compelled to address this quickly and began looking at our options to cut down these emissions.

The approach we employed was about identifying a more local supplier, improving recycled content but to also bring remanufacturing in as an option. We utilised the expertise of our furniture suppliers to explore our options that also protected design aesthetic and could be easily sourced in bulk quantities needed.

We now utilise manufacturers within the UK, with limited overseas parts. The make and models we're specifying are also freely available on the remanufacturing market giving us the option to procure reused chairs as our preference where available.

Storey are now achieving on average 57% savings in embodied carbon on their chairs and 51% on their fixed desks by utilising Orangebox Recur chairs and Rawside desks. The focus now, aside from driving this down further is applying the same strategy to other furniture, hence going on to set reuse targets around our furniture package.

On our most recent fit out of 1 Triton Square, we've been able to procure 439 remanufactured Orangebox Do chairs, reducing the intensity against the design by nearly 80%.

Broadgate Tower newly specified Orangebox Recur task chair and Rawside desks.

Typical carbon impact of our furniture package.

Source: Dodds and Shute

PRIORITISING REUSE THROUGH A REUSE STRATEGY

When reflecting on the fit outs we have completed to date, the most effective means of addressing embodied carbon has been through a Reuse Strategy.

The Reuse Strategy is required to be established at RIBA Stage 1, to ensure no opportunities are missed and should be completed before any strip out activity commences. The outcomes of our embodied carbon assessments to date indicate that the higher embodied carbon projects often came hand in hand with complete strip out of the previous fit out.

We appreciate there is not always an opportunity to reuse an existing fit out, however similar outcomes could be achieved by using material platforms and manufacturer takeback schemes.

CASE STUDY

30 BROCK STREET – **REUSE STRATEGY**

30 Brock Street at Regent's Place was going through the process of being fitted out and re-let as a Work Ready scheme.

Through early engagement with the outgoing tenant, retention of the Cat A ceilings and floors was agreed along with Cat B elements such as joinery, fixtures, finishes, and some furniture. This formed the basis of our Reuse Strategy for the incoming fit out and saved valuable resources from being wasted.

Our appointment of the contractor also centred around reuse and capability to reuse these elements within the proposed scheme was paramount. Our aspirations were embedded within the tendering process to ensure a contractor with the right capability was selected.

30 Brock Street CGI – utilising the existing glazed partitions.

Cast Interiors were appointed and proposed an ambitious retention approach for all the existing materials, fully utilising the asset to avoid procuring new materials where possible, but equally continuing to deliver the same design aesthetic.

The following targets were agreed:

- Retaining **80%** of existing materials, including **100%** of glazed partitions (47 linear metres) and **54%** of joinery carcases (47 total).
- Procurement of remanufactured furniture to **32%** (exclusive of task furniture).

In addition, we were keen to build on the design ambitions and use the project as a trial for material brokering. Not wanting to stop with the fit out itself, we were keen to ensure that surplus materials were diverted for reuse within our industry.

Material Index were appointed to conduct a 'Reclamation Audit' of the surplus materials and uploaded them into their material brokering platform. They then utilised their industry contacts to find recipients for the surplus materials to avoid them becoming waste material.

Fit out materials mapping – luminaries diverted for reuse.

This saw us divert 19 pendent luminaires, multiple tap fittings and benching. We have aspirations to scale this up as we progress and the activity was a useful exercise for lessons learnt.

Key lessons on material brokering:

- Material brokering needs to commence at RIBA Stage 0 to maximise opportunities to divert materials.
- As clients we need to feed the supply but also set the demand to get traction.
- Site insurances and health and safety with third parties coming onto site to retrieve materials was a challenge and needs to be considered when planning material pathways.

We will be looking to scale up how we incorporate more reused materials in our own fit outs to drive brokering with our Brief requirements reflecting this aspiration.

WHAT ARE BIO-BASED MATERIALS?

Bio-based materials are derived from renewable biological sources, such as plants, trees, agricultural by-products, or fungi. Unlike conventional materials, which are often fossil fuel based or highly processed, bio-based materials store biogenic carbon (carbon absorbed by plants during growth) and come with other benefits to the users of the space such as moisture, health and wellbeing properties.

HOW CAN WE USE BIO-BASED MATERIALS IN FIT OUT?

Use of bio-based materials is nascent for the industry, but proving take up within the fit out sector as we're starting to see interesting products in use across our fit outs.

Examples of bio-based materials include emerging materials like hemp which is being utilised in fibre board and even in wall studs. Others include strawboard, or wood-fibre boards, acoustic materials like wool, mycelium (fungi-based panels), or compressed straw panels, flooring like cork, bamboo, linoleum, or timber flooring and insulation like wood-fibre, hemp insulation,sheep's wool and cellulose.

It is important to not only focus on the carbon benefits, some bio-based materials have qualities that support better health and well-being and are biophilic in nature.

Equally apply caution when looking at bio-based products that have cement binders and look for alternatives that use natural or bio-based binders.

To get maximum benefit from any sequestration qualities, it is important to ensure that bio-based products are used to their full potential, which can be in different applications throughout their lifecycle prior to disposal.

Safe and suitable integration of bio-based materials requires careful planning and close engagement with the suppliers, which is why we're phasing our targets. Even small simple swaps with the right engagement can lead to marginal gains on embodied carbon performance. These are equally important to give us the best opportunity to scale up and have greater benefits later down our project pipeline.

WHERE WE'RE USING BIO-BASED MATERIALS

201 BISHOPSGATE STOREY

Acoustic insulation

On the ceiling as an acoustic finish we used SonaSpray. This is a cellulose based product with over 50% pre-consumer recycled content. The cellulose fibre is based on wood, cotton and hemp with water based adhesives.

BROADGATE TOWER LEVEL 10

Cork flooring

An alternative to timber, laminate and LVT, Corkform produce engineered cork flooring made with recycled material from the bottle-stopper industry. It also has excellent sequestration potential.

Baux acoustic pulp panel

100% biobased BAUX acoustic pulp panel utilising materials such as pine, spruce and wheat. Comes with FSC certification and a Declare Label, certifying Red List Free.

CONSIDERATIONS TO REMEMBER WHEN LOOKING TO SPECIFY BIO-BASED MATERIALS

- **Prioritise High-Impact Areas:** Select bio-based materials where they provide the biggest carbon savings (e.g. replacing plastic-based insulation).
- **Engage Suppliers Early**: Ensure availability of bio-based alternatives that meet performance criteria.
- **Specify Materials with Verified EPDs**: Environmental Product Declarations (EPDs) provide transparency on carbon impact.
- **Biogenic Carbon Storage:** Many bio-based materials store CO_2 during their growth phase, offsetting some emissions from processing and transport.
- **Manufacturing Process**: Look for low-energy production methods (e.g. mechanically processed fibres vs. energy-intensive manufacturing like synthetic insulation).
- **End-of-Life Carbon Impact:** Consider if the material is biodegradable, recyclable, or reusable. For example, timber can be reclaimed, while wool insulation decomposes naturally.
- **Important Properties:** Assess other things like fire safety, moisture, durability, acoustics and thermal performance.

APPROACH TO CIRCULAR ECONOMY

WHAT IS A CIRCULAR ECONOMY?

In our current linear economy, we take materials from the Earth, make products from them, and eventually throw them away as waste often before their full life cycle is realised. In a circular economy, we stop waste being produced and keep materials in circulation for longer. Products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting. The benefits realised don't just tackle waste, but there are also benefits to climate change, resource depletion and biodiversity loss.

APPLYING CIRCULAR ECONOMY PROCESS TO FIT OUT

The benefits of circular economy are widespread with commercial drivers becoming increasingly evident. Close attention to process efficiency is required to ensure that the benefits unlock embodied carbon savings too. In 2024, we launched our British Land Full Circle; Full Potential report, which outlines how project process can be adapted in aid of circular economy. We've taken a look at that process and adapted it for fit out. The below provides an overview of our circular processes bespoke to our fit outs.

HOW TO EMBED CIRCULAR ECONOMY WITHIN RIBA PLAN OF WORKS FOR FIT OUT PROJECTS

0

REUSE STRATEGY

Key actions:

- Incorporate the brief into project team appointments.
- Develop high level strategy prior to strip-out (where applicable) to maximise opportunties for reuse.
- Engage with outgoing tenants on maximising reuse opportunities of Cat A and B.

1

MATERIALS MAPPING

Key actions:

- Conduct detailed mapping of existing materials or use material passports where available.

CIRCULAR DESIGN

Key actions:

- Incorporate brief into designer appointments.
- Develop early concept with circularity principles embedded.

2

MATERIALS PATHWAYS

Key actions:

- Set pathways for existing materials identifying routes for reuse on site, other client projects or via reuse brokering platforms.
- Incorporate reuse pathways into design information.
- When appointing a contractor, ensure material pathways are shared in project information.

CIRCULAR DESIGN

Key actions:

- Develop design information and conduct a check in against the circular design guidance in the brief.
- When appointing a contractor, ensure project information reflects circular economy KPIs.

3-4

CIRCULAR DESIGN

Key actions:

- Develop design information and conduct a check in against the circular design guidance in the brief.
- Review progress with the circular economy KPIs.

MATERIALS PATHWAYS

Key actions:

- Prepare to carry out material pathways and method statements for disassembly.
- Facilitate on site visits for brokering parties to view and remove items.

5-6

CIRCULAR DESIGN

Key actions:

- Monitor delivery of circular design principles and collate as-built data to report against circular economy KPIs.

MATERIALS PASSPORTS

Key actions:

- Generate digital inventory of the fit out using as built information.
- Collate Digital Product Passports into the inventory.
- Handover digital inventory to asset and facilities teams.

KEY STRATEGIES TO AID CIRCULAR DESIGN

In order to embed circular economy into the design, the following considerations should be made. The circular design principles should be adopted and followed from RIBA Stage 1 onwards.

Select durable, high-quality materials	– Using robust, long-lasting materials reduces the need for premature replacement. – Specify modular, high-wear-resistant materials like durable carpet tiles (e.g. Interface, Tarkett with take-back schemes), engineered timber, or polished concrete. – Use high-durability finishes (e.g. timber panels, high-pressure laminates) instead of easily damaged plasterboard. – Choose solid, repairable, and reconfigurable furniture pieces over low-cost, short-life items.
Design for timeless aesthetics over trends	– Avoid overly trend-driven finishes and opt for neutral, adaptable colour palettes and natural materials. – Use interchangeable elements (e.g. swappable panels, modular furniture) rather than committing to permanent aesthetics. – Implement flexible branding solutions (e.g., digital screens, removable graphics) instead of fixed corporate-coloured carpets and wall finishes. – Prioritise circular furniture solutions, including reused, refurbished, and remanufactured furniture, which can be updated instead of replaced.
Implement a modular and flexible fit out Strategy	– Use demountable partitions instead of fixed drywall to allow space reconfiguration without waste. – Install raised floors and ceiling grids for flexible MEP (Mechanical, Electrical & Plumbing) layouts that adapt to new tenants. – Incorporate modular workstations and furniture that can be reconfigured rather than replaced.
Prioritise repairability and upgradability	– Select furniture and lighting with replaceable parts (e.g. reupholsterable chairs, upgradable LED systems). – Use click-in floor systems and replaceable carpet tiles instead of fully glued flooring. – Opt for panels, partitions, and surfaces that can be refinished or repainted rather than torn out.
Engage suppliers with Take-Back and Refurbishment programmes	– Choose flooring, ceiling, and partition suppliers with remanufacturing programs. – Use furniture companies that offer leasing, refurbishment, and remanufacturing. – Specify pre-owned or remanufactured elements where possible, which can have lower embodied carbon than new materials.

DELIVERING CIRCULAR DESIGN IN PRACTICE

NORTON FOLGATE

Working alongside Universal Design Studio and Benchmark Joinery, we specified free-standing storage units for Norton Folgate. The purpose of these to act as room dividers but designed to be easily removed and reused. We needed to consider size and shape that is easy to reuse but that can also easily be moved from one location to the next. We also embraced reclaimed furniture in this fit out including this single seater which was reupholstered to suite the scheme.

BROADGATE TOWER

We're also ensuring that materials like this travertine flooring in Broadgate Tower are being retained, refurbished and embraced within our designs.

BROADGATE TOWER

We utilised Smile Plastics within washrooms and as tiling. This product is made within the UK and of 100% recycled plastics.

The product is also fully recyclable and used in lieu of traditional terrazzo which can rely on virgin material. We've also used similar products in our furniture including side tables.

CASE STUDY

BROADWALK HOUSE, LEVEL 3 – CIRCULAR DESIGN APPROACH

Broadwalk House on our Broadgate Campus underwent a minor refurbishment and new fit out to one floor, for the purpose of re-letting. Disassembly of materials was our key requirement to ensure that materials could be repurposed at the end of the leasing cycle. Retention of the materials in the previous fit out was also a priority.

In partnership with Cast Interiors, a detailed study of the potential for retaining existing materials was carried out, with a focus on design for disassembly and durable and reusable materials. Furniture remanufacturing and reuse was also prioritised with task furniture, phone booths and storage repurposed. Raised access flooring also remained with the ceiling tiles retained and resprayed on site. It was also important for new flooring laid to be installed with disassembly to aid future reuse.

Broadwalk House

Partnering with Material Index, Cast Interiors also sourced 7 linear metres of reclaimed partitions which were identified through the Material Index platform from a donor site. Cast Interiors were able to fit the partitions to the space, designing in additional bulkheads and drylining. New tracks were required and were sprayed to suit the design aesthetic. Careful disassembly and transport to site were also required, which we were able to manage without the need for storage. We did need to consider:

- Matching the donor partitions to the space was not a barrier with allowance for additional dry lining factored in to suit the space
- Glazing heights needed to be precise or allowance for bulkheads designed in to the scheme
- Reuse of head tracks was not possible, these needed to be made new for each glazing run so should be factored into procurement and lead times
- Include an allowance for removal and install of new manifestation
- Include an allowance to have profiles sprayed to match existing

The tenant for the space requested the addition of more meeting rooms, which was a challenge to find matching products.

Through collaboration with Material Index, Cast Interiors were able to find matching products, demonstrating that sourcing barriers can be overcome.

The problem solving and challenges that were faced here were managed leading to a successful install with design aesthetic achieved. We've already gone on to learn from this and apply the same thinking to other projects and to other material categories.

It should be noted that this was a cost neutral exercise, however as efficiencies are sought and traction gained in the industry, we anticipate this will shift.

From a client's perspective, we have aspirations to scale reused partitions but recognise it is more feasible where reused in situ, hence our 30 Brock Street approach.

Reuse of glazed partitions should always be considered and prioritised, however we're also taking advantage of closed loop recycled where reuse proves to be a challenge.

CASE STUDY

2 KINGDOM STREET – STOREY FIT OUT

DESIGN FOR DISASSEMBLY

Significant quantities of raised access flooring is being discarded in the industry because of the damage caused by adhering plywood as a sub base to raised access flooring. This impact is particularly compounded when the fit out has to take into consideration the procurement of new raised access flooring which comes at a significant embodied carbon impact and huge waste impact of a valuable resource.

Our Brief tackles this issue by discouraging both the use of plywood at all but also the use of chemical adhesives or fixing that means either the flooring cannot be reused or the raised access flooring is compromised. Careful attention should be paid to linoleum products that often do require a sub base.

We're currently working with our contractors to explore how we overcome these issues of which IOBAC MagTabs from Circular Building Solutions has been one.

2 Kingdom Street

On **2 Kingdom Street** at our Paddington Campus, Thirdway Interiors utilised adhesive-free IOBAC MagTabs for the installation of Luxury Vinyl Tile and Carpet tiling onto the raised access flooring.

The tabs are magnetic on one side and dry tack on the other, with the ability to effectively secure the tiles in place.

They have importantly offered us the flexibility as a reversible fixing method to remove the tiles in future without compromising the flooring or the raised access flooring.

The friction provided is enough to ensure the flooring remains in situ and are simple to use by the flooring contractors.

Example of damage that can be caused to raised access flooring from plywood being glued as a sub layer.

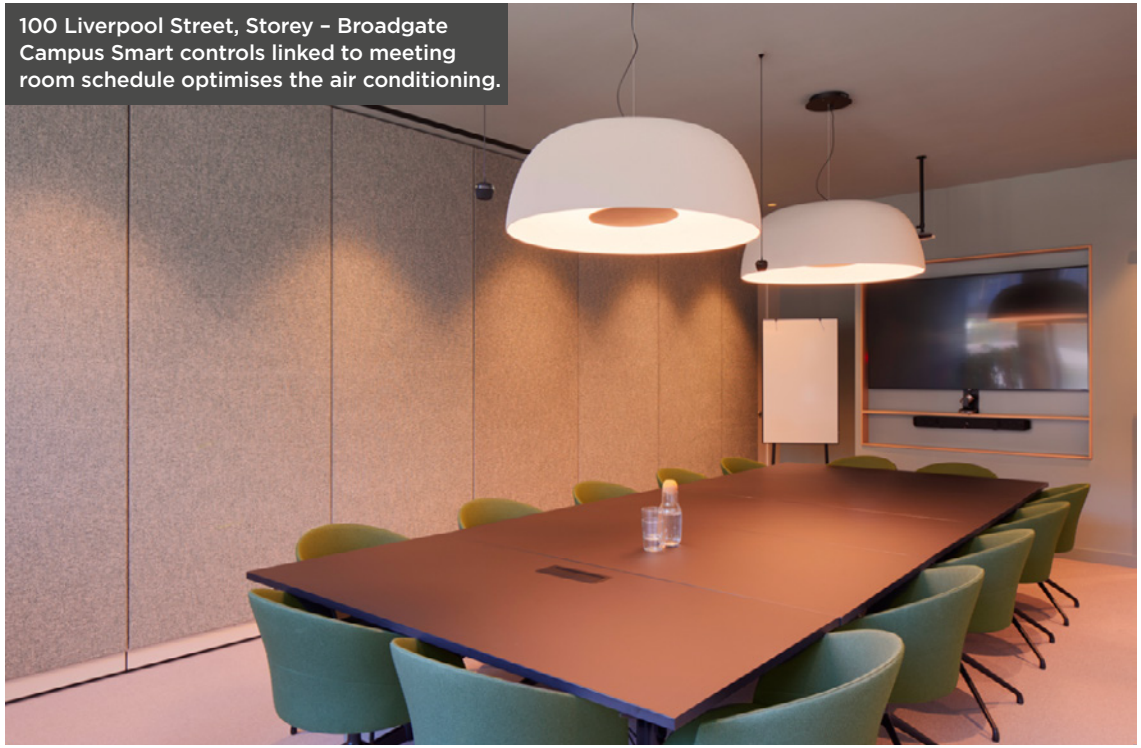
Midway through installation on the IOBAC MagTabs with the flooring contractor.

APPROACH TO OPERATIONAL ENERGY

WHAT IS OPERATIONAL ENERGY?

Operational energy refers to the energy required to maintain daily operations in a building to ensure comfort, safety and functionality over its lifespan. This includes energy used for heating, cooling, ventilation, lighting, powering appliances, and other building systems essential for normal use. Unlike embodied energy, which is consumed during the construction phase, operational energy is the ongoing energy demand resulting from the building's regular use.

We measure Operational Energy by using **Energy Use Intensity**, which is a measure of energy consumption per sqm over a period of 12 months.



100 Liverpool Street, Storey – Broadgate Campus Smart controls linked to meeting room schedule optimises the air conditioning.

MEASURING AND REPORTING OPERATIONAL ENERGY

Measuring energy in use is crucial for understanding how much energy an office fit out consumes during its daily operations. By monitoring real-time energy usage of lighting, HVAC, appliances, and IT equipment, areas of inefficiency and opportunities to reduce waste can be identified. This insight allows for targeted improvements (e.g. adjusting lighting controls, optimising HVAC settings, etc.) that lower operational costs and reduce environmental impact.

Therefore having a metering and submetering strategy for a fitted space allows you to ensure it is being operated in the most efficient way.

British Land's Smart Fit Out Guidelines are also useful in establishing intelligent controls linked to occupancy, presence, air quality and lighting. Meaning your services adapt and respond to be the most efficient for the space.

PREDICTING ENERGY CONSUMPTION

Undertaking energy modelling early during the design stage helps to inform the services strategy and work required to get to the target Energy Use Intensity.

Undertaking a study to predict the operational energy consumption at design stage also allows for a feedback loop once the fit out is in operation, to identify any potential issues, such as overconsumption, incorrect management of systems, poor commissioning or failed controls.

Energy use can be predicted to aid the design using the CIBSE TM54 methodology or through a simplified appraisal.

We have developed some guidance around how to conduct a simplified appraisal to support smaller fit out projects where TM54 methodology cannot be employed.

GENERAL GUIDANCE TO ACHIEVING THE TENANT ENERGY USE INTENSITY TARGETS

The following tables provide detailed guidance on the approach that can be employed to achieve the target tenant energy use intensities.[1] This should be used alongside the British Land Office Design Guide.

	CORE – 45kWhe/sqm/year NLA	STRETCH – 40kWhe/sqm/year NLA	2030+ – 35kWhe/sqm/year NLA
Lighting Efficiency	Align with tenant fit out guide or achieve an average of 135 lm/W on fittings.	Align with tenant fit out guide or achieve an average of 150 lm/W on fittings.	Align with tenant fit out guide or achieve an average of 200 lm/W on fittings.
Materials	Avoid materials with dark finishes which typically result in higher lighting power densities. Install glazed partitions where cellularised offices installed.		Incorporate phase changing materials which use thermal mass to help reduce heating and cooling requirements within conditioned areas.
Metering	Ensure landlord and tenant energy and water is separately sub-metered in line with the NABERS UK Metering and Consumption Rules. Fan coil units sub-metered if linked to the tenant distribution board and separately metered from small power and lighting. On floor BMS system should also be visible on landlord BMS. Refer to British Land Energy Metering and BMS guide.		Install energy sub-metering which allows energy consumption to be broken out per room type/use (e.g. meeting rooms, catering, SER rooms, cellular offices etc.).
Lighting Power Density	Limit the installed lighting power density to ≤5.5 W/sqm. Avoid installation of feature lighting.	Limit installed lighting power density to ≤4.5 W/sqm and ≤0.45 W/sqm for out of hours.	Limit the installed lighting power density to ≤4 W/sqm. No feature lighting. Limit out-of-hours consumption to 0.4 W/sqm peak.
Lighting Control	Utilise occupancy and daylight sensors for automatic demand driven lighting strategy at zonal level.		Utilise occupancy and daylight sensors for automatic control at a zonal level. Lower overhead illuminance in conjunction with task lighting, optimise with constant illuminance sensors.
Small Power	Achieve an average equipment power density of 8-11 W/sqm across a floor plate.	Achieve an average equipment power density of 5-8 W/sqm across a floor plate. Limit small power provision to desks to 80W.	Achieve an average equipment power density of ≤5 W/m2 across a floor plate. Limit small power provision to desks to 60W.
Energy Efficient Equipment	White goods EU Energy Label C. IT equipment Energy Star rated.	White goods EU Energy Label B. IT equipment Energy Star rated.	White goods EU Energy Label A. IT equipment with cloud-based computing with virtual desktops via thin clients.
Small Power Control	Manual switch off policy and timers on office equipment.	Smart plug load controllers with BMS device management, submetering and analytics to identify and address waste.	Integrate Power over Ethernet (PoE). AI integrated controls.
Audio-Visual Equipment	AV equipment Energy Star rated.	AV equipment Energy Star rated. Low standby power <1W with smart power management including auto-off, sleep modes and scheduling.	AV equipment Energy Star rated. Low standby power <0.5W with smart power management including occupancy sensors, scheduling, networked power down and adaptive brightness.
Heating & Cooling Set-points	Heating: 20°C ±2 Cooling: 24°C ±2	Mixed Mode: Heating: 20°C ±2 Cooling: 26°C ±2 Other areas: Heating: 20°C ±2 Cooling: 25°C ±2	Implement adaptive setpoints based on real-time occupancy and external weather data.

1 When reviewing the tables be mindful to read colletively and take into consideration requirements in previous columns for the higher targets.

	CORE	STRETCH	2030+
Ventilation SFP (Specifc Fan Power)	Set ventilation rates based on tenant fit out guide, or: Supply + Extract: ≤ 1.5 W/l/s Supply only: ≤ 1.2 W/l/s Extract only: ≤ 0.8 W/l/s d on real-time demand Specify systems with EC motors.	Set ventilation rates based on tenant fit out guide, or: Supply + Extract: ≤ 1 W/l/s Supply only: ≤ 0.8 W/l/s Extract only: ≤ 0.6 W/l/s High efficiency EC motors, smart demand controlled ventilation linked to CO_2 sensors and heat recovery.	Set ventilation rates based on tenant fit out guide, or: Supply + Extract: ≤ 0.8 W/l/s Supply only: ≤ 0.6 W/l/s Extract only: ≤ 0.4 W/l/s Smart BMS control, AI optimised airflow and passive design reducing ventilation requirements.
Energy Recovery	Implement energy recovery on ventilation to an efficiency of 75%.	Implement energy recovery on ventilation to an efficiency of 80-85%.	Implement energy recovery on ventilation to an efficiency of 85-90% with AI optimisation.
Domestic Hot Water (DHW)	For energy requirements below 10kW use point of use electric heaters. Above 10kW use ASHP-DHW.	Integrate smart controls and greywater heat recovery where catering or shower facilities are installed.	AI optimised DHW. ASHP-DHW with thermal storage and PV integration. Greywater heat recovery.
HVAC Control	Zoning of spaces with operation of HVAC linked to occupany sensors.	Zoning of spaces with operation of HVAC linked to other indoors air quality indicators, lighting and booking schedules.	AI driven HVAC control adapting based on user preferences, use of digital twins to simulate energy use of different occupiers, HVAC adjusts to grid carbon intensity to condition spaces when availability of renewables.
Operational Management	Quarterly reviews of energy consumption within the demise to identify issues of over consumption and implement remedial measures.		Shut off areas during low occupancy periods and shut down HVAC systems and IT/AV equipment in unused areas. Compare metered data with modelled energy consumption on a monthly basis to identify discrepancies and implement remediation measures.
Behavioural	Integrate energy actions in employee inductions and training processes. Refer to the tenant fit out guide for specific building requirements e.g. mixed mode requirements.	Encourage a "laptop first" policy for employees. Implement a clean desk policy, encouraging equipment to be switched off.	Integrate AI tools and applications that optimise the space based on set preferences, advise users to use energy when availability of renewables, engage with digital dashboards on energy use.
Back up Generators	Procure verified hydrotreated vegetable oil (HVO) in lieu of diesel.	Hybrid battery combined with fuel cell.	Fully renewable back up system utilising on site renewables with battery storage sized for resilience.
Water	Leak detection system and lighting connected to Solenoid valves. Leak prevention through the installation of flow control devices and local isolation valves. High usage alerts set up through metering platform.	Chemical free closed system where hydraulically separated.	Real time leak detection with automated shut-off.
Refrigerants	Automated refrigerant leak detection system in place for all equipment that uses refrigerants.	Include automatic shutdown and pump down of refrigerants in case of a leak.	All refrigerant systems integrated to landlord BMS.

MER AND SER ROOMS GUIDANCE

With an increase in the extensive requirements for modern, technology-driven workplaces, it is recognised that robust IT infrastructure is critical in supporting these requirements. As such, dedicated Main Equipment Rooms (MERs) and Secondary Equipment Rooms (SERs) are included in fit outs providing dedicated, secure spaces for housing critical infrastructure such as servers, networking devices and telecommunications hardware.

	CORE	STRETCH	2030+
SER / MER EUI	200-300 kWhe/sqm/year NLA.	200 kWhe/sqm/year NLA.	150 kWhe/sqm/year NLA.
SER / MER Room Design	Utilise cloud-based computing to reduce SER/MER room requirements. Use brush strips, gaskets and floor panels to prevent air leaks.	Optimised rack layouts, neat cable managment to support airflow. Zoned temperature control. Submetered by rack or zone.	High density racks with liquid cooled servers, under floor or overhead cable management with thermal zoning. Thermal mapping real time with smart response. Full BMS integration with energy dashboards.
SER / MER HVAC	Install separate critical cooling systems from the landlord systems (if not feasible, ensure sufficient heat metering is installed to record all energy consumption). Cooling setpoint of space temperature to 24°C. Air to air heat recovery.	Hot/ cold aisle containment with precision air cooling, variable speed fans and air flow floor tiles. Temperature and humidity smart controls for real time adjustment of cooling setpoints. Rear door heat exchangers and recovery to supplement building DHW or HVAC.	Liquid cooling and hot aisle containment with AI optimised airflow. AI driven environmental control with predictive analytics. Thermal energy reuse from liquid cooling and AI optimised recovery.

CATERING FACILITIES GUIDANCE

According to data from the Building Energy Efficiency Survey, catering is responsible for approximately 40% of energy consumption within the hospitality sector in the UK. Although limited data exists for catering kitchens within office environments, it is expected that this represents a similar proportion, if not more for offices that have a catering offering. Eliminating on site catering or providing light catering should be prioritised to reduce the impact of this high energy consuming element, however where unavoidable, the following guidance should be sought to reduce impacts:

	CORE	STRETCH	2030+
Commercial Catering EUI	220 kWhe/sqm/year NLA.	170 kWhe/sqm/year NLA.	120 kWhe/sqm/year NLA.
Catering Design	Efficient appliances and zoning with efficient layout. Submeter significant energy uses, cooking, refrigeration and ventilation.	Low energy and low temperature equipment. Link hood operations to cooking schedules. Electric appliance lead with induction cooking. Integrate heat recovery opportunities	100% electrification of kitchen, full heat recovery on kitchen appliances and exhaust. Smart refrigeration and combi ovens. Dishwasher and greywater heat recovery.
Catering HVAC	Efficient appliances and zoning of space with efficient layout. Demand controlled ventilation and heat recovery from extract air. Coordinate requirements of catering equipment with HVAC.	Demand controlled ventilation linked to occupancy and activity. Low flow hoods.	Recirculating hoods with filtration and building integration. Automated demand controlled ventilation with AI integration.
Operational Control	Programmable timers, stagger startup, staff training on energy efficiency, regular cleaning regimes. Refer to tenant fit out guide and avoid contaminated surface water run off and grease from entering drainage systems.	Adopt smart controls and programmable logic. Integrate with BMS. Adapt cooking to take advantage of low energy methods e.g. batch cooking and avoid slow cooking methods.	Continuous monitoring of energy use with predictive maintenance. Real time analytics with dashboards to driven kitchen staff behaviours. AI driven scheduling with connected appliances, idle mode automation and renewables aware.

GYM FACILITIES GUIDANCE

Gyms are increasingly being provided in office fit outs as part of a broader strategy to enhance wellness offerings and create attractive, health-focused work environments. Preference should be placed on using dedicated gym facilities where energy can be consolidated and efficiency addressed in a coordinated and dedicated manner. Gyms can achieve reductions by following the below guidance:

	CORE	STRETCH	2030+
Gym EUI	250 kWhe/sqm/year NLA.	200 kWhe/sqm/year NLA.	180 kWhe/sqm/year NLA.
Gym Design	Efficient HVAC, LED lighting, occupany sensors linked to BMS and low energy equipment.	Zone areas and install occupancy sensors linked to ventilation and lighting, energy recovery, efficient DHW systems. Low flow showers as per GP-26 requirements.	Self-powered equipment (e.g. water powered rowing machines, free weights, bikes). AI optimised HVAC and ultra-low energy equipment.
Operational Control	Localise energy classes and avoid use of powered equipment. Auto shut off of equipment and smart controls linked to occupancy/ CO_2 sensors.	Localise energy classes and avoid use of powered equipment. Free cooling in mornings and evenings.	Self powered machines (e.g. treadmills and bikes), AI scheduling to predict occupancy, gamification and use of apps to get feedback.

OUR APPROACH TO SOCIAL IMPACT

MAXIMISING SOCIAL IMPACT

British Land has been driving social leadership at our places over two decades to create a long-lasting positive social impact by collaboratively addressing local priorities.

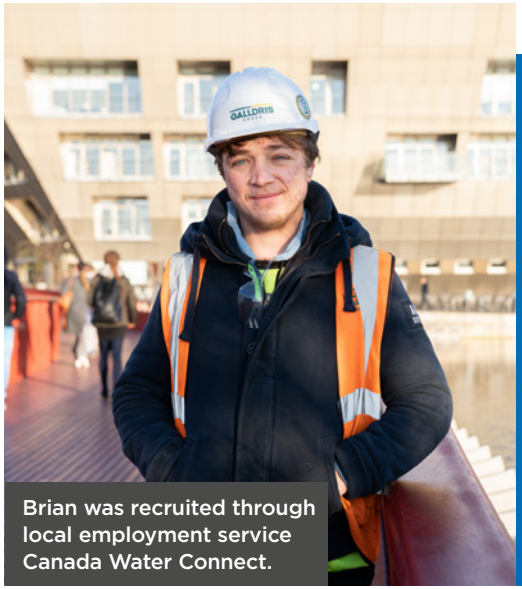
We prioritise social impact not only because it's the right thing to do, but because it drives commercial value. Our programmes help customers meet their social targets and attract and retain the best talent, creating places our customers want to be part of.

→ **READ MORE** www.britishland.com/sustainability/society/

Education workshop at local primary school in Canada Water.

EDUCATION

Local education initiatives should support people at all levels to grow skills, raising awareness of careers in our sectors, growing local talent pools, and supporting young people at risk. This supports social mobility and empowers people to access their career of choice.



Brian was recruited through local employment service Canada Water Connect.

EMPLOYMENT

By enabling local people to access employment, we support our supply chains, businesses and customers to secure the talent they need, while growing local economies and delivering against local authority priorities. In addition, when we deliver against our s106 employment and skills targets we save in financial penalties.

CHECKLIST FOR FIT OUT PROJECT TEAMS

- **Consult with British Land's social impact team:** On our campuses, our Social Impact Managers are on hand to provide advice, connect suppliers to local groups, and ensure initiatives best address local authority and community priorities.
- **Keep it local:** Focus first on understanding local priorities, and opportunities for each project to address them and have an impact on those living closest to the project.
- **Focus on our strengths:** The requirements in this Brief focus on education, employment and community engagement because this is where these projects can deliver the greatest social impact.
- **Identify quick wins:** Social impact can be delivered alongside other programme milestones e.g. hiring local caterers for events increases local spend.
- **Everything's connected:** We cannot meet our environmental and social sustainability goals in isolation. Consider opportunities for carbon and circular economy initiatives to provide local skills and education opportunities, as well as easily implementable quick-wins, such as donating any building materials that cannot be retained and reused to local partners to support local initiatives.

Volunteering at Little Village Baby Bank, Regent's Place.

COMMUNITY ENGAGEMENT

By collaborating with local charities, community groups, residents and businesses, we leverage our skillsets and resources to address local priorities. Impact is maximised through expert volunteering, and when engagement empowers local people to inform how projects can integrate design elements that celebrate local identity, delivering Places People Prefer.

APPENDIX A

FIT OUT CARBON FACTORS

Product/ Material	CORE Carbon Factor	STRETCH Carbon Factor	Functional Unit
Building services			
Ductwork	29	10	$kgCO_2e$/lm
Cable trays (steel)	20	7	$kgCO_2e$/lm
Fan coil unit	370	235	$kgCO_2e$/unit
Linear luminaires	28	22	$kgCO_2e$/unit
Drop pendant lighting	40	25	$kgCO_2e$/unit
Feature lighting	50	30	$kgCO_2e$/unit
Finishes			
Carpet tiles	4	1.5	$kgCO_2e$/sqm
Linoleum	4.5	2.5	$kgCO_2e$/sqm
Luxury Vinyl Tile	10	6	$kgCO_2e$/sqm
Emulsion and eggshell	0.32	0.18	$kgCO_2e$/sqm
Curtains/ fabrics	10	9	$kgCO_2e$/sqm
Textile/ fabrics	19	14	$kgCO_2e$/sqm
Raised access floor panels (wood core)	14	11	$kgCO_2e$/sqm
Raised access floor panels (other)	25	16.5	$kgCO_2e$/sqm
Raised access floor pedestal	10	5	$kgCO_2e$/sqm
Acoustic panels	3	1.5	$kgCO_2e$/sqm
Internal walls (constituent materials)			
Plasterboard	2.15	1.5	$kgCO_2e$/sqm
Metal stud	3.2	1.25	$kgCO_2e$/kg
Glass	2.8	1.4	$kgCO_2e$/kg
Aluminium	6.7	2.3	$kgCO_2e$/kg
FF&E			
Task chair	41	35	$kgCO_2e$/chair
Task desk	38	32	$kgCO_2e$/desk
Sit stand desk	107	85	$kgCO_2e$/desk

The following carbon factors shall be referred to and met during product and material specification. Carbon factors are taken from Environmental Product Declarations as the A1-A3 emissions.

It should be noted that reclaimed or reused materials take priority as per the circular economy requirements, but where new materials are required or justifiable, the carbon factors then apply.

FIND OUT MORE

CONTACT US

British Land
York House, 45 Seymour Street, London, W1H 7LX

sustainability@britishland.com

+44 (0)20 7486 4466

About British Land

We are one of Europe's largest listed real estate investment companies. Our portfolio of high quality UK commercial property is focused on London Campuses and Retail & London Urban Logistics. We create Places People Prefer, delivering the best, most sustainable places for our customers and communities.

www.britishland.com

British Land