Development Sustainability Principles

Version 4.0





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1. Introduction



About The Crown Estate

At the heart of our business lies a set of core duties to grow both the value of the portfolio into perpetuity and the income we return to the Treasury. Established through an Act of Parliament, we operate independently and commercially, occupying a space between the public and private sectors.

Today, we express this through our purpose: to create lasting and shared prosperity for the nation. Across our £16 billion portfolio, we are acting in the national interest for today and for future generations. Driven by our purpose, our strategy focuses on the nation's long-term challenges where we are best placed to make a difference. We aim to:

- Be a leader in supporting the UK towards a net zero and energy-secure future.
- Take a leading role in stewarding the UK's natural environment and biodiversity.
- Support thriving inclusive communities and economic growth.
- Responsibly generate value and financial returns for the country.

A company for the country, all our net revenue profit goes to the Treasury for the benefit of the nation's finances. This has totalled more than £3.2 billion over the last ten years.



The Purpose of the Development Sustainability Principles

To deliver against our aspirations, we recognise that we must continue to challenge ourselves over how we do business and the impact we have on the environment, our communities and customers, employees and suppliers. We believe our buildings, and the spaces in between, should help our customers, our visitors, and our stakeholders to achieve their goals.

In line with our Guiding Principles for decision-making, this latest version of our Development Sustainability Principles (DSP) (Version 4) aims to deliver a positive impact for climate, nature, people and the economy. It sets out our expectations on how key sustainability considerations should be integrated into decision-making throughout the definition, design, and construction phases for all our spaces within and around our built environment. Our decisions and plans are based on the best available evidence, and we pursue objective market and sector leadership in sustainability. Within this document, we have set minimum performance guidance and requirements that projects should deliver against and, where possible, aspire to exceed. To inform decision-making, projects should also identify where some requirements are not achievable, including where there may be trade-offs. All suppliers to The Crown Estate are required to commit to adhering to our principles and being transparent in their approach.

To focus our approach and aid readability and application, we have created key themes which span the breadth of financial, environmental, and social value creation. Whilst these themes are represented as separate sections in this document, we understand each is intrinsically linked. For instance, the creation of nature within an urban environment has an intrinsic benefit to ecosystems whilst also improving the health of people, sequestering carbon, increasing resilience to heat and flooding and adding economic value through increasing footfall to local businesses.

Ultimately, we believe that a sustainable destination is one where people want to be, where our customers are more successful, and where we improve the environment and communities around us.

The DSP is used across all development-related projects (including retrofits and capital projects) across our real estate portfolio that are managed and undertaken by The Crown Estate.

This document is structured as follows:

Introduction: Outlines the purpose of the DSP.

Integrating the DSP: Sets out the governance and reporting requirements of the DSP.
Performance Guidance: The performance guidance for each key theme, applicable to different use classes.
Workstage Requirements: Outlines the process of embedding performance guidance across each work stage (aligned to RIBA).
Appendices and Glossary: Supporting information and definitions as referenced throughout the document.



Integrating the DSP 2.



Application of the DSP

At The Crown Estate, sustainability is integrated at each stage of a building's lifecycle. A range of policies, programmes and guidance documents have been developed for use across our business activities; relevant documents are referenced in this document and in Appendix E.

The DSP is applicable to a wide range of The Crown Estate's development projects across the built environment. It has been designed for different asset classes including office, retail, residential, as well as the public realm; for net zero targets, these have been designed to follow the building sector decarbonisation pathways. To reflect the diversity of different use classes beyond office, retail and residential, the DSP has identified alternative non-residential uses as part of its performance guidance, acknowledging in some industries industry benchmarks may be less established.

Developments have been classified into three categories, depending on the type and scale of works; these are 'Major', 'Moderate' and 'Capital' (see category thresholds below). The Performance Guidance set out in Section 3.0 does not differentiate between Major and Moderate as it is expected that all projects should seek to deliver against these requirements unless it is demonstrated that it is not appropriate, relevant or applicable. Capital projects are also encouraged to target these requirements as far as practicable.

Whilst the DSP can be applied to most built assets, a document applicable to Strategic Land developments is being evolved separately. This is part of TCE's changing approach to longer-term involvement in master planning and will outline more broadly the sustainability principles that will be applied whether we sell with planning consent to aligned partners or look to deliver and act as long-term stewards. If any single asset on a masterplan meets the DSP threshold, and The Crown Estate hold the asset, the DSP process and performance guidance would then be applied.

Note that the Performance Guidance included within the DSP is not exhaustive and it is expected that other aspects may arise/ be applicable to a project.

Major (DSP applicable)	Moderate (DSP applicable)	Capital
 Above Delegated Authority of the Managing Director; and New developments or refurbishments (including public realm) with an overall floor area greater than 1,000 sq m (10,000 sq ft); and/or Residential schemes - 10 units and above. 	 Under Delegated Authority of the Managing Director; and Inclusive of 'Capital Projects' of scale and/or complexity (as agreed by The Crown Estate and project teams). These include Capital projects that adopt the RIBA Stages; and/or New developments or refurbishments (including public realm) with an overall floor area less than 1,000 sq m (10,000 sq ft); and or less than 10 units. 	 Under Delegated Authority of the Managing Director including: External repair and decoration to building fabric or public realm; and/or Internal refurbishment and improvements of buildings including both landlord and tenanted floors (including building services and plant); Service charge recoverable landlord works; and Non-service charge recoverable works undertaken on behalf of The Crown Estate.

Governance and Reporting

Development Governance

Our Value Creation Framework (VCF) seeks to set out, report and measure, where applicable, the direct financial, environmental and social value we create, alongside the wider value we can enable, in pursuit of our purpose. The VCF:

- Underpins our Group and Strategic Business Unit (SBU) level performance imperatives.
- Supports the rationale for pursuing individual initiatives, opportunities and investments.
- Helps us to determine where to deploy capital and resource, as well as consider long-term operational success factors.

The Value Creation Committee (VCC) has responsibility for directing and controlling our major activities (outside of matters reserved for the Board) - which for The Crown Estate are investment or value creation activities. This includes all Major Development projects as defined on page 7. The VCC's primary purpose is to ensure that executive decision-making is balanced and holistic and based on our VCF. The VCC considers all investment decisions and divestment proposals, reviewing them against the strategy and VCF. Where a proposal exceeds the delegated authority of the VCC it will then be escalated to the Board. The VCC also seeks to make decisions not only at asset level but also to provide an SBU and enterprise perspective. As part of the evolution of the VCF, the Guiding Principles ensure decision making aligns to our enterprise objectives on Net Zero, Nature Recovery and Thriving Communities. This includes basing our decisions on the best available evidence; ensuring full transparency of our approach; pursuing objective market leadership; and delivering positive impact for climate, nature, people and the economy.

In addition, the Development Group Committee (for Version 4.0) led by the Development Managing Director acts as a decision making body for budget approvals through key decision gateways on development projects, validating that gateway requirements, alongside financial, social and environmental targets are being met. In addition, the Development Group ensures investment decisions such as capital projects are made within limits of Delegated Authorities for the Development Managing Director.

The DSP has been structured around these decision Gateways to demonstrate how schemes are being developed to deliver against the VCF and are aligned to the RIBA stages. It is essential that these principles are integrated by The Crown Estate and the project Design Team from the outset of any scheme to ensure sustainability is integrated and embedded across the development process. The RIBA stage requirements and Gateways are summarised in Figure 1.



DSP Tracker and Reporting

All projects are required to demonstrate how the performance requirements of the DSP are being considered and delivered, proportionate to the scope of works undertaken throughout the design and construction of the scheme to inform decision-making.

For all Major and Moderate projects, project Design Teams should adopt the template DSP Tracker to set out the scheme's performance requirements. This will be managed by the project Sustainability Coordinator with input from the project Design Team and Principal Contractor to ensure that the business has been provided sufficient information to enable decision-making and monitor the progress and performance of the scheme against agreed performance requirements. The DSP Tracker should be adopted from the outset of a scheme, as follows:

- By the end of RIBA Stage 0-1 (Gateways 1 and 2), agree and set out project specific aspirations and, where available, performance requirements within The Crown Estate's Tracker aligned to enterprise objectives.
- Across RIBA Stages 2-4 (Gateways 3-5) demonstrate through design, specification and procurement, deliverability and progress against the agreed project performance requirements.
- Across RIBA Stages 5-6 (Gateway 6) provide quarterly reporting against the performance requirements submitted within three weeks of the end of each financial quarter.
- At each RIBA stage, the DSP Tracker should incorporate a summary and track progress against key sustainability requirements in line with the DSP, to be signed off by the project Sustainability Coordinator and to be submitted to The Crown Estate.

Project Design Teams are also required to collect and make available auditable evidence to demonstrate how performance requirements have been achieved for the duration of the project and liability period. Independent audits against specific performance requirements may be conducted to support data verification and assurance.

Roles and Responsibilities

The successful adoption of the DSP is the responsibility of all those involved in the delivery of our schemes and not the Sustainability Coordinator. The Sustainability Coordinator will work closely across the design and construction teams to monitor how schemes are performing against the performance requirements. Further details on roles and responsibilities are set out in Appendix F.

Updates to the DSP

We are continually striving for the highest sustainability standards, to ensure we are pursuing objective market and sector leadership, and we therefore expect the performance guidance set within the DSP to continue to evolve over time to reflect these e.g. following the updated sector decarbonisation pathways.

Major developments will have multi-year programmes and therefore DSP updates may occur at some point during the project lifecycle. If the project has not yet moved past concept design (RIBA Stage 2), performance requirements set out within this document may be superseded by more up-to-date benchmarks. Any changes or updates to these performance requirements will be communicated by The Crown Estate to the project Design Team in a timely fashion. If a project has moved past concept design (RIBA Stage 2), an impact assessment will be undertaken, and recommendations provided to allow a decision to be made.



Figure 1: Summary of RIBA Stage Requirements

3. Performance Guidance



To deliver against our strategic aspirations we must continue to challenge ourselves over our approach to how we undertake development activities across our real estate.

This section sets out our Performance Guidance for all Major and Moderate projects and forms the basis for our Mixed-Use Regeneration and Capital Projects. To focus our approach and aid readability and application, we have created key themes which span the breadth of financial, environmental, and social value creation for us and our key stakeholders. These requirements are not exhaustive, and others may be identified.

We would expect that all developments set out a clear ambition in terms of the social and environmental value they seek to create, and set more aspirational goals in accordance with this ambition that may well exceed the requirements set in each theme.

This section must be read in conjunction with <u>Section 4.0 RIBA</u> <u>Stage Requirements</u> to ensure that sustainability requirements are being embedded from the outset, and maximise the broader environmental, social and financial value that schemes can and should deliver.

In exceptional circumstances, it may be deemed that a project does not need to meet all requirements given a valid reason is presented.



Certifications

We will create hi across our portf recognised throu

Whole Life Cark

We will be a lead carbon and ener our real estate p chain. We comm market leadersh

Resource Effici

We will adopt an of resources we across the lifecy

Climate Resilie

Our spaces will risks and extrem today and in the

Nature Recove

As part of taking environment an recovery across improving the h within our own a benefitting the

folio which can be nationally and internationally bugh third party certifications.	mobility and connectivity, engaging with a wider network of stakeholders to catalyse the transition to sustainable travel on a local and regional scale.
bon der in supporting the UK towards a net zero rgy secure future by radically decarbonising both portfolio across all scopes and beyond our value hit to follow sector decarbonisation pathways and hip.	Health and Wellbeing We will support the health and wellbeing of all stakeholders by creating spaces that are safe, secure and positive environments for customers and consumers.
eiency In approach that prioritises and retains the value a have and minimises the use of new resources ycle of our assets.	Accessibility and Inclusion We will build places which celebrate diversity through design and consider a wide variety of needs and perspectives. Our spaces will be designed to meet new standards in inclusive design to achieve a positive experience for people.
ence be designed to adapt to the climate-related ne environmental events that we face both e future.	Construction Employment, Skills and Procurement We will enable a diverse, inclusive and localised economy to prosper through the provision of equitable opportunities for participation and support for marginalised groups to build skills for the future.
g a leading role in stewarding the UK's natural d biodiversity, we will contribute to nature our built environment. Our focus is on ealth and resilience of natural systems not just assets but across wider landscapes, and on wellbeing of people.	Community Investment and Wider Social Impact We will seek to create a positive impact by giving communities a sense of ownership over physical spaces, supporting them to fully engage in the placemaking process and form a strong collective identity which enhances wellbeing.

Sustainable Travel

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Certifications

Statement of Intent: We will create high quality, sustainable and healthy spaces across our portfolio which can be nationally and internationally recognised through certifications. In order to contribute to this, the table below sets out the guidance that all schemes should achieve.

Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
Considerate Constructors Scheme (CCS)	Minimum 40 with a score of 5 across all areas	Principal Contractor	5 - 6		\checkmark	~	\checkmark	
BREEAM	Excellent	Sustainability Coordinator	1-7	\checkmark	\checkmark	\checkmark		
WELL Building Standard	Gold (verification type to suit proposed scheme)		2-7	\checkmark				
HQM	3 stars		2-7			<i>✓</i>		
NABERS UK Rating (Base Build)	5-star rating		2 - 7	<i>_</i>				
EPC	A	MEP Consultant	0 7	<i>_</i>				
	B (with an aspiration to achieve A)		2 - /		\checkmark			<i>\</i>



Whole Life Carbon

Statement of Intent: We will be a leader in supporting the UK towards a net zero carbon and energy secure future by radically decarbonising both our real estate portfolio across all scopes and beyond our value chain. We commit to follow sector decarbonisation pathways and market leadership. In order to contribute to this, the table below sets out the guidance that all schemes should achieve.

Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
RICS Whole Life Carbon Modules A0 - A5 Excl. Sequestration (Upfront Embodied Carbon) Refer to Appendix A for Methodological Alignment	Limit to be confirmed on a project by project basis, and to align with the Crown Estate's Net Zero Carbon pathway and portfolio- level strategy and the scope of the development project	Sustainability Coordinator	0 - 6	~	<u>`</u>		~	~
RICS Whole Life Carbon	A maximum of 275 kgCO ₂ e/m ² (GIA)		0 - 7	\checkmark	\checkmark			
Modules B&C (Excluding B6 & B7)	A maximum of 250 kgCO ₂ e/m ² (GIA)							
(In-Use Embodied Carbon) Refer to Appendix A for Methodological Alignment	Target to be set by the end of RIBA Stage 2							
	Less than 90 kWh/m² (GIA) (Whole Building)		0 7	\checkmark	\checkmark			
Building Energy	Less than 55 kWh/m² (GIA) (Base Building)			\checkmark	<i></i>			
Use Intensity	Less than 40 kWh/m² (GIA)		0 - 7					
	Target to be set by the end of RIBA Stage 2	Lead Responsibility(Action - Close Out)OfficeRetailResidentialRe		<i></i>				
Fossil Fuel Free and	Development to be designed to be all electric and energy secure (for life safety systems, review options for removing fossil fuel i.e. synthetic fuels).		2 - 7	\checkmark	\checkmark			
Modules AU - A5 Excl.Sequestration(Upfront Embodied Carbon)Refer to Appendix A forMethodological AlignmentRICS Whole Life CarbonModules B&C (Excluding B6& B7)(In-Use Embodied Carbon)Refer to Appendix A forMethodological AlignmentBuilding EnergyUse IntensityFossil Fuel Free andEnergy SecureEnvironmentalPerformance Data	Prioritise use of electricity (including vehicles and heavy equipment machines) to avoid on-site emissions during construction.	Principal Contractor	5 - 6	\checkmark	\checkmark	<i>✓</i>		
Environmental Performance Data	Ensure the ability to measure and monitor operational energy, water, indoor air quality and waste performance of the scheme that is complete, timely, relevant and accurate.	MEP Consultant	2-7	\checkmark				

Resource Efficiency

Statement of Intent: We will adopt an approach that prioritises and retains the value of resources we have and minimises the use of new resources across the lifecycle of our assets. In order to contribute to this, the table below sets out the guidance that all schemes should achieve.

Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
	Review, adopt and report against the circular economy principles set out in Appendix B.	Architect, Principal Contractor	0 - 6	<u>`</u>	<i></i>	<i>✓</i>	<i>\</i>	<i></i>
Focus AreaCircular Economy Principles Including Reuse, Adaptability, and DisassemblyConstruction and Strip-Out/ Demolition WasteConstruction Energy and WaterOperational WasteOperational Waste	Meet the minimum percentage recycled content (%) aligned with The Crown Estate's Materials Principles (Appendix C).			<i>_</i>	<i></i>	~	<i>\</i>	<i>✓</i>
	100% of materials can be recovered and reused at disassembly					<i>✓</i>	\checkmark	
	25% of materials and products (by quantity) have an EPD	Architect	2-7	<i></i>	<i></i>	<i>✓</i>	<i>\</i>	
Principles Including Reuse, Adaptability, and Disassembly Construction and Strip-Out/ Demolition Waste Construction Energy and Water Operational Waste	100% of non-hazardous waste diverted from landfill	Contractor Oly Architect vaste Principal Contractor ed). vaste Architect		\checkmark	<i></i>	<i>✓</i>	<i>\</i>	
	95% of non-hazardous waste reused or recycled		or 5 - 6	\checkmark	<i></i>	<i>✓</i>	<i>\</i>	
	Less than 3.2 tonnes/100m ² of non-hazardous construction waste generated.			\checkmark			<i>_</i>	
Construction Energy and Water	Measures to reduce construction impacts resulting in a 25% minimum reduction in RICS Module A5 (note this is being tested).			<i>✓</i>	<i></i>	<i>✓</i>	\checkmark	
Operational Waste	Create appropriate waste segregation facilities for customer waste that supports opportunities to enable waste consolidation.		2 - 7	\checkmark	<i>✓</i>	<i>✓</i>	\checkmark	
	A maximum of 16 l/person/day of potable water	Architect	5 - 6	\checkmark				
Operational Water Use	A maximum of 105 l/person/day of potable water					<i>✓</i>		
Construction and Strip-Out/ Demolition Waste Construction Energy and Water Operational Waste Operational Water Use	Target to be set by the end of RIBA Stage 2		2-7				<i>\</i>	

Climate Resilience

Statement of Intent: Our spaces will be designed to adapt to the climate-related risks and extreme environmental events that we face both today and in the future. In order to contribute to this, the table below sets out the guidance that all schemes should achieve.

Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
Climate Adaptation	Adopt recommendations and measures set out in a climate adaptation strategy (where available) that responds to future climate scenarios. Adaptation measures should prioritise nature- based solutions and passive design.	Sustainability Coordinator	2 - 7	<i>_</i>	~		~	
Flood Risk	 50% of rainwater to be managed and discharged through natural infiltration on-site in a 30-year flood scenario by adopting the following hierarchy: 1. Store rainwater for later use 2. Use infiltration techniques 3. Attenuate rainwater for gradual release 	Landscape Architect, Drainage Consultant	2 - 7	~	<i>_</i>		~	
	Drought resistant planting and species to be used to minimise volume of potable water used for irrigation.			<i>✓</i>	<i>✓</i>		<i>✓</i>	
Overheating	Compliance against CIBSE TM52 (naturally ventilated) or CIBSE Guide A (nechanically ventilated).	MEP Consultant	2-7	<i>✓</i>	\checkmark			
	Compliance against CIBSE TM59					✓		
Utility Resilience	Incorporate measures within the design to future proof the development to maintain energy and water security, and business continuity during potential periods of disruption to supplies, e.g., droughts and power cuts.	MEP Consultant	2-7	<i>_</i>	~		~	



Nature Recovery and Enhancement

Statement of Intent: As part of taking a leading role in stewarding the UK's natural environment and biodiversity, we will contribute to nature recovery across our built environment. Our focus is on improving the health and resilience of natural systems not just within our own assets but across wider landscapes, and on benefitting the wellbeing of people. In order to contribute to this, the table below sets out the guidance that all schemes should achieve.

Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
Nature Recovery	Demonstrate opportunities to maintain and, as appropriate, enhance existing habitats and ecosystems that reflects the baseline of the site and surrounding areas.	Ecologist	2-7	<u> </u>	<u>_</u>	~	<u>`</u>	<u>_</u>
	Schemes should strive to deliver above a 10% BNG with an aspiration to achieve over 15% where practicable.							
	0.3		2 _ 7	\checkmark	\checkmark	<i>✓</i>		\checkmark
Orban Greening Factor	0.4		2-1				\checkmark	
Multifunctionality	All new green infrastructure types shall follow the principles of the Wild West End Value Matrix and User Guide (Appendix D).	Ecologist,	2-7	\checkmark	\checkmark	~	\checkmark	
Green Infrastructure	To identify opportunities for connectivity with existing green spaces beyond the redline boundary of the scheme in line with the Wild West End Value Matrix and User Guide (Appendix D).	Landscape Architect	1-7	\checkmark		~	\checkmark	
Total Valuable Green Space	30% of green space of total redline footprint	Ecologist Ecologist, Landscape Architect	2-7	<u> </u>	<u> </u>	<i>✓</i>	\checkmark	

B

Sustainable Travel

Statement of Intent: We will design our developments to be centres of active mobility and connectivity, engaging with a wider network of stakeholders to catalyse the transition to sustainable travel on a local and regional scale. In order to contribute to this, the table below sets out the guidance that all schemes should achieve.

Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
Sustainable Travel	Develop a transport strategy which ensures accessibility is addressed in an inclusive way and integrates the movement hierarchy as follows: 1. Minimise the need to travel 2. Minimise the need to use a vehicle 3. Use a public vehicle 4. Use a private vehicle	Transport Consultant	1-7	~	<u>_</u>	~	<u>`</u>	
Electric Vehicles	 Provide appropriate EV infrastructure aligned with The Crown Estate's EV Strategy: One electric charge point and cable routes for every 5 parking spaces. Account for EV charging for delivery and service vehicles. 	Transport Consultant	2 - 7	<u>`</u>	<u>`</u>	<u></u>	<u>`</u>	
	Where possible, secure cycle parking, shower facilities and cycle maintenance should be provided on-site or within 200m of the building's main entrance.	Architect	1-7	<i>_</i>		<i>_</i>	<i>_</i>	
Cycle Provision	 Provide, whichever is more onerous: 5% of estimated regular occupants have secure cycle parking. Provide secure cycle parking in line with local planning or certification scheme. 		1-7	<i>_</i>	<i></i>		<i></i>	~
	 Provide, whichever is more onerous: Provide shower facilities, including lockers and changing areas for 1/150 occupants. 1 shower facility, including changing area and locker per 10 cycle spaces. 		1-7	~	~			~
External Air Quality	Identify measures that minimise impacts to external air quality including promoting sustainable procurement and travel of workers, materials and goods; and considerate construction practices including consolidation.	Principal Contractor	4 - 6				<u> </u>	

Health and Wellbeing

Statement of Intent: We will support the health and wellbeing of all stakeholders by creating spaces that are safe, secure and positive environments for customers and consumers. In order to contribute to this, the table below sets out the guidance that all schemes should achieve.

Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
Design for Security	 Achieve a third party accreditation that accounts for these principles: 1. Physical security: the measures which are used to ensure that they withstand attack. 2. Surveillance: design ensuring that occupiers are able to observe the areas surrounding the building. 	Architect	1 – 7		~			
	 3. Movement control: the restriction of access, egress and through movement. 		<u> </u>					
	 Management and maintenance: the processes are in place to ensure that a development is free from signs of disorder. 							
	5. Defensible space: the ownership of space should be clearly defined (e.g. private versus semi-private).							
	Meet all WELL Light feature pre-conditions as follows:	Davlight Consultant						
Natural Davlight	 L01 Light Exposure – provision of appropriate light exposure in indoor environments through lighting strategies. 		1-7					
Natural Daylight	 LO2 Visual Lighting Design – provision of appropriate illuminances on workplaces for regular users of all age groups as required for the tasks performed in the space. 							
Encouraging Active Movement	Stairways should be prominent and obvious within buildings and designed as a feature element in a building to encourage their use.		1-6					
Human Connection With Nature	The project integrates biophilic measures throughout the space, including common circulation routes, shared seating areas and workstations.	Architect	1-7					
Nourishment	Provision of drinking water supply within main lobby/ reception, accessible on entry to the building.		1-7					

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Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
Healthy Materials	Align with The Crown Estate's Materials Principles (Appendix C).	Architect, Principal Contractor	1-6	<i>_</i>	<i>✓</i>		<i>\</i>	~
	 Total VOCs 8-hour mean: 500µg/m³ (testing in line with relevant ISO standard) Formaldehyde 8-hour mean: 33.7 µg/m³ PM₁₀ 24-hour mean: 50 µg/m³ PM_{2.5} 24-hour mean: <15 µg/m³ NO₂ 1-hour mean: 200 µg/m³ CO 8-hour mean: 10mg/m³ CO₂ 8-hour mean: 9,150 mg/m³, 15min mean: 27,400 mg/m³ 	Architect, Principal Contractor	2 - 7					
Indoor Air Quality	 Total VOCs 8-hour mean: 500μg/m³ (testing in line with relevant ISO standard) Formaldehyde 8-hour mean: 33.7 μg/m³ PM₁₀ 24-hour mean: 50 μg/m³ PM_{2.5} 24-hour mean: <15 μg/m³ NO₂ 1-hour mean: 200 μg/m³ 		2-7		<i>_</i>			~
Indoor Air Quality	 Total VOCs 8-hour mean: 500µg/m³ (testing in line with relevant ISO standard) Formaldehyde 8-hour mean: 33.7 µg/m³ PM₁₀ 24-hour mean: 50 µg/m³, annual mean: 40 µg/m³ PM_{2.5} 24-hour mean: <15 µg/m³, annual mean: 25 µg/m³ NO₂ 1-hour mean: 200 µg/m³, annual mean: 40 µg/m³ CO 8-hour mean: 10mg/m³ CO₂ 8-hour mean: 9,150 mg/m³, 15min mean: 27,400 mg/m³ 		2-7					

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Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
Fit Out	 To ensure that the fit-out of spaces, including those where provided, can deliver the following: Appropriate space to accommodate waste segregation within customer demise. Flexibility in space to accommodate: informal spaces used for a range of physical activity uses; and community spaces. The project integrates biophilic measures throughout the space, including common circulation routes, shared seating areas and workstations. Food preparation amenities are provided in a quantity that meets employee demand in at least one dedicated eating area within project boundary. 	Architect, MEP Consultant	2-7				<u>`</u>	
Acoustic Performance	 Develop an acoustic design strategy for the development, which should cover, as applicable the following: Internal sound insulation Internal sound levels Control of reverberation Control of building services noise and vibration Compliance with the acoustic requirements in BREEAM (Hea05 & Pol05) and preconditions of the WELL v2 Sound concept Further consideration should also be given to: Controlling ground-borne noise and tactile vibration Neurodiversity and inclusive design Improving the external acoustic environment through sound scaping 	Architect, Acoustic Consultant	2-7					

Accessibility and Inclusion

Statement of Intent: We will build places which celebrate diversity through design and consider a wide variety of needs and perspectives. Our spaces will be designed to meet new standards in inclusive design to achieve a positive experience for people. In order to contribute to this, the table below sets out the guidance that all schemes should achieve.

Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
Inclusive Decision Making	Comply with the core commitments below and as set out in <u>The Crown Estate's Inclusive Design Brief</u> (Appendix D) aligned with <u>RIBA Accessibility Overlay</u> : Involve People with Lived Experience Mobility and Ergonomic Access and Egress Basic Human Needs Multi-sensory Wayfinding and Communication Multi-sensory Accessibility and Comfort Health and Wellbeing Social Representation Engage Specialist Advice	Architect (or specialist dependent on project scope)	1-7	~			~	

Construction Employment, Skills and Procurement

Statement of Intent: We will seek to create a diverse, inclusive and localised economy to prosper through the provision of equitable opportunities for participation and support for marginalised groups to build skills for the future. In order to contribute to this, the table below sets out the guidance that all schemes should achieve.

Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
Employment Skills and Training	 See Employment and Skills Plan (ESP) template for further guidance and targets for project requirements on the following: Work placements (16+) Construction Careers Information, Advice and Guidance (CCIAG) Events Apprenticeships - new starts (inc. upskilling existing staff members working on the development) Employment - no. of roles created (min. of 6 months contract) Training weeks on site Qualifying the workforce - project workforce Qualifications gained (equiv. NVQ2 and above) Industry certification gained Low carbon training Graduation/celebration events Case studies 	Principal Contractor	5-6					
	All sub-contractors to be paid on-time (within 30 days)		5 - 6					
Procurement	When procuring materials and products, 35% of sub-contractors are SMEs.	Principal Contractor	5 - 6	~				~
	100% of contractors and sub-contractors paid at a minimum the real living wage for the relevant region.		5 - 6					

Community Investment and Wider Social Impact Opportunities

Statement of Intent: Create positive impact by giving communities a sense of ownership over physical spaces, supporting them to fully engage in the placemaking process and form a strong collective identity which enhances wellbeing. In order to contribute to this, the table below sets out the guidance that all schemes should achieve.

Focus Area	Performance Guidance	Lead Responsibility	RIBA Stage (Action - Close Out)	Office	Retail	Residential	Public Realm	Other Non- Residential
Community Investment Plan	For Major Developments, based on an understanding of the local needs of the area, develop a short plan outlining key specific opportunities which will be undertaken by the Principal Contractor to deliver additional social impact beyond the requirements outlined in the Health and Wellbeing, Accessibility and Inclusion, Construction Employment, Skills and Procurement sections.	Principal Contractor	5 - 6	<u>`</u>	~	<u>`</u>	~	~

4. RIBA Stage Requirements

RIBA Stage Requirements

The following tables highlight The Crown Estate's expectation to ensure that sustainability has been embedded across all RIBA stages from the outset and forms a part of decisions and activities relating to design, procurement, construction and operations. The design team will review and incorporate the requirements into their scope of works alongside any other appropriate requirements. The purpose of setting work stage requirements is to achieve the performance requirements set for each development and therefore this section should be read in conjunction with <u>Performance Guidance</u>. The application of specific work stage requirements is determined by the performance requirements chosen on a project-by-project basis and therefore not all may be applicable.

In addition, example deliverables have also been suggested, with lead responsibilities from the Project Teams at appropriate RIBA Stages. To note:

- These deliverables are not an exhaustive list and others may be required, to be determined on a project-by-project basis.
- The deliverables are dictated by whether the associated performance requirement is targeted or not.
- All deliverables marked with * require alignment with relevant methodologies that are set out in the appendices.

RIBA Stage 0-1: Preparation and Brief

Sustainability Objective: Establish high level sustainability aspirations aligned with Enterprise Objectives as set out in the DSP. Consideration should account for opportunities within and beyond the site boundaries to help define sustainability targets.

Strategic Brief and Sustainability Ambitions	 The Crown Estate to ensure sustainability objectives are clearly set of Sustainability Objectives (including The Crown Estate's Wild West End Design Teams to identify sustainability aspirations, objectives, and wh for site context. Design Teams to identify opportunities for innovation in design and cor Where appropriate, the project Design Team alongside The Crown Estate insight from existing buildings to inform Project Brief. The Crown Estate and Design Teams to fully understand site context a available site information (including outputs from MSCI CVaR tool) to in Refer to the TCE Urban Sustainability team where clarification on DSF Matrix and Inclusive Design Brief) and application to project brief are reference.
Establishing High Level Operational Requirements	 The Operations Team to establish strategic objectives on key sustainal Management of operational waste Operational energy, water and waste targets and requirements AIM Requirements
Internal Engagement	 Communicate sustainability ambitions and provide relevant documentat Engage with Operations Team to understand if there is any existing data Design Teams to agree roles and responsibilities of the DSP and appoint Biodiversity Climate-related risks Utility infrastructure Air quality Community and local accessibility needs
External Engagement	 Project teams to ensure that community needs and material issues are against local, regional and national data sources, relying on existing sit undertake a local needs assessment. As appropriate, Design Team to work with The Crown Estate to set out stakeholders.
Monitoring and Sign Off	 Sustainability Coordinator to prepare with input from relevant Design out high level performance requirements to TCE.

ut in the Project Brief aligned to the DSP and Enterprise Value Matrix and Inclusive Design Brief).

nere possible, performance requirements accounting

nstruction.

ate to assess Lessons Learned from previous schemes, as well as

and surrounding areas against DSP topics, including review of nform deliverability of sustainability requirements.

P (and supporting information, such as the Wild West End Values required.

ability parameters including:

tion as set out in Appendix D to the project Design Team.

tment of specialist disciplines as required to support on:

understood, and where feasible, benchmarked as relevant te information where available. Where unavailable and as required,

an approach to community engagement, including identifying key

Team members, a draft DSP Tracker for Gateways 1 and 2 setting

RIBA Stage 2 and 3: Concept Design and Spatial Coordination

Sustainability Objectives:

- RIBA Stage 2: Initiate the project's design to align with The Crown Estate's sustainability vision. Briefing key members of the Design Team and factor in sustainability approaches, baselining, modelling and analysis.
- RIBA Stage 3: Continuation of the design from RIBA Stage 2 with greater level of detail and analysis being made to support delivery and improve performance against the sustainability targets.

Integration Into Design and Procurement Decisions (in Line With Public Procurement Regulations)Project Design Teams to ensure any technical baseline assessments and Design Teams to continually review deliverability of the targets and requirements into de using Teams to continually review deliverability of the targets and requirement Design Teams to ensure that relevant technical assessments, drawings reflect agreed project-level sustainability targets. Sustainability Coordin Operations Team to review design and ensure that all operational requirements on portunities from existing initiatives to maximise its impact. cohesion across the team.Building Operations and Maintenance• The Operations Team to consider resourcing requirements and technic sustainability performance requirements in operation. • The Operations Team to review proposed in-use sustainability perform • Design Teams to engage with key stakeholders to understand priorities • Design Teams to engage with key stakeholders to understand priorities • Design Teams to engage suppliers to identify opportunities for alternaInternal Engagement• Early community engagement to inform concept design by exploring aspi • Before the end of Stage 2, The Crown Estate to confirm any updates to • Design Team to continually review design to identify and report risks a established at the end of Stage 2).Monitoring and Sign Off• Before the end of Stage 2). • Sustainability Coordinator to prepare with input from relevant Design each RIBA stage.			
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Regulations)• Operations Team to review design and ensure that all operational requi • The Crown Estate to engage with relevant stakeholders to create colle harness opportunities from existing initiatives to maximise its impact. cohesion across the team.Building Operations and Maintenance• The Operations Team to consider resourcing requirements and technic sustainability performance requirements in operation. • The Operations Team to review proposed in-use sustainability perform • Design Teams, led by the project Sustainability Coordinator to embed a through sustainability workshops and Design Team Meetings (DTMs). • Design Teams to engage with key stakeholders to understand priorities • Design Teams to engage suppliers to identify opportunities for alternaExternal Engagement• Early community engagement to inform concept design by exploring aspi • Before the end of Stage 2, The Crown Estate to confirm any updates to • Design Team to continually review design to identify and report risks a established at the end of Stage 2). • Sustainability Coordinator to prepare with input from relevant Design " each RIBA stage.		Decisions (in Line With Public Procurement	 Design Teams to ensure that relevant technical assessments, drawings reflect agreed project-level sustainability targets. Sustainability Coordir
 The Crown Estate to engage with relevant stakeholders to create colle harness opportunities from existing initiatives to maximise its impact. cohesion across the team. Building Operations and Maintenance The Operations Team to consider resourcing requirements and technic sustainability performance requirements in operation. The Operations Team to review proposed in-use sustainability perform Design Teams, led by the project Sustainability Coordinator to embed a through sustainability workshops and Design Team Meetings (DTMs). Design Teams to engage with key stakeholders to understand priorities. Design Teams to engage suppliers to identify opportunities for alterna External Engagement Early community engagement to inform concept design by exploring aspi Before the end of Stage 2, The Crown Estate to confirm any updates to Design Team to continually review design to identify and report risks a established at the end of Stage 2). Sustainability Coordinator to prepare with input from relevant Design each RIBA stage. 		Regulations)	 Operations Team to review design and ensure that all operational requi
Building Operations and Maintenance• The Operations Team to consider resourcing requirements and technic sustainability performance requirements in operation. • The Operations Team to review proposed in-use sustainability perform • Design Teams, led by the project Sustainability Coordinator to embed • through sustainability workshops and Design Team Meetings (DTMs). • Design Teams to engage with key stakeholders to understand priorities 			 The Crown Estate to engage with relevant stakeholders to create colle harness opportunities from existing initiatives to maximise its impact. cohesion across the team.
 The Operations leam to review proposed in-use sustainability perform Design Teams, led by the project Sustainability Coordinator to embed a through sustainability workshops and Design Team Meetings (DTMs). Design Teams to engage with key stakeholders to understand priorities Design Teams to engage suppliers to identify opportunities for alterna Early community engagement to inform concept design by exploring aspi Before the end of Stage 2, The Crown Estate to confirm any updates to Design Team to continually review design to identify and report risks a established at the end of Stage 2). Sustainability Coordinator to prepare with input from relevant Design Teach RIBA stage. 		Building Operations and Maintenance	 The Operations Team to consider resourcing requirements and technic sustainability performance requirements in operation.
Internal Engagement• Design Teams, led by the project Sustainability Coordinator to embed a through sustainability workshops and Design Team Meetings (DTMs). • Design Teams to engage with key stakeholders to understand priorities • Design Teams to engage suppliers to identify opportunities for alternal External EngagementExternal Engagement• Early community engagement to inform concept design by exploring aspi • Before the end of Stage 2, The Crown Estate to confirm any updates to • Design Team to continually review design to identify and report risks a established at the end of Stage 2). • Sustainability Coordinator to prepare with input from relevant Design • each RIBA stage.			 The Operations Team to review proposed in-use sustainability perform
External Engagement• Early community engagement to inform concept design by exploring aspinMonitoring and Sign Off• Before the end of Stage 2, The Crown Estate to confirm any updates to • Design Team to continually review design to identify and report risks a established at the end of Stage 2).Sustainability Coordinator to prepare with input from relevant Design Team RIBA stage.		Internal Engagement	 Design Teams, led by the project Sustainability Coordinator to embed a through sustainability workshops and Design Team Meetings (DTMs). Design Teams to engage with key stakeholders to understand priorities Design Teams to engage suppliers to identify opportunities for alternative statements.
 Before the end of Stage 2, The Crown Estate to confirm any updates to be confirmed and sign Off Design Team to continually review design to identify and report risks a established at the end of Stage 2). Sustainability Coordinator to prepare with input from relevant Design each RIBA stage. 		External Engagement	 Early community engagement to inform concept design by exploring aspir
Sustainability Coordinator to prepare with input from relevant Design each RIBA stage.		Monitoring and Sign Off	 Before the end of Stage 2, The Crown Estate to confirm any updates t Design Team to continually review design to identify and report risks at established at the end of Stage 2).
			 Sustainability Coordinator to prepare with input from relevant Design each RIBA stage.

- are completed to inform and support design evolution.
- design and performance specifications.
- equirements, updating technical documents as part of design each RIBA Stage.
- and specifications are regularly and as appropriate, updated to inator to review progress against the DSP targets.
- irements are reflected in the design.
- ective understanding of the Employment Skills Plan (ESP) and This will also inform the development of the ESP and create
- cal specialist input to ensure the ongoing deliverability of
- nance requirements.
- sustainability requirements and review performance against design
- es and opportunities.
- ative procurement methods.
- irations and concerns for the project and the design vision.
- to the targets set out within this DSP for incorporation into projects. and opportunities in delivering performance requirements (as
- Team members, the DSP Tracker for Gateways 3-4 at the end of

Lead Responsibility	Example Deliverables
Sustainability Coordinator	 DSP Tracker at the end of each RIBA Stage in line with Gateways Reviews (Gateways 3 and 4) BREEAM, WELL, HQM pre-assessments and report Sustainability Statement Whole Life Carbon (WLC) assessment and report in line with Appendix A setting out: Whole Building operational energy modelling separating base build and occupier energy use Embodied carbon baseline Identification of reduction opportunities Circular Economy Statement* which accounts for: Reuse targets, consideration of local procurement and opportunities to Design out Waste in line with the Circular Economy Design approach (Appendix B)
Operations Team	 Operational Management Plan
MEP Consultant	 Energy Statement Building Information Modelling (BIM) Model and approach for adopting operational BIM Model at Stage 7* Metering strategy* NABERS modelling and report* Thermal comfort and overheating analyses
Drainage Engineer	 Flood risk assessment
Ecologist	 Biodiversity net gain baseline assessment* Habitat surveys*
Transport Consultant	 Local transport needs assessment
Air Quality Consultant	 Air quality assessment and report including preliminary baseline air quality testing
Demolition Contractor	 Pre-demolition/strip-out audit
Inclusive Design Consultant	 Inclusive design strategy*
Acoustic Consultant	 Acoustic baseline assessment including development targets

RIBA Stage 4: Technical Design

Sustainability Objective: Demonstrate through design and specification, deliverability of finalised project sustainability performance requirements. Ensure that requirements are embedded into tendering process and contractual documents.

h	ntegration Into Design	 Design Teams to embed sustainability targets and requirements into d Design Teams to continually review deliverability of the targets and recevolution, and considering procurement considerations of design for ear Operations Team is appropriately briefed and provided opportunity to reflected in the design.
F	Procurement and Tender	 Sustainability Coordinator to adapt the template Employer's Sustainability requirements as part of tender documents of all Contractors (in also set out expectations of monitoring sustainability project targets a In consultation with The Crown Estate and Project Team, Sustainability assessment of sustainability capability, including reviewing and weight Design Team with Principal Contractor to continue to engage with support as opportunities for consolidation to minimise vehicle use in cons In line with the public procurement regulations and adopting TCE's e-terrelating to sustainability.
F	Pre-site Commencements	 Prior to any works commencing on-site, ensure Principal Contractor against DSP Performance Targets, and as set out in the Employer's Su Principal Contractor or Project Teams to ensure that job opportunities
External En	External Engagement	 Build connections with key partners to enhance the design and outcom In line with agreed Project Stakeholder and Community Engagement P such as: Community workshops to review and evaluate technical design and p Undertake further community engagement on the developed design a

design and performance specifications.

quirements, updating technical documents as part of design each RIBA Stage.

review design and ensure that all operational requirements are

ability Requirements for Contractors, to reflect agreed performance including Strip-out/Demolition and Main Contractors). This should and performance requirements during RIBA Stage 5, 6 and 7.

ty Coordinator to lead the review of tender responses and nting tender response of sustainability requirements.

oply chain on sustainable procurement options of building materials struction and align to the Materials Principles (Appendix C).

endering platform, ensure alignment of all procurement activities

grees and confirms deliverability, measurement and monitoring ustainability Requirements for Contractors.

are advertised via the Local Employment Service.

nes created.

Plan, undertake appropriate community engagement activities

provide recommendations as required

Table continues on the following page...

... Table continued from previous page

	 Sustainability Coordinator with input from the Design Team to close or
	 Design Team to ensure Participate in any Value Engineering exercises sustainability requirements and the operation of the building.
	 Input from Asset and Operational team to review design and ensure th
Monitoring and Sign Off	 Design Team members to produce design stage drawings and specific performance requirements are being achieved.
	 Sustainability Coordinator to review Stage 4 scheme and submit DSP of DSP Gateway 2 tracker confirming fixed project sustainability targe and sign off.

Lead Responsibility	Example Deliverables
Sustainability Coordinator	 BREEAM, WELL, HQM Design Stage Assessment and Certificate Update Whole Life Carbon Assessment and Report* Update Design for Performance Assessment and Report*
MEP Consultant	 Update BIM Model*
Landscape	 Landscape Habitat Management Plan*
Air Quality	 Air Quality Construction Management Plan (CMP) Air Quality Design Development Report
Principal Contractor	 Monitoring Plan for the ESP

out of design stage certification.

do to ensure that it does not have a detrimental effect on the

hat all operational requirements are reflected in the design. cations demonstrating how project sustainability targets and

^D Tracker Gateway 5 progress against the DSP targets. Submission jets and performance requirements by the team for internal review

RIBA Stage 5: Manufacturing and Construction

Sustainability Objective: Report quarterly against the performance requirements during strip out/demolition and construction to ensure the development is realised in accordance with the intended design specifications and additional value is generated through the construction process.

Responsible Construction Practices	 Demolition/Strip-out Contractor to ensure demolition or strip-out a materials as possible at the highest value feasible. Principal Contractor to adopt responsible construction practices in (DSP Tracker Gateway 5 for project). 	ictiv 1 line
Engagement	 Principal Contractor to continue to explore further opportunities to with suppliers. Principal Contractor to engage with the supply chain to discuss the Estate's purpose. Principal Contractor with support from The Crown Estate as approximate and the supply chain to discuss the support from The Crown Estate as approximate and the support from The Crown Estate as approximate and the support from The Crown Estate as approximate and the support from The Crown Estate and the support from The Crown Estate as approximate and the support from The Crown Estate as approximate and the support from The Crown Estate as approximate and the support from The Crown Estate and the support from The Crown Estate as approximate and the support from The Crown Estate and the su) opt e im pria
External Engagement	 Ongoing engagement with community to update on the progress distance 	urin
Monitoring and Reporting	 Sustainability Coordinator to undertake appropriate site inspection and to provide quarterly reporting as a minimum setting out performance against project sustainability targets and performance requirements. Principal Contractor to provide and prepare evidence demonstrating progress and performance against project DSP targets. 	•
Handover	 Operations Team to procure service provider contracts. Operations/Asset team to witness commissioning as required. Review with Operations and Asset Teams, ongoing management and monitoring requirements to maintain best practice in operation. Principal Contractor and Project Teams to provide on- boarding for Operations Team and service partners with sustainability briefing. 	•

vities are conducted in a responsible manner to recover as many

ne with project sustainability targets and performance requirements

timise sustainable materials procurement in collaboration

nportance of the ESP and how it relates to The Crown

ate to engage with the Local Authority on the delivery of the ESP.

ng construction.

Principal Contractor to ensure completion of construction stage/as built certification (e.g. BREEAM) ensuring the right evidence is being collected and maintained.

Accessibility Consultant to carry out onsite inspection to ensure compliance with the Inclusive Design Strategy and agreed recommendations from design stages.

Project Teams and Operations Team to agree scheduling of training events and ensure that all relevant FM personnel attend training sessions provided by the design team and Principal Contractor.

Operations Team to arrange an internal sustainability briefing meeting for relevant stakeholders.

Begin the process of site handover between the Operations Team and Principal Contractor, following a formal handover procedure.

Lead Responsibility	Example Deliverables
Sustainability Coordinator	 BREEAM, WELL, HQM pre-assessments and report Quarterly updates of the DSP Proforma (Gateways 5 and 6) Quarterly updates to the WLC model to reflect design changes and end
Principal Contractor	 CCS certificate Procurement plan outlining how materials will be procured in line with the Employer's Requirements and Sustainable Procurement Plan. Monthly reports on employment and skills contributions Quarterly reporting against DSP targets Record Information for Soft Landings Report demonstrating how the air quality construction management plan
MEP Consultant	 Metering Strategy* BIM Model updated as appropriate to reflect as-built information throu Quarterly updates to the energy model (incl. NABERS modelling) to refremain attainable.*
Ecologist	 Landscape Habitat Management Plan*

nsure that targets remain attainable*

the requirements set out within the Principal Contractor's

blan (CMP) has been implemented

ough physically tagging materials and components* eflect final equipment selections and ensure that targets

RIBA Stage 6: Handover

Sustainability Objective: Enable the Operation and Asset teams to operate the building sustainably and close out any design or construction related targets prior to practical completion.

	Handover and Training	 Project manager to provide relevant documentation to Operation and A Operations Team to identify ongoing maintenance and monitoring requincluding but not limited to: Operational energy (including in-use performance ratings such as NA Landscaping (including biodiversity) Sustainable Travel and mobility Indoor environmental quality (e.g. indoor air quality and thermal comfortion - Accessibility Customer feedback Operations Team to ensure all commissioning to be undertaken in line with Eramework (Appendix D)
		 Operations Team to initiate 'Day-1' Mobilisation Plan. Project Team to provide Operation and Asset teams and tenant with traccould include usability demonstrations and workshops or the developm
	Lessons Learned	 The Crown Estate to undertake Lessons Learned with Design Team, Provide the Sustainability Coordinator to review performance against Gatew - Principal Contractor to review the effectiveness of ESP with the Sustainator to identify areas for improvement
	Customer Engagement	 Customer and Leasing Teams to ensure that the design intent and ong communicated and provided to all prospective customers. Customer and Leasing Teams to incorporate sustainability clauses into
Man	Monitoring, Review and Sign off	 Sustainability Coordinator to ensure project sustainability targets and Completion (excluding any ongoing/in-use sustainability targets and performance as part of submission of DSP price auditable data against each Performance Requirement. Sustainably Coordinator to prepare a complete Gateway 6 Proforma for the properties of the prope

Asset teams relating to sustainability (e.g. As-built EPCs). uirements of asset performance against in-use sustainability targets

ABERS), water and waste

fort)

vith The Crown Estate's Technical Handbook and Soft Landings

raining on operating the building and equipment sustainably, which ment of Personal Emergency Access Plans.

Principal Contractor, and Asset/Operations Team, which includes: way 2 sustainability targets and performance requirements stainability Coordinator, The Crown Estate, partners and Principal

going operational commitments on sustainability are clearly

to the tenant lease agreements including fit out requirements.

I performance requirements are completed in advance of Practical erformance requirements).

ior to Practical Completion, complete, accurate, verifiable and

for project at Practical Completion.

Lead Responsibility	Example Deliverables
Sustainability Coordinator	 Completed DSP Tracker for Gateway 6 at Practical Completion As-built Whole Life Carbon model and report*
Principal Contractor	 Building User Guide and L&M/ O&M Documentation Operations Team handover pack with details of measures and maintenance in Independent audit of the metering strategy, BMS & EMS set out in The Crow
Operations Team	 Renewable energy procurement contract
MEP Consultant	 Handover BIM Model including property management training As-built Operational Energy model and report* EPC certificate (through independent assessors/ auditors)
Air Quality Consultant	 Post construction indoor air quality performance in line with applicable asse
Access Consultant	 Access Guide to the building or location (or update existing one) to promote the new space or improvements made.
Inclusive Design Consultant	 Inclusive Design Guide for the building to support maintenance of an inclusive environment through active management.
Acoustic Consultant	 Post construction acoustic testing

intenance requirements in The Crown Estate's Technical Handbook (Appendix D)
icable assessment methods
o promote and communicate
f an inclusive

RIBA Stage 7: Use

Sustainability Objective: During operation create value by maintaining a high standard of sustainability performance throughout the asset lifecycle.

	Soft Landings and Handover	 Operations Team to attend Aftercare Plan meetings with the Project M and Defects.
		 Operations Team to undertake seasonal commissioning at appropriate
		 Project Team to initiate Mobilisation Plan close-out meetings with Operation
		 Operations Team to attend a Lessons Learned workshop with the design - The performance of the building against the operational performance - Known performance issues with the building. - Suggested measures to improve the performance of future developm
		 Operations Team to ensure ongoing use and upkeep of BIM Model.
	Building Operations and Maintenance	 The Operations Team to re-evaluate resourcing requirements and technologies and technologies and technologies are as a second structure of the second structure o
		 The Operations Team to monitor and measure performance of operation use DSP performance targets.
		 Where targets are not being met, the Operations Team should seek to i to achieve targets.
		 The Asset and Operations Team to ensure that any future refurbishmen appropriate, disassembly of the different building layer.
		 The Operations Team to implement identified circular procurement rou
	Engagement	 The Asset Teams to ensure ongoing and consistent engagement with constrained Teams to undertake as agreed. Post Occupancy Evaluations
		 Operations ream to undertake as agreed, Post Occupancy Evaluations of building performance.
	Monitoring	 The Operations Team to assess outcomes against objectives and report The Crown Estate.
		 The Operations Team undertakes continuous monitoring of performance requirements identified at RIBA Stage 5/6 and in line with the SBU Sur-

Anager and Principal Contractor to review and close out Snagging

- periods.
- erations Team.
- gn team. Discussion shall include, but is not limited to: e targets developed during the design stage.
- nents.

nnical specialist input with The Crown Estate to ensure the ongoing

onal building performance (e.g. energy, water) against targeted in-

identify remedial measures to optimise sustainability performance

ent works are undertaken to ensure ongoing adaptability and where

utes for new or replacement materials and components.

customers on building performance and sustainability features. to understand customer feedback and experience

ort any good practice and further opportunities back to

nce against in-use sustainability targets and performance ustainability Action Plans (SAP).

Lead Responsibility	Example Deliverables	
The Crown Estate	 Metering strategy review* BMS & EMS performance reviews* 	
Ecologist	 Biodiversity net gain assessment* 	
Operations Team	 Align with the building-specific targets as set out in the portfolio Susta - Monitoring of operational Environment Performance Data (energy, wa - Ongoing maintaining of in-use performance or relevant building certif - Undertaking as agreed with The Crown Estate, Post Occupancy Eval 	
	 Support and input in managing ongoing S106 obligations such as trav 	
	 Metering strategy review* 	
	 BMS & EMS performance reviews 	

tainability Action Plans (SAPs), including: vater and waste) tifications including NABERS and EPCs luations

vel plans as agreed

5. Appendices and Glossary

Appendix A: Whole Life Carbon

Embodied and Whole-Life Carbon

This appendix sets out The Crown Estate's Whole Life Carbon Assessment (WLCA) framework. It provides guidance for carrying out an assessment for The Crown Estate's developments to ensure consistency. The following sections outline the assessment methodology and scope, reporting requirements, baseline definition, software requirements, roles and responsibilities.

Assessment methodology

Life-Cycle Assessments must comply with RICS Professional Standard <u>"Whole life carbon assessment</u> for the built environment", 2nd edition, September 2023 (RICS PS).

LCA to EN15978 & EN17472 & RICS professional standard		ICMS 3		
[A0]	Pre-construction stage	A 1	Acquisition	
[A1-A3]	Product stage			
[A4]	Transport	C 2	Construction	
[A5]	Construction process			
[B4]	Replacement			
[B5]	Refurbishment	R 3	Renewal	
[B1]	In use			
[B2] - cleaning only	Maintenance - cleaning			
[B6]	Operational energy	014	Operation	Life Cycle Carbon Emissions (LCCE)
[B7]	Operational water	014		
[B8]	Other operational			
[B2] - other than cleaning	Maintenance - other	MIS	Maintananca	
[B3]	Repair		Maintenance	
[C1]	Deconstruction/demolition			
[C2]	Transport		End of life	
[C3]	Waste processing			
[C4]	Disposal			

	D				Be
--	---	--	--	--	----

Terminology	ŀ
Upfront Carbon	ι
Embodied Carbon Over the Life Cycle	E
Whole-Life Carbon	V

Figure 2. LCA Modules

nefits and loads beyond the system bounrdary		Externalities	Externalities	
--	--	---------------	---------------	--

Acronym	Modules
JC	AO-A5 covering all impacts up to the completion of the project, but excluding any sequestered biogenic carbon stored within construction products incorporated into the asset, which is reported separately.
EC	A0-A5 + B1-B5 + C1-C4, all material-related impacts.
WLC	A0-A5 + B1-B5 + C1-C4 + B6-B7 + B8. This is the system boundary for a WLCA over the asset's life cycle. However, a full assessment will also include module D, which is reported separately.

Software and BIM

The WLC assessors should ensure that software used for WLCAs complies with the RICS PS. The chosen software should also be able to fulfil BREEAM requirements regarding LCA assessments. Projects using BIM at any stage should assess no later than Stage 3 the compatibility.

Projects using BIM at any stage should assess no later than Stage 3 the compatibility between the chosen software and BIM software. Design Teams should agree with The Crown Estate whether BIM can be efficiently used as a source of quantities and material specifications to inform the WLCA.

Reporting requirements

To allow for clarity and transparency, the mandatory reporting requirements set in RICS PS Reporting Template should be followed. In particular, a clear brief of the life cycle stages, building elements included in the study and detailed description of all assumptions made, scenarios, and information data source must be provided. In addition to reporting the output per stage, the report should also include the upfront carbon, embodied carbon and whole life carbon figures separately. The carbon emissions associated with stages B6-B7, B8 & D and carbon sequestration should also be reported separately.

Metrics

- Area: Both Gross Internal Area and the Net Internal Area (NIA) of the project should be reported, in m2.
- Carbon: Absolute metrics should be disclosed either in tCO2e or kgCO2e. Intensity metrics should be expressed in kgCO2e / m2 GIA.

Results

All reports should be complemented with an Excel file disclosing calculation result aligned with RICS PS.

Baseline

The LCA Baseline should be defined in the end of Stage 2 (or beginning of Stage 3) with information from Stage 1 and 2 Cost plans and default values from RICS PS:

Other building components: The rest of building components are often only sufficiently defined for Life Cycle Assessment at the end of Stage 2. Therefore, the baseline for the rest of the building components should be completed with information from the Stage 2 Cost Plan.

In some projects, Stage 1 information may be sufficiently detailed to define the Baseline at Stage 1, providing earlier opportunities to capture and reduce Embodied Carbon. In these cases, the Design Team can choose to define the full baseline with Stage 1 information.

Appendix B: Circular Economy

The circular economy is an alternative approach to the traditional 'take > make > use > dispose' model whereby raw materials are collected, transformed into products, used, and then discarded as waste. As well as resulting in value being lost at product end-of-life, this approach also produces a range of negative externalities that include resource scarcity, illegal waste practices, human health concerns from hazardous waste, unsustainable levels of water extraction, rising carbon emissions, and widespread ecosystem pollution. In the circular economy the value of products and materials are retained, eliminating the

In the circular economy the value of products and materials are retained, eliminating the production of waste and reducing embodied carbon in construction projects. The circular economy follows the waste mitigation hierarchy which orders approaches from most to least impactful considering retention of resource value and waste reduction, as shown in the figure below.

Circular Economy Design Approach	Principles
Site Evalutation Prior to demolition consider the existing materials and products within the site to identify opportunities for reuse.	Pre-development Pre-demolition audit to be carried out by the Demolition Contropportunities for reuse and recycling. See Demolition Waste s
Strategic Brief Understand if and how commercial or other needs can be met with the existing asset's full or partial reuse.	Evaluating layers Engineering Team to evaluate the lifespan of existing structur their longevity. Avoid new construction Engineering and External Design Teams to determine which e could be retained.
Circular Design Apply circular and efficient resource management to the design of new developments. Early considerations and adoption into design typically leads to more impactful and economically viable approaches.	 Design for more circular materials External Design Team to utilise material efficiency, reuse, refudesign. Design for maintainability Engineering and External Design Teams to design to improve systems, and components to extend their useful life. Design for longevity Engineering and External Design Teams to design to improve systems, and components to avoid unnecessary damage or necessary for flexibility Engineering and External Design Teams to design to accommiss to meet occupant needs.
Circular Procurement Procure materials with circular economy principles to avoid or reduce negative environmental impacts and waste generation.	Sustainability procurement policy Contractor to create a Sustainable Procurement Policy, this we benchmarks expected to be met by construction partners and Product-as-a-Service (PaaS) Contractor and Operations to review a lease-based procurement retain ownership of their building materials during use. This we products for reuse, repair and disassembly, increasing their re- enables the recovery and redeployment of building materials for Renting and leasing Contractor and Operations to review renting and leasing opport material is used but ownership is retained by a third-party.

tractor to understand section below.

ure layers to understand

existing site structures

urbished or recycled materials in	Design for adaptability Engineering and External Design Teams to design to future-proof the building to accommodate changing use scenarios and needs.
the ease of maintaining building,	Engineering and External Design Teams to design to facilitate the deconstruction of the building while retaining the value of constituent elements.
the durability of the building, eed for replacement.	Engineering and External Design Teams to design to enable recycling of materials at end- of-life, avoiding the need for downcycling.
odate regular changes in the short-	
	Take-back arrangements
vould typically outline the d the entire supply chain.	Contractor and Operations to review take-back opportunities. These are agreements that manufacturers or another third-party "take back" leftover materials, packaging materials, and/or products that are at the end of their lives.
ent approach where the suppliers vill incentivise suppliers to design esidual value at end of use. This then back into the supply chain.	Second-life materials and components Contractor to procure reused materials and components or materials with recycled content. Just-in-time procurement Contractor to align procurement from suppliers directly with construction programme
ortunities whereby the product or	to avoid wastage.

Circular Economy Design Approach	Principles
Circular Construction Construct buildings in a way that minimises waste products.	 Offsite construction Contractor to complete elements of the building works in a fact waste and recycle pre-consumer materials in production. Reuse Contractor to use second-life materials for the temporary work Waste management Contractor to send back unused materials to suppliers and wattake-back or recycling. Disassembly sequencing Contractor to plan for disassembly sequence to time and cost Industry 4.0 Contractor to review digitalisation of construction industry an printing, material passports, blockchain and Artificial Intelligent
Circular Operation Reduce the quantity of waste generated in operations and ensuring material value is retained.	 Raising awareness Operations to raise awareness with building occupants on the materials being consumed and best practice to manage those Product leasing Operations to review product leasing as a model by which producing downtime and the overall count of each. Maintenance and repair Operations to maintain and repair to preserve the condition of Selling and donating Operations to sell or donate products and materials no longer existing form. This can be done through reuse brokers or direct Upcycling Operations to upcycle, this is the process of taking products a components or re-engineering their look and function. Return to manufacturer Operations to return products and materials to the manufacture rid does not match what was advertised or is simply at end of life

actory setting. Presents the opportunity to reduce

rks or site installation.

aste streams segregated and stored for reuse,

t and improve material recovery at end of life.

nd the automation of processes, includes 3D ence.

e benefits of reducing the volume of products and e that are.

oducts are only used when they are needed, thereby

f products.

r needed thereby maintaining their life in their ctly to businesses and charities.

and adding life and value to them by replacing

urer to be re-engineered or recycled. Some if the product is faulty, broken, damaged, unusable, e.

Demolition waste

Follow the waste hierarchy for demolition of the existing building as follows:

- A. Reduce the amount of materials that need to be disposed of, by keeping as much material as possible in-situ; this will also reduce the embodied carbon of the proposed building. When major elements of the building are not retained, justify this decision.
- B. Any item that cannot be retained in-situ but could be reused / repaired and used on site in original format or after repair should be considered to be used on site. The technical feasibility and associated carbon emission with any repair process should be considered. When major elements of the building are not reused, justify this decision.
- C. Rehome the remaining of the products in their original format where possible through intermediary companies working in this area. Report against the proposed destination of the existing materials to show this step is well thought through and considered.
- D. The recycling and recovery of materials in waste management facility should be monitored.

The percentage of the above categories should be calculated and reported separately. Refer to DSP targets for diversion from landfill and recycling.

To allow the principles of circular economy to be implemented, it is important that sufficient time is allocated for carrying out the pre-demolition audit, and for the building to be carefully stripped out so that materials can be recovered and reused where possible.

Pre-demolition audit:

To facilitate the above process a pre-demolition audit should be prepared. The pre-demolition audit should:

- Be carried out at stages 1-2 and prior to strip out to be able to inform the design.
- The audit should be carried out by a competent person outside the design team and reviewed and commented closely by the QS team and the architects. Local experience on waste and recycling options is essential to carry out this study.
- The audit should identify and quantify the key materials present on site. As a minimum consider all the followings materials listed in the table on page 45, including also all MEP plant units.
- For each material or material category, the potential of whether it can be reused on site or off-site in the original format should be reported in the audit document, including any challenges predicted. This should guide the design to consider materials for reuse and set targets for waste management.
- Local reprocesses or recyclers for recycling of materials should be identified.
- The report should include the predicted recycling rate for all key materials.
- Propose reuse targets and predict the average landfill diversion rate.

The report should be discussed in a workshop and a plan for demolition waste should be prepared early in the design.

Key group	Examples
Bricks	Bricks
Concrete	Pipes, kerb stones, paving slabs, concrete rubble, precast and in situ
Insulation	Glass fibre, mineral wool, foamed plastic
Packaging	Paint pots, pallets, cardboard, cable drums, wrapping bands, polythene sheets
Timber	Softwood, hardwood, board products such as plywood, chipboard, medium density fibreboard (MDF)
Electrical and electronic equipment	Electrical and electronic TVs, fridges, air-conditioning units, lamps equipment
Canteen or office	Office waste, canteen waste, vegetation
Oils	Hydraulic oil, engine oil, lubricating oil
Asphalt and tar	Bitumen, coal tars, asphalt
Tiles and ceramics	Ceramic tiles, clay roof tiles, ceramic, sanitary ware
Inert	Mixed rubble/excavation material, glass
Metals	Radiators, cables, wires, bars, sheet
Gypsum	Plasterboard, plaster, fibre cement sheets
Binders	Render, cement, mortar
Plastics	Pipes, cladding, frames, non-packaging sheet
Furniture	Tables, chairs, desks, sofas
Soils	Soils, clays, sand, gravel, natural stone
Liquids	Non-hazardous paints, thinners, timber treatments
Hazardous	Defined in the Hazardous Waste List (HWL) of the European Waste Catalogue (EWC)
Floor coverings (soft)	Carpets, vinyl flooring
Architectural features	Roof tiles, reclaimed bricks, fireplaces
Mixed/other	Efforts should be made to categorise waste into the above categories wherever possible

Appendix C: Material Principles

The Crown Estate is committed to the sustainable and responsible use of materials. This policy sets out the Key Principles and specific commitments to be followed by our supply chain.

Key Principles:

We aim to select materials that are:

Safe	Avoiding worker risks such as child/bonded labour and unsafe with relevant legislation.
Healthy	Supporting the health of both building occupants and the work decommission them.
Low impact	Avoiding habitat destruction and damage to the natural enviror production.
Non-polluting	Avoiding release of harmful substances that damage the surrow water sources) as a result of material extraction, processing, or
Low-emitting	Minimising CO2 and other greenhouse gas emissions resulting emissions released from mining and processing.
Traceable	With high visibility and/or traceability through the supply chain
Circular	Minimising resource use and selecting materials that are durab renewable.

working conditions in the supply chain

kers who install, maintain and

onment as a result of material sourcing and

ounding environment (including the air and or use in operation.

from material sourcing, including

ble, reusable, recyclable or rapidly

We will:

- Promote use of sustainable products with industry recognised third party accredited certifications¹, and products manufactured by suppliers with ISO 14001 or BES 6001 certified management systems.
- Follow specific requirement for all projects:
- 100% of timber² to be from certified source, e.g. FSC or equivalent³
- Follow specific requirement for our Major and Moderate projects:
- 100% of blockwork BES 6001 Good
- 100% of structural steel ISO 14001, ISO 18001, OHAS 9001
- 100% of reinforcing steel BES 6001 Good
- 100% of glass ISO 14001, ISO 18001, OHAS 9001
- 100% of plasterboard ISO 14001, ISO 18001, OHAS 9001
- 100% of concrete BES 6001 Good.
- Stone should be sourced responsibly, demonstrating accreditation to a recognised environmental product declaration (EPD)⁴ or in accordance with other BREEAM evidencing requirements specified under Mat 02⁵.
- Use materials with low VOC content, where appropriate. For Moderate and Major projects, this should be in accordance with the relevant sustainability rating scheme where applicable (refer to Targeted Performance section).
- Use materials with a high percentage recycled content. Specific requirements for our Major and Moderate projects where applicable:
- 50% Blockwork recycled content (% by weight)
- 80% Plasterboard recycled content (% by weight)
- 70% Chipboard recycled content (% by weight)
- 20% Concrete paving slabs/blocks and reconstituted stone paving blocks recycled content (% by weight).

- Follow guidance from building assessment methodologies, labelling schemes and databases to determine the project strategy for each material type to be used and the requirements included in the project preliminaries¹. Where identifying lower impact options the performance requirements may preclude their use. The availability of suitable materials will affect the project strategy and it may not be possible to avoid every substance. A strategy of what can reasonably be achieved should be adopted.
- In all cases, when Asbestos is found to be present in an asset that is to undergo refurbishment or re-development, endeavour to ensure that all asbestos containing materials are removed during these works. This may be waived only in the following circumstance:
- Sound justification can be made (and approved by the head of HSSEW) proving that it is of materially lower risk to leave in situ
- The material is fully encapsulated
- There are adequate control measures in place
- The correct records have been stored and are available on request

This policy is supported by The Crown Estate Materials List.

¹Schemes include: BREEAM, WELL, LEED, EU Ecolabel. Blue Angel, Nordic Ecolabel, Nature Plus, GUT, Emicode, CARB, French Decret, Declare, Cradle to Cradle, Pharos, Quartz, Healthy Materials Lab, Health Product Declaration; Environmental Product Declaration; GreenScreen.

²This applies to all timber used within the project (i.e. site timber used in the construction process and timber materials installed within the building elements). ³Timber to be procured in line with UK Government's Central Point of Expertise on Timber (CPET) report www.cpet.org.uk. ⁴Credentials include BES 6001, the Stone Federation Ethical Standards Register, EPD scheme according to the ISO 14025 and BS EN 15804 and EMAS - EU Eco-Management and Audit Scheme, BS EN ISO 9001, BS EN ISO 14001 and BS EN ISO 18001. ⁵BREEAM SD5078: BREEAM UK New Construction 2018 2.0

Appendix D: The Crown Estate's Supporting Documents

This table sets out The Crown Estate's key documents that support the implementation of the DSP. They are updated from time to time, and copies are available on request.

Deliverables	Currenting Decurrent	Commonto	Appl	Applicable RIBA stages								
Deliverables	Supporting Document	Comments	0	1	2	3	4	5	6	7		
NABERS Modelling and Report		Section 03, Appendix C and D		х	x	х	х	х	х	Х		
Metering Strategy		Section 13, Appendix D			х	х	х	х	х			
BIM Model	Section 11, Appendix D				х	х	х	х	х			
BMS & EMS	The Crown Estate's Technical Handbook	Section 12, Appendix D			x	х	х	х	х			
Crown Estate Commissioning Management and commissioning Services scopes of services		Section 15, Appendix D						x	х			
Utilities Strategy		Section 14, Appendix D			х	х	х	х	х			
Ecology and Landscape	 The Crown Estate's Strategic Ecology documents; London Phase 1 Habitat Survey 2023 (updated every 2 years) Value Matrix 	Value Matrix applicable to all developments Strategic documents in relation to London developments		Х	x	x	х	Х				
Inclusive design strategy	Inclusive Design Brief				X	x	х	Х				
Employment Skills Plan	Employment and Skills Plan Template				X	х	х	Х	х			

Appendix E: Roles and Responsibilities

All team members involved in a development project have a part to play in achieving the selected sustainability performance requirements. The team is expected to work together collaboratively and take shared responsibility for the successful delivery of a sustainable scheme. The key roles performed by the different members of the design team are summarised below.

Full duties and specific consultant responsibilities will be confirmed by The Crown Estate on a project-by-project basis.

Development Team (The Crown Estate) Sustainability Coordinator	Development has overall responsibility for delivering our schemes. They work closely with the planning authorities and manage development costs. They will also work with the sustainability coordinator to ensure the schemes are delivering against the performance requirements. The Sustainability Coordinator takes ownership for co-ordinating	Engineering Team (The Crown Estate)	The Engineering Team is responsible for ensuring all Crown Estate developments are following the best-in-class standards for technology use, construction methodologies, energy efficiency and carbon reduction. They are available to advise the development and operations teams at every stage of a project. They will also aim to ensure that all sustainability and NZC goals of The Crown Estate a				
(External)	the implementation and monitoring of the DSP across a project. They are responsible for liaising with the development team, external design team and contractor to ensure that the DSP Tracker is being actioned and risks are being managed. At the end of each work stage, the sustainability coordinator will work with the development team to report against progress to date.	Operations and Asset Teams (The Crown Estate)	The operations team ensures that the proposed design will allow them to run the building as it was designed. They stay involved in every scheme throughout the soft landings phase, ensuring that we optimise its operational performance, which occurs during the commissioning / post-construction stage.				
It is likely that throughout the design and construction phase, the appointed sustainability consultant will be the sustainability coordinator. However, the position can be held by any individual from The Crown Estate's quatainability or development toom, the			The team is responsible for training the main operational contractors. This includes training the Technical Services Manager who is responsible for the upkeep of the building services.				
	external design team or the contractor. It must be made clear who the sustainability coordinator is at each stage of the development and captured in the DSP Tracker.	Design Team (External)	Our consultants (including sustainability consultants) are responsible for designing and delivering a scheme ensuring compliance with the scheme-specific DSP Tracker.				
Urban Sustainability Team (The Crown Estate)	The Urban Sustainability Team is responsible for advising The Crown Estate on sustainability standards and keeping the DSP in line with best standards. The team will ensure the Performance Guidance is ambitious yet achievable.	Contractor and Supply Chain (External)	Contractors are responsible for delivering the scheme in accordance with the intended design as well as providing handover documentation and occupier training to allow for ongoing successful management of the building in line with sustainability targets.				
	They are available to advise, support and challenge the development and operations teams when required on projects.	Customer and Leasing Teams (The Crown Estate and External)	Leasing work with customers to agree on sustainability objectives through the leasing process. Leasing managers also help our customers with their sustainability challenges. They draw upon the expertise of the sustainability team to do this.				

Glossary

A1-A5

Life cycle stages of a building are split into modules from A1-A5. Stages relate to the materials production and construction stages of a building.

AIM Requirements

Asset Information Modelling Requirements

Air Quality Assessment

An assessment to establish the baseline air quality on a site, to inform air pollution mitigation measures needed to prevent harm to either the environment or activity.

Biodiversity net gain (BNG)

Overall increase in habitat and/ or quality of a natural environment. Provides targeted improvements of biodiversity and societal benefits.

BREEAM

Building Research Establishment Environmental Assessment Method is a sustainability assessment method applied to the design, specification, construction and operation phases of different types of building.

Building Information Modelling (BIM)

The holistic process of creating and managing information for a built asset. Based on an intelligent model and enabled by a cloud platform, BIM integrates structured, multi-disciplinary data to produce a digital representation of an asset across its lifecycle.

Building Management System (BMS)

A computer-based system installed to control and monitor a building's mechanical and electrical equipment such as ventilation, lighting, energy, fire systems, and security systems. It consists of software and hardware.

CIRIA

Construction Industry Research and Information Association

Circular economy

Ensures waste is designed out, materials are reused and natural systems are regenerated. Circular economy principles include designing for longevity, adaptability, standardisation etc.

CITB

Construction Industry Training Board

Climate resilience

Climate resilience is the ability to anticipate, prepare for and respond to hazardous events, trends, or disturbances related to climate.

Community initiative/group/organisation

An initiative/group/organisation which is not-for-profit and led by members of the community for the benefit of the community.

Community Review Panel

An independent panel which meets regularly to discuss issues relating to development and plays an advisory role to the council in relation to the planning process.

Considerate Constructors Scheme (CCS)

An independently managed, not-for-profit organisation that works side-by-side with the construction industry and the public to raise standards and build trust in construction.

Embodied carbon

The greenhouse gas emissions emitted through the life cycle stages of a building. These include building material extraction and processing, transportation, construction, maintenance stages and final demolition of a building.

Energy intensity

The energy consumption of our buildings expressed as kWh/m2.

Energy Performance Certificates (EPCs)

An assessment of a building's potential energy efficiency graded from A to G. An EPC is required when buildings are built, sold or let.

Energy Security

The uninterrupted availability of energy sources at an affordable price.

Environmental Performance Data

Operational data relating to the environmental performance of an asset, including where applicable, energy, water, waste, indoor air quality and biodiversity. Data should be complete (100% coverage); Timely (ability to monitor Day +1); Relevant (attributable to customer/use); Accurate (verifiable and from source).

Environmental Product Declarations (EPDs)

An independently verified and registered document that communicates transparent and comparable information about the life cycle environmental impact of a product.

Ethical procurement

Taking into account ESG criteria including environmental and social impacts and labour practices when selecting suppliers.

FTE

Full Time Equivalent

GIA

Gross Internal Area

Greater London Authority (GLA)

To devolved regional governance body of Greater London.

Green jobs/ skills

Jobs and skills that are needed to enable the transition to a low-carbon future, with more focus on the those jobs and skills which have recently emerged or of which there are a shortage.

Home Quality Mark (HQM)

The HQM is a sustainability standard for new homes in the UK and serves as a mark of assurance for homeowners and tenants.

Life Cycle Assessment

The systematic evaluation of multiple environmental impacts of a product, activity, or process over its entire life cycle. It follows the standard ISO 14044.

Local Needs Assessment

An analysis of demographic and socioeconomic data relating to the area local to the development site, and series of community engagement activities, conducted to create an understanding of socio-economic issues and needs of the local community and the most effective methods of addressing these.

Marginalised

When a group of people are relegated to the fringes or periphery of society where they experience social disadvantage due to having limited influence in comparison to those groups who remain central to the societal structure.

NABERS UK

NABERS UK is an operational energy rating system adopted from NABERS in Australia, applicable currently to commercial office buildings.

NIA

Net Internal Area

Participatory approach

Stakeholders – those impacted by the subject of engagement – are facilitated and empowered to be fully involved in the process, through the approach to consultation or the environment which it is held in.

Passive Design

Passive design is a method of design and construction that uses natural resources and site conditions to minimise energy use. Examples of passive design include airtight envelopes, solar orientation and highperformance windows.

Post Occupancy Evaluations (PoE)

The process of obtaining feedback on a building's performance in use after it has been built and occupied.

Sustainability Action Plan (SAP)

The Crown Estate document setting out plans and targets for buildings in operation.

SME

Small and Medium Enterprises

Social cohesion

Building shared values and sense of belonging in a community, reducing divisions and disparities amongst sub-groups to promote upward mobility and better quality of life.

Urban Greening Factor

A planning tool to improve the provision of Green Infrastructure and increase the level of greening in use.

VCSE

Voluntary, Community and Social Enterprise organisations

VOC

Volatile Organic Compound

WELL

A building ratings system focused on health and wellbeing.

Wild West End (WWE)

Partnership of neighbouring land owners in the West End, focusing on improving green spaces and their connectivity through working collaboratively.

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