

In Collaboration with JLL



Green Building Principles: The Action Plan for Net-Zero Carbon Buildings

ADDENDUM: REPORTING &
ACCOUNTABILITY GUIDANCE

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Introduction

As recognition of the urgency of climate action grows, countries, companies and cities have been making bold climate commitments. Many companies have made a commitment as part of the Race to Zero, the United Nations-backed global campaign to achieve net-zero carbon (NZC) by 2050 at the latest. Now that targets are set, companies must act. However, the sheer abundance of guidance on how to deliver a NZC real estate portfolio has caused many key stakeholders to view the process as overly complex. In response, the World Economic Forum, in collaboration with JLL, has developed the [Green Building Principles: The Action Plan for Net-Zero Carbon Buildings](#). The Principles and Action Plan distil the existing guidance and research to provide globally relevant and straightforward steps on implementation that are applicable to any organization's real estate footprint, regardless of industry sector or organization size.

The Principles and Action Plan provide a roadmap for net-zero carbon buildings to help companies ensure they meet their commitments and make

meaningful progress annually. Companies can formally adopt the Principles and pledge to decarbonize their real estate portfolios accordingly. To measure that action, the following reporting guidance is meant to aid companies in demonstrating their progress. This document, to be read in conjunction with the [Green Building Principles: The Action Plan for Net-Zero Carbon Buildings](#), details the reporting requirements for each Principle and signals which reporting practice is either mandatory, best practice or included for additional information.

Each Principle and reporting requirement comes with additional signposting guidance from existing external sources, as well as a reference to other common reporting requirements that may overlap. Reporting should not inhibit action. The goal of this guidance is to avoid that outcome and instead to simply provide a viable tool to benchmark progress. Where possible, this guidance signals where other commitment requirements are the same to help ease the administrative process. The document concludes with a list of signposting guidance.

Public disclosure guidance

The table below details the symbols included in this report to help indicate which information is required, which information is simply best practice and what is included for knowledge purposes.

The disclosure requirements will evolve and mature with the rest of the NZC buildings landscape and current best practices may transition to mandatory requirements in the long-term, in alignment with industry standards. At all times, companies should seek to provide the most complete, ambitious and relevant data to demonstrate meaningful action on the journey to NZC real estate.

Icon	Requirement type
	<p>Mandatory reporting metric required for public disclosures, demonstrating sufficient levels of detail and action to achieve targets.</p> <p>These reporting points are already common in other NZC and related climate disclosures; therefore, reporting on them should require minimum additional efforts. Companies can choose to include the mandatory reporting requirements in their annual report/sustainability report/financial report/environmental, social and governance (ESG) reporting/company website/or stand-alone NZC pathway document, as appropriate.</p>
	<p>Good practice reporting requirements that provide additional information on the organization's progress in implementing the principles. Organizations are encouraged to report on these metrics and include them in public disclosures. These are not required but are strongly encouraged.</p>
	<p>Additional guidance to support the provision of increased detail as stated in the Action Plan.</p>

Signposting

The signposting section at the end of this document provides details on existing guidance to help companies develop a robust reporting system for their NZC journey. Links are provided to recent documentation on the subject matter; however, the most recent iteration of these external documents should be sought as updates are made to NZC guidance across the industry regularly.



Reporting requirements

Each principle is outlined below with the associated reporting requirements, best practice reporting approaches and additional signposting guidance from existing external sources. There is also reference to other common reporting requirements that may overlap. These external sources are all linked in the signposting section at the end of this document.

Principle 1

Calculate a robust carbon footprint of your portfolio

Calculate a robust carbon footprint of your portfolio in the most recent representative year to inform targets.

Theme	Action	Type	Description	Signposting guidance	Alignment with existing commitments
Baseline year	Report baseline year		Set and report the year for which the baseline carbon footprint calculation has been made.		Carbon Disclosure Project (CDP) Dow Jones Sustainability Indices (DJSI) Global Real Estate Sustainability Benchmark (GRESB) – T1.1 Global Reporting Initiative (GRI) Task Force on Climate-related Financial Disclosures (TCFD) United Nations Principles for Responsible Investment (UNPRI)
	Explain baseline year selection		Reported values can include justification for why the year was selected as representative year.		
	Baseline year guidance		Ideally the most recent year for which there is full data should be selected; however, the baseline year should also be representative of business as usual. For example, the use of data from 2020 may be problematic for some companies due to COVID-19 pandemic disruptions.		

Report carbon footprint



Report on the carbon footprint of the company's real estate portfolio in the selected baseline year and in the reporting year in tonnes of CO₂e or kilograms of CO₂e.

DJSI
Greenhouse Gas Protocol (GHG Protocol)
GRI
Royal Institute of Chartered Surveyors (RICS) ICMS 3
Morgan Stanley Capital International (MSCI)
Sustainability Accounting Standards Board (SASB)
TCFD
UNPRI

GRESB – GH1, T1.1
European Public Real Estate Association (EPRA) Sustainability Best Practices Recommendations (sBPR)

Report carbon footprint boundaries



Companies adhering to these Principles must make clear what has been included and excluded in the calculated footprint of their portfolio. Inclusions and exclusions should be detailed in terms of:

– **Emission scopes:** It should be clear which scope 1, 2 and 3 carbon emissions have been included in the calculated footprint. Where scope 3 emissions are included, it should be clear which scope 3 categories have been included.

– **Elements of whole-life carbon for a building:** It should be clear which elements of the whole-life carbon for a building have been included. For further guidance, see Figure 3 in the Action Plan, RICS Elements of whole-life carbon for a building. As noted, it is not expected that A1-A5 be measured for existing buildings.

Better Building Partnership (BBP)
Science Based Targets Initiative (SBTi)
UK Green Building Council (UKGBC)
World Business Council for Sustainable Development (WBCSD)'s Building System Carbon Framework

DJSI
EPRA sBPR
GRESB – GH1, T1.1, DMA2.1
GHG Protocol
GRI
MSCI
SASB
TCFD
UNPRI

Report carbon footprint boundaries



Companies reporting on their carbon footprint are encouraged to include the real estate emissions of all emissions scopes, including material scope 3 categories where possible. For the elements of whole-life carbon, companies should look to cover as many elements of the building life cycle as possible, including operational and embodied carbon in their carbon footprint.

For new buildings, coverage of both construction stage A1-A5 and use stage carbon B1-B7 is expected, whereas for existing buildings, coverage of use stages B1 – B7 is expected at a minimum in the whole-life carbon assessment. For further guidance, see Figure 3 in the Action Plan, **RICS** Elements of whole-life carbon for a building.

Report carbon footprint boundaries



Commentary on the exclusion of certain assets is welcomed, along with commentary on a strategy for bringing excluded emissions into scope eventually when possible.

Provide a carbon footprint breakdown



Companies can provide a breakdown of emissions either by:

- **Emissions scope:** Real estate asset scope 1, 2 and 3 greenhouse gas emissions. Further clarity should be provided for scope 3 emissions with a breakdown per scope 3 category included.
- **Elements of whole-life carbon for a building:** Breakdown of emissions across elements or higher-level life stages (see Figure 3 of supporting Action Plan, **RICS** Elements of whole-life carbon for a building)
- **Operational/embodied carbon:** As an alternative to breaking down, by specific elements, the whole-life carbon for a building, companies may also consider providing a higher level breakdown of operational and embodied emissions. Operational emissions can be further broken down into stakeholder categories, for example by occupier and owner.

Provide methodology



The methodology used for calculating emissions can be reported alongside the declared footprint. While it is recognized that specific methodologies may differ depending on the nature of the organization, it is important to use a robust and appropriate methodology.

United Nations Environment Programme (UNEP) Net-Zero Asset Owners Alliance
GHG Protocol
SBTi
UKGBC
RICS
WBCSD

GRESB – HG1, T1.1, DMA2.1

Provide data commentary



Data commentary detailing where footprints have been calculated using actual or industry benchmarking data can be provided.

Where data is based on best practice and national industry benchmarks, the organization can comment on what is being done to improve data coverage where possible.

EPRA sBPR

Carbon footprint

Provide data commentary



It is sufficient to restrict data commentary to a relatively high-level data commentary, for example per scope/scope category or per element of the whole-life carbon framework.
It is recognized that data will rarely be entirely based on actual data and some estimations are likely to be used in setting out a company's carbon baseline.

Provide verification



Companies can disclose whether the values reported have been verified by recognized third parties or to recognized standards such as the AA1000 AccountAbility Principles (2018). Where values have been verified, companies should report verification body or standard involved.

SBTi
United Nations (UN): Race to Zero

GRESB – MR2, RP1
EPRA sBPR

Provide verification



Verification by an independent third party is recommended to provide the requisite level of assurance to substantiate communications and claims.

Principle 2

Set a target year

Set a target year for achieving net-zero carbon by 2050 at the latest and an interim target for reducing 50% of these emissions by 2030.

Theme	Action	Type	Description	Signposting guidance	Alignment with existing commitments
Target year	Report target year		Companies must report the target year planned for when the NZC commitment will be achieved for all real estate emissions.	SBTi	CDP DJSI SASB TCFD UNPRI
	Report target year		<p>The final target year for achieving NZC across the business must be no later than 2050, in alignment with the Race to Zero. However, it is highly encouraged that businesses set as early a target date as practically possible to achieve NZC emissions for their buildings.</p> <p>To determine the most appropriate NZC target year, it is strongly advised that a company first undertake a robust carbon footprint (see Principle 1) and trajectory setting exercise where projections to target year are explored taking into consideration growth plans, strategic shifts, grid decarbonization, and operational and embodied carbon.</p>	World Green Building Council (WorldGBC)	
Interim target year(s)	Report interim target		To avoid the postponement of meaningful action, the Action Plan requires companies to set at least one interim target for emissions reductions by at least 50% by 2030 at the latest, although additional interim targets may also be set.	UN: Race to Zero	

Interim target year(s)	Report interim target		<p>Interim targets in addition to the required 2030 and 2050 targets may be considered both in terms of percentage improvements to the net-zero commitment and any material sub-targets made for specific areas to become net-zero before the overarching target year.</p> <p>For example, companies may wish to set an earlier target date for scope 1 and 2 emissions reductions before reducing scope 3. In addition, targets could be considered by building management type. This could include reducing emissions for assets under direct management before leased assets. Alternatively, companies may consider prioritizing emissions reductions by either operational or embodied emissions and look to achieve NZC for operational emissions prior to embodied emissions.</p> <p>Percentage improvements may be set as annual year-on-year reduction targets or for milestone dates, for example at 5-year intervals, as long as they align with the overarching ambition for decarbonization.</p> <p>For new developments and major refurbishments, an interim target is realistic for the achievement of net-zero embodied carbon emissions.</p>	
Target verification	Provide verification		<p>Companies may disclose whether recognized verification bodies have assessed the targets reported or they have reported them according to recognized standards. Where targets have been verified, companies should list the verification body or standard involved.</p>	<p>SBTi UN: Race to Zero</p>
Target verification	Provide verification		<p>Companies publicly reporting on progress on fulfilling their commitments should be backed by verification. This provides assurance that goals are credible and consistent.</p>	

Action plan for achieving net-zero emissions	Report delivery strategy		Companies must report on their delivery strategy for achieving their NZC target pursuant to the NZC hierarchy and the strategy for meeting interim targets should be outlined.	WorldGBC BBP	CDP TCFD
	Report delivery strategy		The delivery strategy for achieving NZC should be a working document. Companies may not initially have a highly detailed plan of how the targets will be achieved. However, reporting can grow to become more detailed as the strategy evolves. Companies are encouraged to provide an appraisal of the actions undertaken and to share key lessons learned and future action plans.		
Report on progress	Report annual progress		Companies must annually report on the status of progress on interim and final year targets, detailing progress on projected targets, targets achieved and any revisions to targets. Substantial variations, changes or missed targets should be addressed.		
	Report annual progress		Within their annual progress report, companies can also consider including detail on benchmarking. It is recommended that companies compare performance against industry benchmarks in terms of energy use and carbon performance.	Carbon Risk Real Estate Monitor (CRREM) Built Environment Carbon Database International Living Future Institute (IFLI) Embodied Carbon in Construction Calculator (EC3) Urban Land Institute (ULI)	

Principle 3

Measure and record embodied carbon

Measure and record embodied carbon of new developments and major refurbishments.

Theme	Action	Type	Description	Signposting guidance	Alignment with existing commitments
Carbon footprint	Report definition		Companies must define and disclose what “major refurbishment” means to their organization.	GRESB	
	Report target year		<p>A new development is defined as the new construction of any asset type, including offices, homes, shopping centres and warehouses.</p> <p>A major refurbishment is typically considered as involving a floor area greater than 1,000m² (~10,700ft²) unless local or national regulations or guidance indicate otherwise. Alternatively, major refurbishments can be also defined in terms of the materials being replaced rather than the floor area. In the absence of an international definition of what constitutes a major refurbishment, it is recommended that the selection of a definition be made depending on what is most appropriate to the organization. Regardless of which definition is selected, this should be reported. Major refurbishment projects refer to buildings that were under construction at any time during the reporting year.</p>	WBCSD ICMS 3	
	Report carbon footprint		Report on the embodied carbon emissions associated with new developments and major refurbishments undertaken during the reporting year as a carbon intensity value. For example, as kilograms or tonnes of carbon emissions per floor area, kgCO ₂ e/m ² or kgCO ₂ e/ft ² . Calculations can be made using real, partial or industry benchmark data.	Global Alliance for Buildings and Construction (Global ABC)	CDP TCFD

Carbon footprint

Report carbon footprint



It is recommended that companies undertake a design phase assessment of embodied carbon. This ensures the assessment has the greatest potential to drive carbon reductions in all future stages of project delivery.

This assessment will require the following information:

- Associated embodied carbon for all quantities of materials used.
- Emissions factors, including grid carbon factors that will vary from country to country, which are used to calculate the carbon emissions where necessary.
- If possible, environmental product declarations (EPDs) from material manufacturing companies, which calculate the embodied carbon of building materials at all stages.
- A final as-built assessment of embodied carbon at practical completion may also be considered. This assessment should be used to determine the extent of carbon impacts needing to be offset to achieve NZC for construction.

WorldGBC
RICS
Royal Institute of British Architects (RIBA) 2030 Climate Challenge
American Institute of Architects (AIA) 2030 Commitment

CDP

Report carbon footprint



Companies can also provide data commentary that expands upon the calculation approach, with specific acknowledgment of whether real data, partial data or industry benchmarking data was used in the calculation of embodied carbon emissions.

Useful material



Tooling or the use of carbon calculation tools is encouraged to calculate asset specific embodied carbon footprints. However, it is recognized this is not always practical and, as such, the use of industry standards and benchmark values, as applicable to the geographical location, may be used.

One Click LCA
Embodied Carbon in Construction Calculator (EC3)

Principle 4

Reduce embodied carbon

Maximize emissions reductions for all new developments and major refurbishments in the pipeline to ensure delivery of net-zero carbon (operational and embodied) by the selected final target year.

Theme	Action	Type	Description	Signposting guidance	Alignment with existing commitments
Target setting	Report embodied energy targets		Companies can set and report on performance targets for embodied emissions for new developments and major refurbishments, including the target year planned for achieving net-zero embodied carbon.		GRESB – DEN2.2
	Report embodied energy targets		Reduction targets may be set in terms of carbon emissions per floor space or alternatively as a targeted percentage improvement. For example, reduce embodied carbon by at least 40% by 2025 from current business-as-usual baseline figures, before offsetting.		
	Provide benchmarking		Performance can be compared against industry standards for a completed asset in order to see how the assets perform against industry averages/best practice. Where a benchmarking exercise has been undertaken, companies can comment upon how they plan to align with the benchmark and any identified performance gap.	RICS Building Carbon Database WBCSD ICMS 3	
Action plan	Report delivery strategy		Companies must report on their action plan for reducing embodied carbon associated with their buildings.	WorldGBC RIBA AIA 2030 Commitment	

Action plan

Report delivery strategy



Within the high-level strategy, commentary can be provided on decisions most applicable to reducing embodied carbon, for example in the application of circular economy principles and material selection, procurement and optimization, including the use of nature-based materials and local sourcing.

Commentary may also be provided on how design choices to reduce embodied carbon are aligned with usage expectations/modelling.

Companies are also advised to report on how planned actions to reduce embodied carbon are projected to quantifiably contribute to the decarbonization of their real estate assets for the target year.

GlobalABC
Ellen MacArthur
Foundation: Circularity
Indicators: An Approach
to Measuring Circularity

Report delivery strategy



While the Action Plan allows for the embodied carbon of existing buildings to be labelled and reported as out of scope due to the more limited measurement options, the redevelopment and re-use of existing structures, along with new developments, provides an opportunity to lower overall embodied carbon and should be part of the delivery strategy.

Report on progress

Provide performance appraisal



Companies can consider reporting specifically on progress made on reductions in embodied carbon for the NZC target year, for example as a percentage reduction from the baseline year. Recognizing year-on-year changes in development and refurbishment schedules, it is recommended that progress be reported in both total emissions for embodied carbon and as carbon intensity values to aid comparison.

This guidance recommends that companies include commentary on how progress compares to projected values and explain the reason for any substantial variations.

Principle 5

Energy optimization

Drive energy efficiency optimization across both existing assets and new developments.

Theme	Action	Type	Description	Signposting guidance	Alignment with existing commitments
Target setting	Report on energy performance targets		<p>Companies can set and report on energy performance targets per asset type or per portfolio. It is recommended that companies set energy performance targets in terms of the energy use intensity (EUI) of a building and report them as percentage reductions from the baseline year or as kWh/m²/year.</p> <p>Alternatively, energy performance targets may also be set relative to industry or national building standards and certifications, for example targeting the achievement of outstanding/excellent level or a specified star rating.</p>		GRESB RA3
	Provide benchmarking		<p>Performance can be compared against industry standards to help understand building performance compared to other buildings in the market and inform target setting. Where a benchmarking exercise is undertaken, it is recommended that companies comment upon any performance gap.</p>	<p>Chartered Institution of Buildings Services Engineers (CIBSE)</p> <p>Carbon Risk Real Estate Monitor (CRREM)</p> <p>International Living Future Institute (IFLI)</p>	
	Guidance		<p>The expression of energy efficiency targets will vary depending on whether it is an existing or new development.</p> <p>Companies can model the potential energy-efficiency savings for existing buildings based on energy performance certificates, sub-metered data, energy audits and similar sources. Based on these, the possible percentage of savings, which are commonly expressed as either carbon intensity or EUI reductions.</p> <p>New buildings should be designed in the most energy optimized manner possible and ensure that they can perform at the efficiency level at which they were intended to operate. There are a series of benchmarks available for energy efficiency in new developments, which are expressed in kWh/m²/year. They will vary by building type and location.</p>		

Action plan	Report delivery strategy		<p>Companies can report on their plan for optimizing the energy efficiency of existing assets and new developments, with a focus on achieving specified energy targets by asset type and the measures being taken to drive energy efficiency in areas identified as most inefficient.</p> <p>As part of the action plan, companies can report on how planned energy efficiency actions are projected to quantifiably contribute to the decarbonization of their real estate assets for the target year.</p>	TCFD
Report on progress	Report on current energy efficiency performance		<p>Companies can report on the energy efficiency of their buildings by asset type for the baseline and reporting year. This may be presented in terms of EUIs or with reference to industry or national building standards and certifications, for example providing a breakdown of assets or floor space certified to different levels of performance.</p>	<p>CDP EPRA sBPR GRESB – BC1.1, BC1.2 TCFD</p>
Report on progress	Provide performance appraisal		<p>It is recommended that companies report at least annually on progress made on optimizing energy efficiency toward their NZC target year, for example as a reduction in average EUI per asset type.</p> <p>In ensuring values are comparable, companies may consider normalizing figures accounting for occupancy when reporting on progress.</p> <p>Companies are expected to include commentary on how progress compares to levels of energy performance projected for the reporting year and explain the reason for any substantial variations.</p>	

Principle 6

Increase renewable energy

Maximize supply of on-site renewable energy.

Theme	Action	Type	Description	Signposting guidance	Alignment with existing commitments
Renewable energy report	Report renewable energy generation		<p>Companies can measure and report on the amount of on-site renewable energy generated, where applicable. On-site renewable energy generation should be reported in terms of total annual generation (kWh) or alternatively as a percentage of total energy consumption.</p> <p>It is recommended that companies provide a breakdown of renewable energy generation per renewable energy source, for example breaking down the amount generated between solar photovoltaic (PV), bioenergy and wind energy source.</p>	UKGBC	CDP EPRA sBPR GRESB – EN1
	Provide renewable energy targets		Companies can set and report on-site renewable energy generation targets.		
Target setting	Target setting		Companies may consider setting on-site renewable energy generation targets, specified in terms of percentages of total energy requirement or in terms of targets for new builds and major renovations. For example, a company may choose to undertake a solar feasibility study in year 1 across all assets before implementing a target for the installation of solar panels across appropriate assets from year two. Demonstrating the intention of action is key.		

Provide delivery strategy



Companies can report on their renewable energy strategy and include the actions being taken to increase on-site renewable energy generation in line with the NZC targets.

The renewable energy strategy may include details on policies for conducting feasibility studies during all major refurbishments and the approach to energy procurement, for example.

Companies can report on how on-site renewable energy generation is projected to quantifiably contribute to the decarbonization of their real estate assets for the target year.

GRESB DEN2.1

Provide delivery strategy



It is recommended that companies engage with experts to conduct an evidence feasibility study for on-site renewable energy options.

Provide delivery strategy



Stakeholder engagement – especially between owners and occupiers – and cost-sharing schemes are important (see Principle 10).

Principle 7

Maximize renewable energy procurement

Ensure 100% of off-site energy is procured from renewable-backed sources, where available.

Theme	Action	Type	Description	Signposting guidance	Alignment with existing commitments
Renewable energy report	Report renewable energy procurement		<p>Companies can measure and report on renewable energy procured in the reporting year. On-site renewable energy generation should be reported in terms of total annual procured (kWh) or alternatively as a percentage of total energy consumption.</p> <p>Companies may consider providing a breakdown of renewable energy procurement as per the procurement options listed in the Action Plan:</p> <ul style="list-style-type: none"> – Corporate or physical power purchase agreements (PPAs) – High-quality green tariffs – Standard or low-quality green tariffs – Other options 	UKGBC GHG Protocol Scope 2 Quality Criteria	
	Report renewable energy procurement strategy		Companies can develop a renewable energy procurement strategy and report on the actions they are taking to maximize renewable energy procurement across all asset types, demonstrating how procurement guarantees exclusivity and additionality.	WorldGBC UKGBC	
Action plan	Report renewable energy procurement strategy		Renewable energy supply to the energy grid will vary from country to country but companies should demonstrate their efforts to explore the various options available as part of their public disclosure.	International Renewable Energy Certificate (I-REC)	
	Report renewable energy procurement strategy		Companies should engage with procurement teams and actively source renewable energy at a rate consistent with achieving carbon emissions reductions set out in the targets of Principle 2.		

Principle 8

Reduce emissions in your value chain

Engage with stakeholders with whom you have influence in your value chain to reduce scope 3 emissions.

Theme	Action	Type	Description	Signposting guidance	Alignment with existing commitments
Action plan	Provide delivery strategy		Companies can report on the actions they are taking to reduce real estate related emissions in their value chain.		CDP GRESB – SE6, TC1, TC6.1, DSE3.1 TCFD
	Provide delivery strategy		<p>Emissions classified as scope 3 are the emissions that a company indirectly impacts in its value chain. These emissions often comprise the most significant portion of emissions for a company, especially for building owners and developers. Figure 6 in the accompanying Action Plan details the scope 3 emissions categories and details how they relate to a building's value chain.</p> <p>Companies are encouraged to undertake a scope 3 emissions screening, identify significant sources and develop action plans for reducing emissions, starting with where they have influence.</p>	GHG Protocol UKGBC	
Report on progress	Provide performance appraisal		<p>Companies can consider reporting, at least annually, on progress made on reducing value chain related emissions for their NZC target year.</p> <p>Companies are expected to include commentary on how progress compares to levels of scope 3 emissions projected for the reporting year and explain the reason for any substantial variations.</p>	SBTi	

Principle 9

Carbon offsetting

Procure high-quality carbon offsets to compensate for residual emissions.

Theme	Action	Type	Description	Signposting guidance	Alignment with existing commitments
Action plan	Provide carbon offsetting strategy		For any emissions that cannot be reduced through energy-efficiency, embodied carbon or renewable energy measures, companies can consider offsetting the remaining emissions. Companies should provide a high-level outline of their strategy for offsetting residual emissions for their NZC target year(s).		CDP
	Provide carbon offsetting strategy		<p>In prioritizing reducing emission in line with the NZC hierarchy, companies should first have made all efforts to reduce their emissions by the previously outlined means before procuring carbon offsets from their NZC target year(s).</p> <p>Organizations are therefore encouraged to develop a robust and transparent carbon offsetting strategy as they approach their target year.</p> <p>With the recognition that as the market for carbon removal offset options is in its infancy, it may not be possible to meet all criteria in these early years. As such, a delivery strategy will need to adapt to and align with the growth in the market that should enable full NZC targets to be met by 2050.</p>	WorldGBC	
Carbon offsetting	Report carbon offsetting		Once companies start to offset residual emissions, they must report on the level of offsetting purchased under recognized standards or certification schemes in tonnes or kilograms of CO ₂ e in achievement of their NZC targets.	WorldGBC	CDP GRESB – GH1

Report carbon offsetting



Companies may additionally consider reporting offsets as a proportion of carbon emissions offset against the baseline year.

Report carbon offsetting



Companies must provide details of the types and locations of offsetting projects, indicating how this aligns with the best practice offsetting principles as outlined in the Action Plan.

Oxford University: The Oxford Principles for Net Zero Aligned Carbon Offsetting

Report carbon offsetting



The level of offsetting should be reported separately from total carbon emissions. The level of offsets should be clearly identifiable in the report and ideally presented within proximity of the total carbon footprint.

Where the offsets have been purchased across multiple schemes, the level attributable to each scheme should be clearly identifiable in the reported values.

UN: Race to Zero

Principle 10

Equitable cost-benefit sharing

Engage with stakeholders to identify joint endeavours and equitably share costs and benefits of interventions.

Theme	Action	Type	Description	Signposting guidance	Alignment with existing commitments
Action plan	Provide delivery strategy		Companies can develop an engagement plan for key stakeholders and report on the actions they are taking to increase collaboration with the aim of decarbonizing real estate assets.		EPRA sBPR
Stakeholder engagement	Report stakeholder engagement		<p>Companies can identify the most relevant stakeholders through the completion of a materiality assessment and can then focus on creating an engagement strategy and targets for those identified as key stakeholders.</p> <p>As part of the engagement strategy, companies may wish to include a list of the topics that are material to key stakeholders and the company, with actions that are being taken in line with each topic and in addition to commentary on how the topics were identified and how the stakeholders were engaged.</p>	SBTi	GRESB – SE6, TC1, TC6.1 EPRA sBPR
	Report stakeholder engagement		<p>A stakeholder engagement plan may consider identifying joint endeavours to equitably share costs and benefits of interventions.</p> <p>Within the strategy, commentary may be provided on items such as property owner/tenant engagement plans, green leases/clauses and internal carbon pricing mechanisms as outlined in the Action Plan.</p>		

Signposting

Guidance and signposting sources are detailed below. This list is not exhaustive and is provided to give context and reference to the work of existing organizations. Where guidance is not stated – or is perhaps not geographically specific – local best practice guidance should be followed and the most recent iteration of the document should always be sought.

Organization	Document or key reference item	Commentary	Principles
American Institute of Architects (AIA)	The 2030 Commitment	Guidance on achieving delivery of carbon-neutral new buildings, developments and major renovations by 2030. Comparable to RIBA 2030 Challenge.	P4
Better Buildings Partnership (BBP)	Net Zero Carbon Pathway Framework	Guidance on NZC boundaries, scope and strategy; geographically specific guidance should be sought where necessary.	P1, P2
Built Environment Carbon Database		User-led database of carbon-related construction project data.	P4
Carbon Disclosure Project (CDP)		Runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.	P1, P2, P3, P5, P6, P8, P9
Carbon Risk Real Estate Monitor (CRREM)	CRREM Risk Assessment Reference Guide (August 2020)	European Union initiative with the objective of highlighting the downside financial risks of poor energy performance in the built environment.	P2, P5
Chartered Institute of Building Services Engineers (CIBSE)		Online energy benchmarking tool relying on current energy usage.	P5
Dow Jones Sustainability Indices (DJSI)		Benchmarks for investors that have recognized that sustainable business practices are critical to generating long-term shareholder value.	P1, P2
Ellen MacArthur Foundation	Circularity Indicators: An Approach to Measuring Circularity, Methodology , 2019 revision	Guide to the principle of circularity and reuse of materials.	P4

Organization	Document or key reference item	Commentary	Principles
Embodied Carbon in Construction Calculator (EC3)		Allows for benchmarking, assessment and calculation of reductions in embodied carbon.	P2, P3
European Public Real Estate Association (EPRA) Sustainability Best Practices Recommendations (sBPR)	EPRA Sustainability Best Practices Recommendations Guidelines (third version 2017)	Intended to raise the standards and consistency of sustainability reporting for listed real estate companies across Europe.	P1, P5, P6, P10
Global Alliance for Buildings and Construction (GlobalABC)	GlobalABC Roadmap for Buildings and Construction 2020-2050	While aimed at governments and ministries, this provides relevant guidance on the delivery of net-zero developments and refurbishments.	P3, P4
Greenhouse Gas (GHG) Global Protocol	The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard	Framework for measurement and reporting of greenhouse gases; applicable to real estate.	P1, P8
	Scope 2 Quality Criteria	Standardizes how to measure emissions from purchased or acquired electricity, steam, heat and cooling (known as scope 2 emissions).	P7
	Corporate Value Chain (Scope 3) Accounting and Reporting Standard	Guidance for the assessment of value chain emissions; applicable to real estate.	P1
Global Real Estate Sustainability Benchmark (GRESB)	GRESB 2022 Real Estate Reference Guide	Provides a consistent framework to measure the environmental, social and governance (ESG) performance of individual assets and portfolios based on self-reported data. What investors and the wider industries consider to be material issues guides performance assessments. Aligned with the Sustainable Development Goals, the Paris Climate Agreement and major international reporting frameworks.	P1, P2, P4, P5, P6, P8, P9
Global Reporting Initiative (GRI)		An independent, international organization that helps businesses and other organizations take responsibility for their impacts by providing them with the global common language to communicate those impacts.	P1
International Cost Management Standard (ICMS)	ICMS 3	Global standards for professionals to manage and report on carbon to influence design and implementation decisions.	P1, P3, P4

Organization	Document or key reference item	Commentary	Principles
International Future Living Institute (IFLI)		Global zero-carbon certification scheme.	P2, P5
International Renewable Energy Certificate Standard (I-REC)		Certify the use of energy generated from renewable sources; useful for countries where renewable energy is not available through the national grid.	P7
Morgan Stanley Capital International (MSCI)		Provides greater transparency to financial markets and enables the investment community to make better decisions for a better world.	P1
One Click LCA		Facilitates life-cycle carbon assessments; affiliated with Green Building Councils in the United Kingdom, Finland and USA.	P3
Oxford University	The Oxford Principles for Net Zero Aligned Carbon Offsetting	Good practice guidance on the necessary considerations for securing high-quality offsets.	P9
RICS Building Carbon Database		Allows users to identify where associated carbon emissions reductions can be made, during all stages of a building's life cycle.	P4
Royal Institute of British Architects (RIBA)	2030 Climate Challenge	Voluntary performance targets for operational energy, water use and embodied carbon in new builds. Comparable to AIA 2030 Commitment.	P4
Royal Institute of Chartered Surveyors (RICS)	Whole Life Carbon Assessment (Nov 2017)	Reference for the built environment on whole carbon assessments, United Kingdom-based numerically but applicable globally.	P3
Science Based Targets Initiative (SBTI)	Criteria and Recommendations (October 2021)	Extensive guidance on target setting to achieve NZC; must be applied to a real estate context.	P10
	Net-Zero Standard	Framework for corporate NZC achievement; applicable to small and medium-sized enterprises (SMEs); must be applied to a real estate context.	P1, P2
	Target Validation Protocol	Guidance on validating net-zero targets.	P1, P2
	Value Change in the Value Chain: Best Practices in Scope 3 Greenhouse Gas Management	Information on scope 3 emissions and stakeholder engagement.	P8

Organization	Document or key reference item	Commentary	Principles
Sustainability Accounting Standards Board (SASB)		Guide the disclosure of financially material sustainability information by companies to their investors and identify the subset of environmental, social and governance (ESG) issues most relevant to financial performance in a variety of industries, including real estate.	P1,P2
Task Force on Climate-related Financial Disclosures (TCFD)		Offers climate-related financial disclosure recommendations designed to help companies provide better information to support informed capital allocation. Recommendations are structured around four thematic areas that represent core elements of how companies operate: governance, strategy, risk management, and metrics and targets.	P1, P2, P3, P5, P8
United Kingdom Green Building Council (UKGBC)	Whole Life Carbon Net Zero Roadmap	Guidance for achieving NZC in the construction, operation and demolition of buildings and infrastructure.	
	Guide to Scope 3 Reporting in Commercial Real Estate	Guidance for scope 3 reporting, specific to the real estate sector. Geographically specific guidance should be sought where necessary.	P1, P8
	Renewable Energy Procurement and Carbon Offsetting	Example of best practice guidance in the United Kingdom. Geographically specific guidance should be sought where necessary.	P6, P7
United Nations Environment Programme (UNEP)	Net-Zero Asset Owner Alliance: Inaugural 2025 Target Setting Protocol	Guidance on net-zero target setting; aimed at asset owners; applicable across all real estate.	
United Nations Principles for Responsible Investment (UNPRI)		UNPRI provides six principles for responsible investing and supports signatories in incorporating these factors into their investment and ownership decisions.	P1, P2
United Nations: Race to Zero		Expert peer review group.	P1, P2, P9
Urban Land Institute (ULI)	ULI Greenprint Goals	Alliance of more than 60 companies sharing benchmarking data on the journey to NZC real estate.	P1, P2, P5

Organization	Document or key reference item	Commentary	Principles
<u>World Business Council for Sustainable Development (WBCSD)</u>	<u>The Building System Carbon Framework</u>	Guidance on emissions reduction strategies across embodied and operational carbon.	
	<u>Net-zero buildings: Where do we stand?</u>	Guidance on calculating whole life carbon in real estate assets.	
<u>World Green Building Council (WorldGBC)</u>	<u>Net Zero Carbon Buildings Commitment</u>	Global initiative aimed at the decarbonization of the real estate sector.	P2
	<u>Bringing Embodied Carbon Upfront</u>	Guidance on measuring and recording embodied carbon in the real estate sector.	P3, P4
	<u>Advancing Net Zero Whole Life Carbon</u>	Guidance for offsetting residual emissions on the road to NZC.	P9



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