

Carbon Zero: the professional institutions' climate action plan



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Introduction



This Climate Action Plan is proposed by the professional institutions and organisations active in the construction and property industries – covering both the natural and built environments, as convened by the Construction Industry Council (CIC).

The signatories to this Action Plan agree that:

- the actions listed are necessary for dealing with the challenge of climate change;
- they will implement those actions appropriate to them as an institution/organisation; and
- they will support the other signatory institutions and organisations in delivering the remaining actions

Background

In June 2019, under the aegis of the Edge, 25 built and natural environment organisations met with the Chair of the Committee on Climate Change, Lord Deben, to discuss the need for action in the face of climate change. Those attending agreed on an urgent and concerted response to achieving the UK's 2050 net zero carbon emissions target; to continue to work together to establish shared standards and practice; and to continue to develop professional resources and capacity.

In response the CIC issued a joint statement on the Climate Change and Biodiversity Emergency in early 2020, with 29 organisations agreeing on the urgent need for action. This document represents the first concerted output from this commitment; a plan for real action in the face of the climate and biodiversity emergencies, a plan capable of delivering on net zero.

The timetable for action is very short, as laid out in the Sixth Carbon Budget: The UK's path to Net Zero published by the Climate Change Committee in

December 2020 and accepted by the UK government in April 2021. The UK construction industry has a very significant role to play and needs to act now to put in place the necessary measures to be able to meet its obligations towards the UK achieving its targets to reduce energy demand and carbon emissions, including delivering net zero new buildings no later than 2025¹.

The actions will prepare the construction and property sectors for making the long-discussed transition to becoming an effective and digitally enabled industry, able to deliver on the challenges and obligations ahead, including the important need to respond to the building safety agenda and delivering safe outcomes, in particular in the residential sector.

Actions

This plan identifies 10 areas of work, which embrace all interests within the CIC and were developed in close collaboration with a diverse range of institutions, organisations and individuals. The 10 workstreams are set out below and have been developed through a process that has included:

- Mapping out the roles and responsibilities of the 30+ CIC members overall and in each workstream, identifying what they can and need to do ensure their members are actively engaging with the aims of the Plan

Introduction



- Compiling a summary of current activities by CIC members and others, relating to achieving the aims of the Plan
- Identifying synergies (and avoiding duplication) in CIC members' and others' activities
- Identifying gaps and necessary additional activity, for example:
 - a. the means for assessing what good looks like (benchmarking, targets, case studies)
 - b. processes and methodologies for avoiding unintended consequences.
- Collaborating with each other wherever required, both within and across workstreams and outside the CIC membership, e.g. most or all workstreams will need to work with workstream 1 to identify and meet educational and competence needs.

The actions have been divided into three priority groupings: short-term, medium term and longer term. As an indication the CIC recommends that these will be commenced immediately, achieved within the next 2 to 3 years and be established and consolidated within the next 5 years, respectively. The signatories to this plan commit to each developing and publishing an action implementation programme by October 2021, prior to COP26.

The medium-term objective is for the professional institutions to enable all construction industry professionals to become energy/carbon advocates –

whatever their discipline – using PI members' professional standards as the mechanism to initiate up-skilling, ultimately making low carbon competency a mandatory element of being a built and natural environment professional. Note: this will need to be carried out in tandem and against the same timeline and deadlines as training and competence development under the new building safety regime.

In the longer-term the great majority of built environment professionals; properly supported by legislation and standards, guidance, tools, training and education; must be fully able to design a functional and safe environment with minimum use of resources and achieve net zero carbon reduction targets for all their significant projects. This will be mirrored in the far greater regulatory focus on CPD and competence that the new, post-Grenfell, building safety regime will introduce and the timeline for implementation will need to align with the deadlines for action required under that new system.

To support the action plan the professional institutions and other signatories will establish an interorganisational climate action network for the purpose of promoting, and engaging, climate action among their members and they will develop and implement proposals for monitoring and reporting on progress against the Action Plan through the CIC.

It is recognised that the professional institutions will require the involvement of government, outside organisations, companies and individuals, but they have an essential leadership and enabling role to play. In response to this actions are divided into those that the professional institutions (PIs) can accomplish by themselves or acting together and those that require engagement with the wider industry.

Stephen R Hodder MBE PPRIBA
CIC Chair 2019-2021

Simon Foxell RIBA
the Edge

The actions have been divided into three priority groupings

- Short-term – commenced immediately
- Medium term – achieved within the next 2 to 3 years
- Longer term – established and consolidated within the next 5 years

¹ Under its Balanced Net Zero Pathway the CCC requires all new buildings to be zero-carbon from 2025 at the latest and for the rollout of refurbishment of all houses with mortgages to EPC C standard to have started. Sixth Carbon Budget, (2020), Climate Change Committee, p112.



Co-ordinated by UCEM

The plan focuses on professional and cross-disciplinary education at undergraduate and postgraduate levels and the development of a wide-ranging collective CPD programme for the industry.

It is anticipated that tertiary education and professional qualification requirements will need to be substantially revised to focus on environmental performance and that the existing professional sector will have to take part in comprehensive training programme for net-zero delivery alongside new building safety requirements.

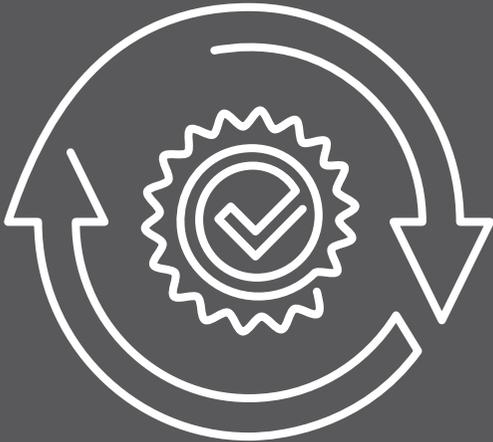
Education & qualification

Actions for Professional Institutions (PIs)

a	Each PI will determine their respective member roles, scope and responsibilities for carbon reduction
b	Each PI will review learning outcomes and the accreditation requirements of relevant degree and training courses
c	Individual PIs to adopt and update discipline-appropriate CPD requirements for net zero skills and competences for their members
d	The PIs will work together (and with other relevant bodies) to share and implement their educational proposals
e	The PIs will work towards making ongoing CPD on climate issues obligatory for all chartered PI members alongside the introduction of statutory mandatory CPD under the new Building Safety Regime
f	PI entrance requirements and professional membership assessments will be reviewed and revised, if required, to include a threshold carbon literacy/competence test

Actions for the wider industry with support from the Professional Institutions

g	A cross-industry climate framework curriculum to be agreed and adopted
h	A shared CPD curriculum, based on the framework and including specialist sub-modules, to be established
i	All institute and registration body agreement to be brokered for professional education to ensure climate change & biodiversity competence is achieved as a default requirement
j	Training materials to be developed and shared, supported by the PIs



Co-ordinated by CABE

The sector is already working on upgrading practice standards and developing common procedures and protocols to tackle climate change. Voluntary codes and methodologies have been proposed or are being developed, which once successfully trialled are likely to become mandatory within a relatively short time frame. It is anticipated that lessons learned from the development of standards will translate into the institutions' input and advice on regulatory change.

Standards and regulations

Actions for Professional Institutions (PIs)

a	PIs to establish and recognise an advanced cross-disciplinary practitioner + research group
b	Stretch and voluntary standards/regulations to be developed for willing practitioners and their clients to adopt, trial and provide feedback on (for 2025/2030/2035 etc.)

Actions for the wider industry with support from the Professional Institutions

c	PIs to convene a cross-industry working group to provide input to Building Regulations, the Building Safety Regulator and other relevant bodies on future standards and regulations
d	The working group to publish recommendations for upgrading standards and regulations on a minimum annual basis
e	Digital building passports, dealing with build quality standards and embodied and operational carbon, to be agreed with financial institutions with the intention that they become mandatory across the industry and set a series of progressive expected performance requirements



Co-ordinated by RIBA

Operational energy performance and embodied carbon targets (collectively whole life carbon standards) have been proposed for new build in the RIBA 2030 Challenge and retrofit standards are to follow. Subsequent work will be required on avoiding unwelcome and unintended consequences. Parallel work will need to take place on building services and energy flows within and around buildings. Proposals are also to be developed for the use of decarbonised energy where imported energy is still required.

Inputs on embodied carbon (Workstream 4) will combine with the work on operational performance (Workstream 7) to provide overall metrics and targets for achieving net-zero whole life carbon.

Operational energy and whole-life carbon

Actions for Professional Institutions (PIs)

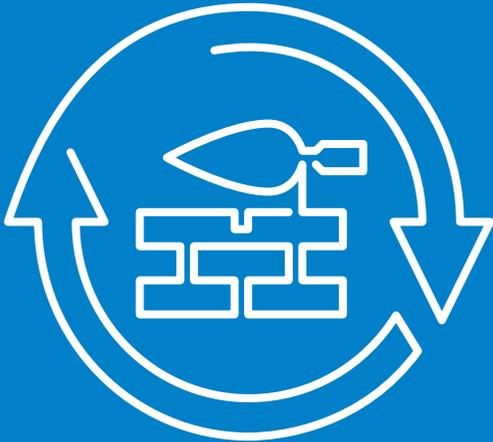
a	The PIs to lead on an agreement for operational performance targets and a net-zero ² whole life pathway
b	The RIBA 2030 Challenge to be reviewed and expanded for consideration and potential adoption across the industry
c	PIs to publish distilled guidance on design strategies, specifications, standards and methods for achieving net-zero whole life carbon, with simple to use formats to encourage use by all professionals
d	PIs to identify and support the development of central construction industry databases for whole life carbon and other environmental impacts (eg. RICS Buildings Database and CIBSE operational energy benchmarking)
e	PIs to identify and provide guidance on use of low/zero carbon energy supplies and decarbonised heat sources
f	PIs to encourage the professional service firms they recognise or accredit and those firms employing their members to publish annual energy and whole life carbon performance data for their operations
g	PIs to encourage and, if possible, place an obligation on their members to ensure that all design teams offer, regardless of whether clients have requested the service, proposals for progressing projects towards net-zero whole life carbon design
h	PIs to support the routine use of Building Passports (see WS2) for operational energy and whole life carbon

■ Short-term ■ Medium term ■ Longer term

Actions for the wider industry with support from the Professional Institutions

i	Cross industry expert group/s to be formed to advise practitioners and policy makers: <ul style="list-style-type: none"> • On achieving energy efficiency standards • On achieving a consistent whole life carbon approach • And to monitor and produce advice and guidance on social impacts and behaviour change in relation to energy reduction
j	Definitions to be agreed across industry to ensure common purpose and consistency
k	The relationship between existing environmental performance metrics and whole life carbon to be clearly and authoritatively set out

² 'A 'Net Zero Carbon Asset' is one where the sum total of all asset related GHG emissions, both operational and embodied, over its life cycle (Modules A1-A5, B1-B7, C1-C4) are minimized and meet local carbon, energy and water targets, and with residual offset, equals zero.' WLCN / LETI 2021



Co-ordinated by IStructE

Calculations for and reporting on embodied carbon to become industry standard. Methodologies and databases for this are already in development. Protocols for minimising waste and for re-use of materials to be established, implemented and monitored.

The initial focus is carbon and the climate emergency. In time this should expand to cover all resources and respond to wider issues.

Resource use and embodied carbon

Actions for Professional Institutions (PIs)

a	PIs to support use of embodied carbon (upfront and lifetime) and other environmental impacts as design criteria and facilitate use of databases to drive design decisions
b	PIs to support and enable effective decision-making on the specification of responsibly sourced materials and processing methods
c	PIs to identify and support the development of databases to provide whole life environmental impacts across all Environmental Product Declaration (EPD) indicators – with a focus on carbon emissions – for: <ul style="list-style-type: none"> i. materials and resources ii. projects
d	PIs to support innovation and development of new solutions in response to embodied carbon and environmental impact design criteria
e	PIs to support the routine use of Building Passports (see WS2) for resource usage, waste and embodied carbon

Actions for the wider industry with support from the Professional Institutions

f	Work to establish databases providing relevant and accessible information on environmental impacts across all Environmental Product Declaration (EPD) indicators starting with carbon emissions
g	Adopt and promulgate standard metrics for monitoring and reporting embodied carbon, e.g. BS EN15804
h	Support research on development of effective means for, and advice on, resource substitution
i	Establish methods and a requirement for responsible sourcing of building materials
j	Establish a requirement for use of EPD databases in the design process



Co-ordinated by RTPI / CIHT

The 6th Carbon Budget highlights that important changes are needed to how development and transportation is located, planned, designed, delivered, maintained and operated. This transition needs to be people centric. Implementation needs to unlock the potential of climate change mitigation and adaptation to generate wide economic and social benefits. It must also ensure that those benefits and any impacts are distributed fairly.

Land use, transport & infrastructure

Actions for Professional Institutions (PIs)

a	PIs to update guidance on the role of planning, land use and design in reducing carbon emissions from transport
b	PIs to publish guidance on how design codes and standards can align with net zero
c	PIs to identify and introduce new professional responsibilities and support to ensure decision making in relation to land-use, transport and infrastructure is consistent with Net Zero obligations
d	Identify, prioritise and shape professional and industry practices in planning, transport and land-use needed to deliver a just transition to net zero

Actions for the wider industry with support from the Professional Institutions

e	Identify weaknesses in the policy framework that prevent the planning system aligning with the UK's Net Zero Obligations and the changes that are required to remedy this
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A system of project procurement to be developed and put into place, including a golden thread approach to responsibility for quality and outcomes building on the recommendations of the Hackitt Report. A standardised valuation method that deals with future value and project risk to be established and implemented. Funding and grant awarding criteria to be overhauled.

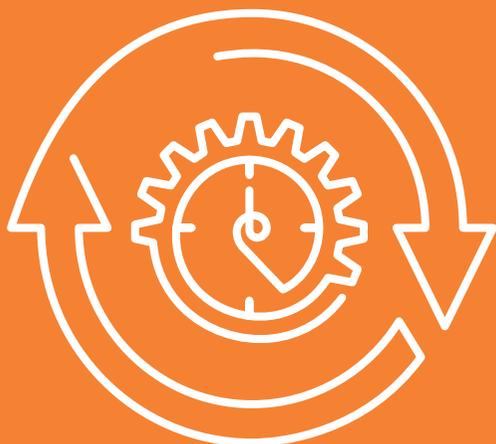
Finance & risk

Actions for Professional Institutions (PIs)

- a** Establish a lead on pan-industry statement that lays out, and keeps up to date, climate related risks to physical, regulatory, reputational and future value and methods for taking these risks into account in valuation and professional advice
- b** PIs to develop and promulgate a common standard on providing professional advice on projects that is transparent, properly evidenced and able to be widely shared

Actions for the wider industry with support from the Professional Institutions

- c** Develop a common industry approach to valuation that takes into account whole life carbon, energy performance, building safety, wider social value and anticipated changes to market/regulatory/ environmental systems and potential for stranded assets
- d** Identify or develop tools to provide industry-wide assistance to practitioners on categorising, quantifying, avoiding and mitigating climate risk



Co-ordinated by CIBSE

The current systems for monitoring and reporting in-use performance will be widened to include all projects over a certain size, with that threshold reducing at regular, predetermined intervals. Effective feedback loops will be developed and professional responsibility will extend further into the lifetime of projects. Social impact & behaviour are likely to become essential project considerations.

In-use performance

Actions for Professional Institutions (PIs)

a	PIs to work to agree a coherent approach on actual in-use performance, supported by monitoring and evidence, from the professions, their clients and the wider industry. This will be supported by training and accreditation schemes where required (in liaison with WS1)
b	PIs to work together (and with organisations outside of CIC) to remove barriers to evaluating and reporting on performance
c	PIs to work together and with organisations outside of CIC to provide a coherent advocacy voice for policy on operational performance
d	PIs to introduce incentives for their members to carry out in-use monitoring, evaluation and reporting as well as reviewing further options, including professional requirements for organisations or projects over a certain size and collective requirements set out in the Plan of Work and Plan for Use
e	PIs to collectively review the possibility of introducing formal professional obligations for monitoring and disclosure of in-use performance

Actions for the wider industry with support from the Professional Institutions

f	Develop and adopt agreed metrics for monitoring and reporting in-use performance, starting with energy and carbon and gradually encompassing other aspects of in-use performance
g	Develop and adopt agreed approaches and methods for in-use performance evaluation
h	From the collected data, develop benchmarks and case studies to support the development of guidance and targets under Workstream 3
i	Review and continuously improve performance modelling tools through testing against real life data, in turn improving their usefulness for in-use performance evaluation
j	Real-world modelling validation techniques to be continuously improved in relation to in-use performance evaluation approaches and methods
k	Build the evidence base to inform other workstreams and to track progress
l	Develop a performance and disclosure culture across professional service firms, their clients and supply chains for monitoring and reporting against the agreed metrics, using agreed processes
m	Develop and adopt shared agreements, processes, tools and formats for data collection, reporting, and access, with open source, inter-operability and transparency as core principles



Co-ordinated by LI

In liaison with existing forward planning groups proposals to be developed to guide professionals in increasing building and environmental resilience and biodiversity in the face of higher temperatures, more extreme weather conditions, flooding, pollution, infestation, future pandemics etc. Recommendations will be developed in relation to nature-based solutions, development of tighter regulations and other measures.

Adaptation & resilience

Actions for Professional Institutions (PIs)

- a** PIs to develop forward plans for dealing with global heating, pandemics, rising flood levels, desertification and other global trends in order to advise policy makers and enhance preparedness
- b** PIs to develop and publish advice for issued to practitioners for dealing with longer-term climate-related risks and trends including those noted above

Actions for the wider industry with support from the Professional Institutions

- c** Form a standing cross-industry group to recommend measures for increasing resilience in building and infrastructure projects
- d** Identify or develop resilience metrics for standard use on all major projects



Advance planning and training for dealing with short-term environmental crises and emergencies. Liaison with emergency services, civil and defence groups.

Emergency response

Actions for the wider industry with support from the Professional Institutions (PIs)

- a** PIs to identify agencies to work with at a macro level, but also at sector and project level
- b** Work with those agencies (including major utility and infrastructure companies) to ensure plans are in place for developing preparedness and providing rapid recovery response and advice on the impact of extreme climate events
- c** Develop a programme to mitigate, so far as is possible, the worst aspects of extreme events and prepare for them



Co-ordinated by CIOB

Levels of professional expertise and competence will become central to institutions' activities with the core objective of enabling and delivering safe buildings, net-zero emissions & bio-diverse environments. Codes of ethics, practice and conduct will follow suite as will professional disciplinary systems and monitoring of skills. Professional institutions will focus their advocacy, reward and award systems on achieving positive environmental and social change and will coordinate their message to government and others on both mitigation and adaptation³.

Competence/Ethics/Advocacy

Actions for Professional Institutions (PIs)

a	PIs to remain aware of and responsive to their wider and international obligations to the environment, society and users and to pass these obligations on, where appropriate, to their members	g	PIs to make planning and design for net zero carbon emissions more relevant and attractive to a broader group of potential members and recognise emerging specialisms related to climate change, proactively promoting future opportunities in the industry for climate action
b	PIs to argue collectively and individually for the importance of delivering bio-diverse and net zero carbon projects and to establish an information and knowledge base able to support and engage with research and provide effective and evidence-informed advice	h	All PIs to take increased (and co-ordinated) measures to ensure competence in low-energy design and management amongst their membership, both on entry and at regular intervals throughout their careers
c	PIs to communicate to their members the importance of biodiversity and moving rapidly towards net zero design and provide them with adequate tools and training obligations for achieving and monitoring it	i	PIs to provide ethical training and support, including whistleblowing services, to their members and others
d	PIs to continue to make the case for policy levers and resources to deliver change	j	PIs to update codes of professional conduct, as necessary, to ensure that enhancing biodiversity, maintaining low energy design ability and making deliverable proposals for achieving, as far as possible, net zero carbon emissions are matters of professional ethics and obligation
e	PIs to continue to create impact through campaigns where planning and design can have direct influence; transport, energy, housing and patterns of development	k	PIs to ensure that award and other promotional schemes appropriately consider biodiversity and net-zero requirements and that relevant and consistent data is collected and published on such schemes
f	PIs to support, train and monitor their members with regard to their net zero obligations		

³ See initiatives including the RIBA 2030 Challenge (www.architecture.com/about/policy/climate-action/2030-climatechallenge), LETI Climate Emergency Design Guide (www.leti.london/cedg) and UKGBC Whole Life Carbon Roadmap project (www.ukgbc.org/news/industry-comes-together-to-collaborate-on-whole-life-carbon-roadmap-project)¹



Co-ordinated by CIOB

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Competence/Ethics/Advocacy (continued)

Actions for the wider industry with support from the Professional Institutions

l	Pls to collectively endorse the UN Sustainable Development Goals and provide support to relevant implementation programmes
m	Pls to lobby government, collectively and individually, for more effective investment, regulations and standards for the built environment for achieving net zero emissions and to develop a coordinated response at and engagement with major policy deliberations
n	Pls to maintain continual knowledge exchange between themselves and with outside individuals and organisations on both a national and international level



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The signatories to this plan include the following institutions and organisations.

ACE: Association of Consultancy and Engineering

APM: Association for Project Management

AS: Adjudication Society

BIID: British Institute of Interior Design

BPIC: Black Professionals In Construction

BSI: British Standards Institution

CABE: Chartered Association of Building Engineers

CCS: Considerate Constructors Scheme

CIBSE: Chartered Institution of Building Services Engineers

CIHT: Chartered Institution of Highways & Transportation

CIOB: Chartered Institute of Building

CIPHE: Chartered Institute of Plumbing and Heating Engineering

CIPR: Chartered Institute of Public Relations

CIRIA: Construction Industry Research and Information Association
the Edge

ICWCI: Institute of Clerks of Works and Construction Inspectorate

ISSE: Institute of Specialist Surveyors and Engineers

IWFM: Institute of Workplace and Facilities Management

IFE: Institution of Fire Engineers

IStructE: Institution of Structural Engineers

IIRSM: International Institute of Risk & Safety Management

LABC: Local Authority Building Control

LI: Landscape Institute

NHBC: National House Building Council

RIBA: Royal Institute of British Architects

RICS: Royal Institution of Chartered Surveyors

RTPI: Royal Town Planning Institute

SCL: Society of Construction Law

UCEM: University College of Estate Management