

Agenda



Delegated Decisions - Joint Cabinet Member

Date: Wednesday, 1 May 2024

To: Councillors Forsey and Lacey

Item	Wards Affected
1 <u>NCC Decarbonisation Standards Policy for Council buildings</u> (Pages 3 - 18)	

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Report

Cabinet Member for Climate Change and Biodiversity Cabinet Member for Infrastructure and Assets

Part 1

Date: 1 May 2024

Subject NCC Decarbonisation Standards Policy for Council buildings

Purpose To secure approval from Cabinet Members for the adoption of a new policy document outlining the Council's carbon reduction criteria for both new construction projects and the retrofitting of existing buildings.

Author Head of Environment and Public Protection

Ward All

Summary The NCC built environment stands as a pivotal component in achieving the Council's Net Zero 2030 aspirations, as outlined in our Climate Change Plan. Action is needed to establish a uniform approach that aligns with our carbon reduction objectives, and this is outlined in the attached draft policy.

By embracing the proposed policy (Appendix 1), NCC can effectively prioritise low-carbon practices in our construction, retrofitting, and procurement processes moving forward.

Proposal That the council adopts the Built Environment – Decarbonisation Standards Policy at Appendix 1 of this report.

Action by Newport Norse, along with all contracted parties, and every department and official within the Council responsible for initiating new constructions, expanding existing structures, renovating current buildings, or acquiring new properties.

Timetable If approved, the policy will be formally adopted by the Council by raising awareness of with relevant officers to ensure incorporation of the new standards in to future projects and contracts. The policy will not be applicable to existing contracts.

This report was prepared after consultation with:

- NCC officer- Strategic Asset Management Group
- Newport Norse
- Property Manager
- Chief Financial Officer
- Monitoring Officer
- Head of People, Policy & Transformation

Signed

Background

There is an urgent global need for adaptation to the present and future impacts of climate change. The increasing effects, including rising sea levels, deteriorating air quality, and extreme weather events, are already endangering people, both locally and worldwide.

In March 2022 Cabinet agreed the adoption of Newport City Council's Organisational Climate Change Plan (2022-27). The plan was developed in collaboration with staff and managers across the council and the involvement of the public. The aim of the plan was to:

- Reach net zero as an organisation by 2030.
- Review the services we provide to ensure they support the city's journey to net zero and adaptation to climate change.

Upon the establishment and development of the Council's Organisational Climate Change Plan, it becomes evident that decarbonising our built environment significantly influences our progress towards net zero. Currently, there are approximately 130 buildings in our estate, collectively responsible for 19% of our total emissions. Each building requires different levels of interventions for achieving net zero, such as solar PV installation, transition to electric heating, and improved insulation.

While the Council has made commendable strides in decarbonising its estate, achieving full organisational alignment with this agenda is imperative to:

- Optimise opportunities for carbon reduction.
- Minimize expenses associated with net zero interventions.

Avoid exacerbating the challenge by promptly and effectively addressing net zero requirements from the outset of projects.

The Policy – (Appendix 1)

The policy's objective is to:

Define NCC's baseline expectations and performance metrics for adoption, facilitating the implementation of decarbonisation efforts across three principal property sectors within our built estate: construction practices, retrofitting processes, and property procurement.

This will be realised through specific measures to guarantee that energy efficiency and carbon reduction consistently remain integral aspects of our building, retrofitting, and procurement approaches.

New builds

The policy establishes overarching targets for both operational and construction-related carbon emissions. This will encourage our supply chain to recognise and fully embrace net zero measures in their proposals. Additionally, it incorporates specific measures for various interventions, accompanied by key performance indicators (KPIs), to ensure optimal energy efficiency and reduced utility expenditure.

Currently, there are no government policies or standards for the Council to align with for our new construction projects. The industry is working to fill this gap by developing standards that can be adopted and implemented. However, it is expected that these standards will not be available short term. Therefore, this policy aims to set clear guidelines for our new constructions until such standards become available for consideration.

Retrofits

Our strategy regarding retrofits necessitates thorough consideration, as certain interventions may cause consequential impacts.

Given that each building possesses distinct characteristics and functions autonomously, a uniform approach cannot be universally applied. Hence, it is imperative to embrace a comprehensive approach to retrofits, ensuring that interventions are meticulously planned, tailored to specific needs, and do not impede occupancy or future modifications.

The policy advocates for the adoption of established retrofit methodologies to mitigate risks associated with these endeavours.

Purchase of property assets

It should be our goal, when engaging in property acquisitions, to prioritise the operational energy performance of a building. Failing to do so results in:

- Emitting unnecessary amounts of carbon,
- Incurring higher utility costs, leading to increased revenue expenditure,
- Contributing to the backlog of decarbonisation efforts, thus escalating expenses.
- The procurement process for acquisitions can significantly contribute to our decarbonisation objectives and ultimately lead to cost savings for the Council. Hence, this policy outlines minimum environmental building performance standards for our new acquisitions.

Recognising that energy-efficient buildings meeting our operational needs may not always be readily accessible in the short term, the policy mandates that the purchase and retrofitting of inefficient buildings be included in any business case where more efficient options are not readily available.

Review

The process of designing, constructing, and retrofitting buildings is intricate. With a constantly evolving market for green technologies and buildings possessing distinct individual traits, our policy must be adaptable to change and open to revisions.

Hence, it is suggested that this policy undergo annual reviews to ensure its relevance, responsiveness to feedback, and continuous alignment with industry best practices. These reviews will also provide updates on any projects or acquisitions initiated or completed in the previous year, enabling monitoring of adherence to the policy.

This policy is linked to the Council's Strategic Asset Management plan, which is currently in draft. One of the guiding principles of this policy is to support the Council's Net Zero aspirations, along with associated commitments consistent with the Decarbonisation standards policies approach.

Financial Summary (Capital and Revenue)

Buildings designed and constructed to achieve Net Zero carbon operation are expected to incur a higher initial capital cost, compared to those simply meeting minimum standards. Nonetheless, this cost disparity is diminishing as the demands of minimum standards escalate. Forecasts suggest that in the future, minimum standards will align more closely with Net Zero requirements.

Through the organisational Climate Change Plan, the Council has already pledged to cover the capital expenses associated with achieving Net Zero Carbon (NZC) in operational buildings (*either via external grants or Council capital funds*). This policy sets out the design principles for realising this commitment.

For projects such as the 21st Century Schools Projects, the Welsh Government has covered the costs of achieving NZC during operation, while specific grant funding has been secured for non-school projects like the Council's new city centre leisure centre to ensure the exclusion of fossil fuels on-site. External assistance will continue to be pursued wherever feasible.

Investing upfront in efficient, non-fossil fuel buildings will yield long-term capital and revenue savings and shield our organisation from the volatility associated with fossil fuel dependency.

Risks

Risk Title / Description	Risk Impact score of Risk if it occurs* (H/M/L)	Risk Probability of risk occurring (H/M/L)	Risk Mitigation Action(s) What is the Council doing or what has it done to avoid the risk or reduce its effect?	Risk Owner Officer(s) responsible for dealing with the risk?
Awareness at project inception	H	L	<ul style="list-style-type: none"> ○ A training or launch session will be conducted to introduce the guidance, with annual reminders to follow. ○ Commissioning officers, Newport Norse, and their subcontractors are required to comprehend and comply with the guidance. 	Carbon Reduction Manager
Adherence to Policy	H	H	<ul style="list-style-type: none"> ○ Increase awareness prior to commissioning. ○ Ensure continuous involvement of the Carbon Reduction Team in all project development stages. ○ The Senior Responsible Officer (SRO) must prioritise achieving Net Zero Carbon (NZC) as a non-negotiable requirement. 	Commissioning Officers / Newport Norse / SRO's and Cabinet Members
Evolving Standards and emerging technologies	M	L	<ul style="list-style-type: none"> ○ Continual interaction with NZC standards and the construction industry. ○ Conducting post-project reviews for each construction project. ○ Regular updates to appendices as needed. ○ Regular policy review. 	Carbon Reduction Manager
Supplier selection and capability	H	M	<ul style="list-style-type: none"> ○ Commissioning Officers and Newport Norse are required to choose project teams and contractors with demonstrated expertise and dedication to Net Zero Carbon (NZC) initiatives and collaboration with the client on this aspect. This requirement should be clearly communicated before appointment, rather than being introduced later. 	Commissioning Officers / Newport Norse

Links to Council Policies and Priorities

- Organisational Climate Change Plan
- Corporate Plan Theme 2 – Newport's Environment and Infrastructure
- Strategic Asset Management Plan – *(draft March 2024)*

Options Available and considered

- 1) Endorse and adopt NCC decarbonisation standards policy.
In support of the Council's organisational climate change plan and to provide greater clarity to officers, Newport Norse and sub-contractors involved in construction projects to ensure that the best possible outcomes are achieved with minimal input and limited in-process change.
- 2) Do not endorse and adopt the decarbonisation standards policy.
The Council's net zero carbon targets will remain in place but policy on its effective implementation in relation to builds will not be in place and inefficiencies will continue.

Preferred Option and Why

Option 1 - To review and approve the NCC decarbonisation standards policy for adoption.

Implementing the policy will bolster the Council's organisational climate change plan and offer enhanced clarity to officers, Newport Norse, and subcontractors engaged in construction projects, ensuring optimal outcomes are attained with minimal intervention and limited changes during the process.

Comments of Chief Financial Officer

The endorsement of the above policy supports Newport Council Climate Change Plan which has already been adopted by the Council. This policy could have a significant impact on available capital resources; therefore, it will be critical that there is a clear understanding of the financials implications when considering any new capital projects. The extent of that financial impact can't be known at this point.

To date, the Council has been successful in attracting external funding to meet the additional costs this policy currently gives rise to and the Council will need to continue to be innovative in identifying external funding sources to support any capital investment required, as well as ensuring that any grant opportunities are maximised.

Comments of Monitoring Officer

It is open to the Cabinet Members for Climate Change and Sustainability and Infrastructure and Assets to adopt the policy document at Appendix 1 in accordance with the Scheme of Delegation to Cabinet Members. Adoption of this policy document is likely to assist the Council in achieving the environmental and sustainability objectives set out in the Council's Corporate Plan.

It should be noted that the provisions of this policy will not automatically apply retrospectively to contracts which the Council has already entered into; if amendments to existing contracts are needed to fulfil the objectives of this policy, these will need to be negotiated on a case-by-case basis.

Comments of Head of People, Policy and Transformation

The proposed new policy sets out the Council's carbon reduction criteria for construction projects, the procurement of buildings and retrofitting of existing buildings to mitigate the long-term effects of climate change and poor air quality. Implementing this policy will contribute to the Council's Climate Change Plan by guiding Council officers, Newport Norse, and subcontractors involved in construction and procurement projects.

There are no direct human resources implications within this report.

Comments of Non-Executive Members

Councillor Townsend:

When we hear, relentlessly about reducing "carbon", we are actually talking about carbon dioxide – a vital gas in our atmosphere, for sustaining plant life, greening the planet and therefore keeping us alive. No carbon dioxide means no life.

Sales of electric vehicles are plummeting for obvious reasons: Expense, the cost of batteries, the weight of the vehicles and their unpredictable performance. The lithium and cadmium are mined by children in the developing world so that westerners can feel good about doing their bit by 2030.

This year has been touted as the year when the UN and WEF unelected billionaires impose their great "reset" on us, ordinary people.

Net Zero will impoverish humanity. Solar power cannot keep the lights on, and homes heated, during the winter or when there is no wind.

Farmers are already under massive pressure to release large areas of arable land for "rewilding" schemes, which, with a population moving towards 80 million (unofficial figures) is environmental insanity. No farmers, no food.

My comments won't be popular, but before we all go down the road to Net Zero, we should consider that the people pushing this ideology are billionaires with their own agendas.

There are many scientists who disagree with the “settled science” on climate, but because they cannot be heard, the public believe all they are told.

Net Zero is a totally dishonest mandate that can never change climate, only destroy the global economy. In the 1970s we had a coming ice age, then destruction of the ozone layer, followed by global warming, which didn't materialise, so now we have climate change.

Climates change, always have, always will.

Response:

Dear Councillor,

Thank you for your comments. As no points have been made which relate specifically to the Decarbonisation Standards document shared, we have no specific response.

Newport City Council have previously approved (at full council) a policy of targeting Net Zero Carbon as an organisation by 2030. The NCC Decarbonisation Standards for Council buildings is simply a supporting policy to help us achieve this commitment.

Scrutiny Committees

N/A

Fairness and Equality Impact Assessment

The pressing need for adopting this policy means that conducting a comprehensive and thorough FEIA is not practicable. Its adoption is aimed at addressing the necessity to establish minimum Net Zero expectations for our properties, thereby advancing towards our mandated 2030 target. Consequently, the implications of this policy do not have any specific impact on any group or community in Newport.

The principles of this policy will not impact people and do not differ to any BAU maintenance capital investment works.

Children and Families (Wales) Measure

The outcomes of this policy will guarantee that buildings are habitable and suitable for children and Council employees. This will serve as tangible evidence of the Council's commitment to advancing climate change mitigation measures, benefiting all families within the Council's jurisdiction through reduced carbon emissions and improved air quality.

Wellbeing of Future Generations (Wales) Act 2015

Long-term: The policy ensures that the Council adopts a forward-looking approach, considering how we construct and refurbish buildings to mitigate the long-term effects of climate change through proactive measures such as reducing carbon emissions and phasing out fossil fuels, which contribute to poor air quality.

Integration: By default, the policy will enhance local air quality and potentially alleviate the long-term impacts of climate change, indirectly benefiting residents and promoting various well-being outcomes, including improvements in health, mental health, and overall personal well-being.

Community Engagement: Local schools have shown interest in conducting sessions for their students to provide an overview of low-carbon interventions within the context of climate change.

Collaborative Efforts: The indirect implications of the policy will place significant emphasis on a collaborative approach to its adoption and implementation. This will involve collaboration with key stakeholders, including the Welsh Government, industry bodies, as well as engaging expert consultants and suppliers.

Preventative Measures: The overarching ethos of this policy is to prevent or mitigate the consequences of climate change. By taking appropriate actions now, we may be able to lessen or mitigate the predicted impacts of global warming, which will affect us locally, nationally, and globally. Local predicted consequences, such as increased flooding, heatwaves, and rising sea levels, may impact the community, highlighting the importance of proactive measures.

The application of this policy will avoid exacerbating the challenge by promptly and effectively addressing net zero requirements from the outset of projects.

Welsh Language (Wales) Measure 2011

The policy is not anticipated to have a negative impact on this Act. It will influence the manner in which we construct and retrofit our estate. Previous measures and considerations regarding construction, such as the provision of bilingual signage where necessary, will remain unchanged.

Consultation

Climate change and asset cabinet members have provided verbal feedback, particularly regarding the procurement of assets and the potential challenges associated with acquiring high-performing assets, which may impede broader Council statutory obligations and operational requirements. This feedback has led to a reduction in this requirement, placing responsibility on the designated officer to ensure the retrofitting of inefficient assets as part of the initial business case. In addition, public consultation on the Organisational Climate Change Plan took place in November and December 2021.

Background Papers

[Organisational Climate Change Plan 2022-27](#)

[Organisational Climate Change Plan Cabinet Report Mar 2022](#)

[Climate Change Annual Report 2022-23](#)

[Strategic Asset Management Plan Scrutiny Report March 2024](#)

Dated: 1 May 2024

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Built environment - Decarbonisation standards Policy

1.0 Introduction

In March 2022 Cabinet agreed the adoption of Newport City Council's Organisational Climate Change Plan (2022-27). The plan was developed in collaboration with staff and managers across the council and the involvement of the public. The aim of the plan was to:

- Reach net zero as an organisation by 2030.
- Review the services we provide to ensure they support the city's journey to net zero and adaptation to climate change.

The Welsh Government has augmented UK legislation for all Welsh public bodies, setting a target to attain Net Zero (NZ) status by 2030. NCC recognises that decarbonising our built environment is crucial for achieving these goals and tackling Scope 1 greenhouse gas emissions.

2.0 Aims

This document outlines NCC *minimum* expectations and performance measures for adoption, to enable the delivery of decarbonisation within our built estate.

3.0 Scope

The scope of this document covers undertakings, which commonly give rise to significant carbon emissions within our estate:

- [New builds](#), (commissioned by NCC).
- [Retrofits- non-domestic buildings](#).
- [Purchase of property assets](#).

4.0 To be read in conjunction with

Strategic Asset Management Plan
Climate Change Plan

5.0 New builds

The objective of this section is to outline NCC's expectations and performance criteria concerning the construction and operation of future buildings and dwellings. To ensure that our delivery partners are aligned with NCC's goal of achieving Net Zero (NZ) status, requirements and performance criteria must be addressed from the outset. It is the responsibility of our suppliers to identify health and safety, environmental, financial, and operational risks that adherence to this document may indirectly pose.

The incorporation of low-carbon and Net Zero principles must be woven throughout the design, construction, operational performance, and planned maintenance of any new building project. This approach should ensure that operational requirements are fully met, and most importantly, that the physical well-being of our building occupants takes precedence.

5.1 Design requirements

The UKGBC Framework details a 5-step approach that a building should undertake to achieve NZ. *Noting* point 5 of the framework ‘*Offset any remaining balance*’ should be collaboratively worked through with NCC to determine the most ethical and cost-effective solution. [See Appendix 1](#)

NCC will seek suppliers that actively engage and collaborate with us to ensure our new builds are constructed and operate to the highest environmental construction standards.



The table below highlights the overarching targets for all NCC commissioned new builds:





Table 5.1.1: New Build- Principal targets





Carbon Source	PRINCIPAL TARGETS
Construction	The amount of carbon emissions associated with a building’s product and construction stages up to practical completion should be zero or negative .
Operational Energy	Carbon emissions associated with a building’s operational energy on an annual basis will be zero or negative .





A suite of further overarching requirements NCC are committed to incorporating within our new builds, are included in table 5.1.2. In order to achieve these measures, where appropriate **acceptance testing, must be incorporated into our design and build contracts or equivalent.**

Table 5.1.2: NCC new build requirements

	REQUIREMENTS	PERFORMANCE INDICATOR
	<p>Scope</p> <ul style="list-style-type: none"> The new build will achieve as per the targets defined within this document or referenced elsewhere for both construction and operational energy. Construction: WLAM carbon assessment must be undertaken to determine the building’s carbon impact. Construction: Any net export of renewables/purchase of offsets audited by 3rd party with client agreement. Operation Energy: Defined as all areas under operational control that have been used to demonstrate NZ. The energy scope and related GIA should be disclosed. Operational Energy: Must be reported annually for carbon impacts as a total emission (tCO₂e) and intensity (kgCO₂e/m²). 	<ul style="list-style-type: none"> Applicable LETI emergency design guide compliance. See Appendix 2 NZ for OE is achieved when the building’s total annual net CO₂ emissions = 0.
	<p>Building envelope and orientation.</p> <ul style="list-style-type: none"> Building orientation and form should consider HVAC load, reduction/optimisation daylight savings and exposure to outdoor conditions. The design optimises benefits of passive solar and disbenefits are mitigated – Optimum balance to be sought. Design is considerate to <i>maximise</i> the installation of Solar PV. Roof structures are accessible and have appropriate design super loads. 	<ul style="list-style-type: none"> Inclusion within architectural design process. Applicable LETI emergency design guide compliance. See Appendix 2 Roof design super loads factor include Solar PV weight loads.

	REQUIREMENTS	PERFORMANCE INDICATOR
	<p>Building fabric</p> <ul style="list-style-type: none"> ○ The fabric of the building minimises winter heat loss and reduces heating system demand. ○ Overheating minimised and thermal mass maximised. ○ Air tightness target <3 ($m^3/h/m^2$ @50Pa). ○ The specification of appropriate fabric/glazing tones and coatings to be incorporated to minimise overheating. ○ Indirect consequences of moisture are assessed and mitigated in design. 	<ul style="list-style-type: none"> ○ <i>Inclusion within architectural design process.</i> ○ <i>Applicable LETI emergency design guide compliance.</i> See Appendix 2 ○ <i>Handover commissioning certification.</i> ○ <i>Design assessment and adherence to code of practice BS 5250:2021.</i>
	<p>Heating and Hot water</p> <ul style="list-style-type: none"> ○ A heating system options appraisal of GSHP, ASHP and heat networks should be presented to the client to determine decision making. ○ Underfloor heating network provides heat output for all end users. ○ Design temperatures (<i>general</i>) -3°C outside and 19°C internal. Social Services setting internal 21°C. ○ Hot water and heating systems are independent of each other. ○ LETI space heating demand/heat loss targets incorporated. ○ LETI maximum heating dead leg and water outlet certification applied. ○ NCC ASHP Developers Pack. ASHP designs are sized and designed to optimise energy efficiency, whilst meeting operational requirements. 	<ul style="list-style-type: none"> ○ <i>Heating/hot water/commercial catering is fossil free.</i> ○ <i>Inclusion within architectural design process.</i> ○ <i>Adherence to NCC ASHP Developers Pack</i> See Appendix 5 ○ <i>Applicable LETI emergency design compliance.</i> See Appendix 2
	<p>Renewables</p> <ul style="list-style-type: none"> ○ Maximise Solar PV generation, exhausting all suitable locations for building and ground mounted Solar PV systems. (<i>Solar PV installation not limited to roof spaces to meet operational NZ</i>) ○ Solar PV system options to review emerging technologies and their project inclusion to maximise energy generation yield. (<i>i.e. building integrated PV</i>) ○ Solar PV product `solar edge` or equivalent specification, with individual panel optimisers, and interface with fire alarm systems. ○ Solar PV automatic inverter function, reduces DC on roof to close to zero. 	<ul style="list-style-type: none"> ○ <i>Offsets operational usage and exports excess, where possible.</i> ○ <i>Inclusion within architectural design process.</i> ○ <i>Solar PV system alignment with `solar edge` specification or equivalent.</i>
	<p>IT</p> <p>IT server/communication room(s) strategically located away from heating plant and situated on a North or East facing outside wall, to maximise natural cooling.</p> <ul style="list-style-type: none"> ○ LETI IT loads incorporated, where appropriate. 	<ul style="list-style-type: none"> ○ <i>Inclusion in architectural design process.</i> ○ <i>Applicable LETI emergency design guide compliance.</i> See Appendix 2
	REQUIREMENTS	PERFORMANCE

		INDICATOR
	<p>Lighting</p> <ul style="list-style-type: none"> ○ LED lighting specified for all internal and external lighting luminaires. ○ Lighting preprogrammed to achieve a <i>maximum</i> 10% over minimum guidance lighting lux levels. ○ SMART control system to incorporate daylight maximisation and absence energy saving features. Lighting programmed demand on/auto off, where appropriate. ○ PIR detection to be included in toilet areas. ○ Decorative lighting included by client exception only. ○ LETI lighting power density measures incorporated. 	<ul style="list-style-type: none"> ○ <i>Inclusion in architectural design process.</i> ○ <i>Applicable LETI emergency design guide compliance.</i> See Appendix 2 ○ <i>Lighting control strategy.</i>
	<p>Ventilation</p> <ul style="list-style-type: none"> ○ Ventilation should be passive by default and designed in as far as practicable, ensuring compliance with associated statutory requirements/guidance. ○ Should mechanical ventilation be unavoidable, LETI targets to be incorporated. ○ Indirect consequences of moisture are assessed and minimised in design. 	<ul style="list-style-type: none"> ○ <i>Compliance with BB101, HSE and building control.</i> ○ <i>Applicable LETI emergency design guide compliance.</i> <i>Design assessment and adherence to code of practice BS 5250:2021</i>
	<p>Utilities</p> <ul style="list-style-type: none"> ○ Site electrical connection capacity is specified to meet end usage only and agreed with client. Significant margins of expansion removed. ○ No fossil fuels to be used on site, (<i>excluding educational purposes etc</i>). ○ Water boosters installed by exception. Its passive infrastructure to be installed, should there be future demand. ○ Water fittings comply with the flow rates set in applicable standards including showers, taps, WCs and urinals. 	<ul style="list-style-type: none"> ○ <i>Inclusion in architectural design process.</i> ○ <i>Electrical connection capacity agreed in collaboration with client.</i> ○ <i>GBS/WPPN's for water fittings. They should also meet AECB standards & DEFRA best practice guidelines.</i> ○ <i>CIRIA W11 4m³/fte/yr, 16 l/fte/day or 0.55 m³/m² NIA – Office only</i>
	<p>Equipment</p> <p>Energy consuming equipment including building services equipment, ICT and white goods should meet the relevant energy efficiency standards.</p>	<ul style="list-style-type: none"> ○ <i>Adherence to WPPN's</i> ○ <i>'A' rated equipment to be used where possible (eco-design of energy-consuming products regulations)</i>
	REQUIREMENTS	PERFORMANCE

		INDICATOR
	<p>Monitoring and metering</p> <ul style="list-style-type: none"> ○ Metering strategy to be designed in collaboration with building operators, proving the meters are providing accurate readings. ○ Install an automated metering system (AMR) with half hourly data logging separate from the BMS with data storage and interoperability to access CSV data. ○ AMR breakdown to include major energy uses, (<i>not exhaustive</i>): Heating system flow and return, electrical input (ASHP), catering distribution board, ventilation plant, IT room(s), renewable energy generation, passenger/goods lifts, lighting, cooling, small power. ○ LETI data disclosure requirements to be incorporated. 	<ul style="list-style-type: none"> ○ <i>Inclusion in architectural design process.</i> ○ <i>Applicable LETI emergency design guide compliance.</i> See Appendix 2 ○ <i>TM39 Building energy metering adherence.</i>
	<p>Embodied Carbon</p> <ul style="list-style-type: none"> ○ Focus on reduction of embodied carbon for the largest usages. ○ LETI emergency design guide requirements/targets to be incorporated. 	<ul style="list-style-type: none"> ○ <i>Applicable LETI emergency design guide compliance.</i> See Appendix 2 ○ <i>BS EN 15978 2011 LCA construction stages applied.</i> See Appendix 3
	<p>Electric Vehicle Charging</p> <ul style="list-style-type: none"> ○ Dual AC 22kW capable (<i>can be wired as single phase 7kW chargers if capacity is limited</i>) Type 2 chargers. ○ Connected to the buildings electrical supply. ○ EV charger supply to be sub metered. ○ Charge point installation to follow PAS 1899:2022 for first charger. ○ At least OCCP 1.6 compliant, preferably OCCP 2.0 ○ Preferred supplier for design, installation, and operation See Appendix 4 ○ Point of sale (<i>contactless payment</i>) must be included on the terminal. ○ Charger specification – See Appendix 4 	<ul style="list-style-type: none"> ○ Charger specification same or equivalent as: See Appendix 4 ○ Adherence to PAS 1899:2022
	<p>Controls</p> <ul style="list-style-type: none"> ○ SMART BMS provision to provide front end/remote access. (<i>Where economically advantageous</i>) ○ Controls in end user areas are tamperproof and vandal resistant. ○ Main controls - operated by authorised staff (<i>i.e., simple holiday auto/self-cancelling extension</i>) 	

6.0 Retrofits- non-domestic buildings.

The retrofitting of our estate poses the most significant decarbonisation challenge. NCC has a diverse, ageing estate with differing *live* operational activities. It is vital that a methodical approach is undertaken to ensure property architypes dovetail with NZ interventions.

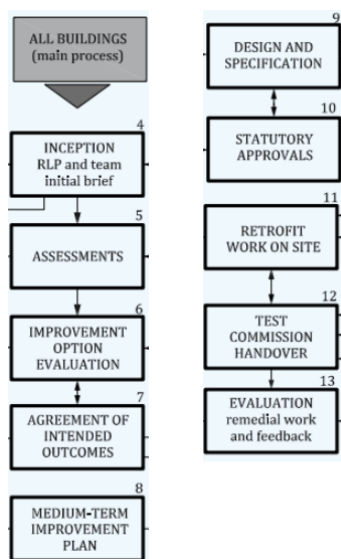
Each building will have its own unique solution; therefore, we will endeavour to find the right balance between carbon and cost savings, heritage, and inconsequential impacts for each of our sites in scope. A priority will be given, where practicable to do so for the reduction of operational carbon, via heating and solar PV interventions, in advance of alternative interventions with a slower carbon ROI.

To do this we will ensure that our retrofits adopt the following methodology:

‘PAS 2038:2021 Retrofitting non-domestic buildings process’

The appointment of a retrofit lead professional/team for works in scope will help to ensure that we de-risk projects and ensure inconsequential impacts from our interventions are considered and mitigated. The practical steps of this commitment are detailed in the figure below:

Table 6.1: PAS 2038 – All building approach



In parallel with this holistic approach, should an ASHP low carbon heating and hot water solution be proposed, it should follow the *‘ASHP Developer Pack Guidance’*. [See Appendix 5](#)

A more sensitive approach will be undertaken for any of our historic buildings and dwellings, as building regulations state:

‘Work to such buildings is required to comply with the energy efficiency requirements as far as is reasonably practicable. In considering what is reasonably practicable, the work should not unacceptably alter or mar the character of the building or increase the risk of long-term deterioration of the building’s fabric or fittings’

Source: Approved document L – Conservation fuel and power

Therefore, for buildings of this type we will supplement the PAS:2038 process with the application of the following British Standards:

- BS 7913:2013 (*Historic Buildings*)
- BS EN 16883:2017 (*Historic Buildings*)

7.0 Purchase of property assets

*****The adoption of this policy will not impact any inflight projects*****

It is recognised that repurposing the organisation’s built environment entails a considerable allocation of resources, expenditure, and disruption. Therefore, it is imperative that we refrain from increasing the workload and costs associated with the current task by incorporating inefficient, carbon-intensive properties into our portfolio.

NCC will seek out funds to fill any financial gaps that may arise from acquiring more efficient buildings. The returns on investment will be significantly greater when considering the alternative - completely retrofitting an inefficient building.

NCC will only target properties that are in the following energy efficiency performance range:

Energy Performance Certificate

B or above.



What if there are no suitable energy efficient properties that meets our operational requirements?

At present, it is uncertain whether energy-efficient buildings that align with our operational needs will be readily available.

If the availability of properties in the market fails to meet NCC's performance standards, it is crucial to clearly outline alternative solutions. In such scenarios, the following approach should be adopted:

The designated officer is required to provide justification in the initial business case or option appraisal.

Explanation of any deviations from policy, accompanied by commentary (*e.g., The inclusion of professional property searches has failed to satisfy both operational requirements and energy efficiency standards*).

Identification of strategies to mitigate energy performance issues in alternative proposals (*e.g., engaging with the Carbon Reduction Team, securing funding for low-carbon interventions to enhance property performance levels through capital expenditure or grant funding*).

Provision of an indicative roadmap outlining the necessary measures and associated costs to retrofit the property to an acceptable standard.

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