

# Planning, climate change and sustainability, with reference to development in London

Account of Forum meeting on Monday 13th September 2021 on Zoom  
Full minute by James Mitchell also at [planninginlondon.com](http://planninginlondon.com) > LP&DF

## DISCUSSION TOPIC

Planning, climate change and sustainability, with reference to development in London

### Leading:

- Ashley Bateson – Hoare Lea – Chair of the NLA Expert Panel to inform their “Zero Carbon London” report published at the start of the year
- Mitch Cooke – Director at sustainability consultant Greengage
- Will Hurst – executive editor Architects’ Journal – Currently running their Retrofit Campaign

Brian Waters welcomed everyone and introduced the first speaker: **Ashley Bateson (Partner Hoare Lea; Chair NLA Net Zero Expert Panel) Advancing Net Zero. Zero Carbon London.**

-AB introduced himself, having a background in engineering-design but in the last 15 years he focused on sustainability as a specialism looking at how the build environment impacts the human experience, community and environmental impact.

-AB outlined the presentation would start with the content page – starting with what net zero carbon and whole-life carbon are, an overview of the NLA net zero carbon expert panel and a summary of the Net Zero London recent report and survey findings; and insight on future policy proposals

-AB outlined the 3 Key challenges for sustainable development –the climate protection, the protection of the biodiversity loss, and wellbeing.

-The Advancing Net Zero programme of the World Green Building Council (amongst others) – is a charity that advocates that all new buildings should operate net zero carbon by 2030 with the longer term roadmap of achieving net zero in complete operation in body carbon by 2050

- The World Green Building Council defines a net zero carbon building as a highly efficient energy building with all the remaining energy coming from on site or off site renewables

-Key principles are measurement and disclosure carbon, reduce energy demand, generate balance from renewable and improve verification and rigour shifting the focus on outcomes matter

-AB was happy that many leaders, investments and developments are committing on net zero (Net Zero Drivers. Developer Climate Commitments).

-AB outlined signatories of Better Buildings Partnership(BBP) Climate Change Commitment – planning to fund net zero for new and existing buildings.

-AB explained that there are evidence of the business case and attraction of a building with better environmental credentials for both tenants and landlords.(Net zero drivers. Tenant perspective)

-A study from JLL showed that sustainable build-

ings have 6%-11% rental premium and lower vacancy rates (based on study of London office market).

-London Plan. Net Zero Policy –provides information on energy hierarchy: Be Lean- use less energy, Be Clean- supply energy efficiently, Be Green- use renewable energy and Offset Payments being made to the local authority as required by policy. There is a recent addition to the policy Be Seen objective – to disclose the measured building performance, the whole life cycle carbon assessments and the circular economy statements.

-Brian Waters (BW) asked how the performance can be measured all the time?

-AB - The verification process will entail metering of total building energy consumption and that will be converted to carbon using carbon factors from the grid.

-AB explained what is zero carbon development and defined the operational and embodied carbon.

Embodied carbon is upfront carbon in construction and involves an assessment of the emission arising from the extraction of the material, the manufacturing and modification of the material, the transport and installation of the actual construction works. It also includes any replacement and refurbishment during the life of a building.

Operational Carbon takes into account the in-use energy (power and heating) and any renewable energy generation and ultimately offset any balance.

## Meeting held on Monday 13th September 2021 on Zoom

### Moderators

Brian Waters – Chairman  
Jonathan Manns – Vice chairman  
James Mitchell – Hon Sec

### Speakers

Ashley Bateson  
Mitch Cooke  
Will Hurst

### Participants:

John Walker  
Peter Eversden  
Terry Vanner  
Andrew Catto  
Mary Hogben  
Simon Gillespie  
Patrick Inglis  
Gavin Felgate  
Jonathan Louth  
Janet Laban  
Kana Nomoto

Imogen Anderson  
Sarah Newman  
Andy Lamb  
Tim Gough  
Nigel Abbott  
Pearl L U  
C Trott  
Geoffrey Robje  
Jan Donavon  
Riette Oosthuizen  
Jim Fennell  
Ruby Raw

## Key challenges for sustainable development.



Offsetting is a legitimate part of the strategy for net zero. The whole life carbon includes both embodied and operational emissions.

Net Zero carbon. Whole life assessment.

-The proportion of operational carbon vs embodied carbon is shifting to make more of an emphasis that embodied carbon is something that we should tackle.

-The operational carbon and the embodied carbon generated from building elements replacement will increase over time and can be assessed using modelling tools at pre-planning stage.

Getting to zero in operation. Follow the energy hierarchy.

-There is a planning hierarchy that London Plan has to improve the carbon credentials of a project: Assess, Reduce, Generate, Source, Offset and Verification.

-AB recalls that he had an interesting interaction with planning officers. Working on a project in N London, there was a tension between planning requirement to not see any building servicing equip-

ment and the carbon consultant climate agenda to use larger plants that are more energy resistant. Many of the energy efficient equipment used can be quite large and people should be aware there is a sacrifice that has to be made on the aesthetics of the building.

Use less. Reducing embodied carbon.

-Through the lens of carbon – it should be given priority to refurbishment/retention over new build, simpler building forms, reclaimed and recycled building elements systems to reduce waste, fewer internal finishes and use of robust and resilient materials that tend to have fewer plastics.

Jonathan Louth – noted that the lifespan of a façade is 25-30 years. What are the findings that the developers are bringing forward?

AB – If you have curtain walling or a panelised system that has components does not last 60-100 years, replacement cycles has to be considered in whole life carbon.

Brian Waters – expressed concerns about the lifespan of 2 extremely attractive buildings materials

- BW** BRIAN WAT... (Host, I
- AB** Ashley Bateson
- C** CTrott
- AC** Andrew Catto
- c** carlxb
- DR** Diana Rogers's iPad
- GF** Gavin Felgate
- GR** GEOFFREY ROBJEN1
- i** iPhone
- JM** James Mitchell
- JL** Janet Laban
- j** jfennell
- JM** Jon Manns
- JL** Jonathan Louth ArCc
-  Katie Wilmot
- KK** Kerstin Kane
- MH** Mary Hogben
- MC** Mitch Cooke Green
- NA** NIGEL ABBOTT
- PI** Patrick Inglis
- P** PearlU
- PE** Peter Eversden
- PS** Peter Shadbolt
- r** riette
- RR** Ruby Raw
- SN** Sarah N
- SG** Simon Gillespie
-  Terry Vanner
- tg** tim gough

such as neoprene and mastic –having roughly a lifespan of 30 years if installed correctly.

Jonathan Louth - noted from his experience that the elasticity of the mastic attached to masonry type products as a joint in brickwork breaks down. >>>

**Advancing Net Zero**  
A World Green Building Council global project

**WorldGBC definition:**  
A net zero carbon building is highly energy efficient with all remaining energy from on-site and/or off-site renewable sources

**2030** All new buildings must operate at net zero carbon

**2050** 100% of buildings must operate at net zero carbon

**Key Principles**

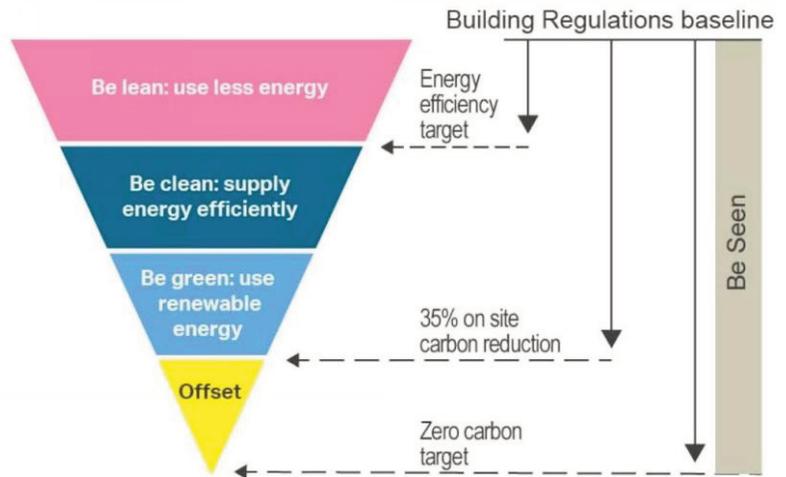
- 1. Measure and disclose carbon**  
Carbon is the ultimate metric to track, and buildings must achieve an annual operational net zero carbon emissions balance based on metered data
- 2. Reduce energy demand**  
Prioritise energy efficiency to ensure that buildings are performing as efficiently as possible, and not wasting energy
- 3. Generate balance from renewables**  
Supply remaining demand from renewable energy sources, preferably on-site followed by off-site, or from offsets
- 4. Improve verification and rigour**  
Over time, progress to include embodied carbon and other impact areas such as zero water and zero waste

GOVERNMENT ENGAGEMENT  
TRAINING & EDUCATION  
CORPORATE ENGAGEMENT  
CERTIFICATION

# London Plan. Net zero policy.

- Need to include information on how the building's actual energy performance will be monitored post-construction and declared on the GLA's online platform.
- Whole Life-Cycle Carbon Assessments.
- Circular Economy Statements.

The London Plan energy hierarchy

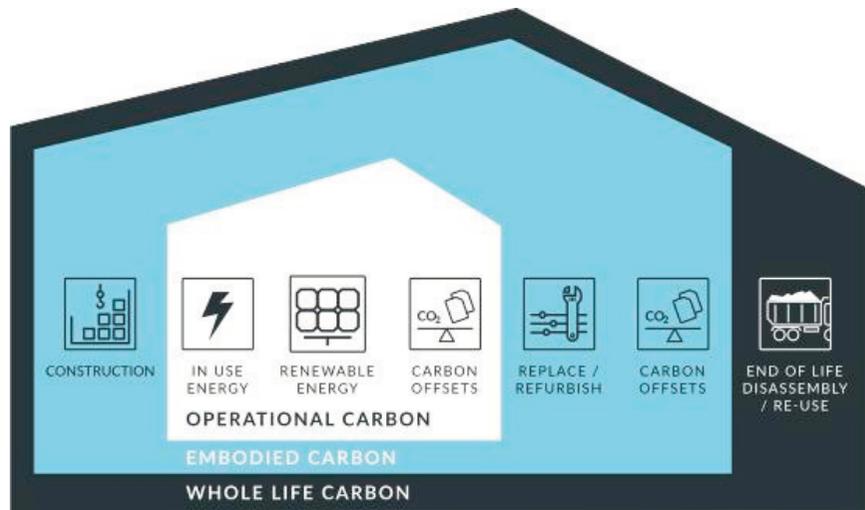


## What is zero carbon development? Defining the scope.

UK-GBC framework defines two potential targets for net zero carbon:

- Net zero carbon in construction and refurbishment (embodied)
- Net zero carbon in operation

Whole Life Carbon includes embodied and operational carbon emissions together.



>>> He had no experience on glass façade with neoprene – but it can be seen in modern properties that neoprene strip shrunk and opens at the joint and often slips out the glazing.

-AB recalls that an RIBA president in mid 1970s said Long Life Loose Fit Low Energy to be an imperative of architecture, and it is as valid as it was in oil crisis. Adaptability and low energy is still crucial.

NLA – Net Zero Panel

-The panel focuses in understanding the priorities for London Leadership to achieve Net Zero and the role that the built environment has to play in meeting this target.

-The panel has a number of representatives such as architects, developers, public sector representatives, Historic England representative - allowing for a rich and diverse conversation.

NLA – Statistics

- Surveying over 100 companies working in the London built environment sector (New London Architecture members) – 85% of NLA members believe that current policy and regulations are not compatible with zero carbon ambitions; 91% believe COVID 10 presents an opportunity to transform our way of life and transition to a 100% green

economy; 90% of the build environments should be retrofitting – if we want to address climate emergency.

James Mitchell asked what is the approach to existing buildings? How difficult will be to address this in the next few years?

AB –The building regulation did not address an approach which is why more intervention is needed. It is difficult to generalise because a 1930s townhall will be a different challenge than a residential development in the 80s. More case studies are needed to be reviewed.

-Chris Trott noted that it is extremely difficult to proof the case that if an existing building is knocked down and a new building is built to the highest standard, the new building will be better than improving the existing building.

Transport should play an important part in assessing a building. To a building accessed by foot or public transport or bicycle – you might be adding 15%-20% in carbon, while a remote building, accessed by car you might be adding 200-300% life carbon. It is difficult to see a context where you can get a policy right without understanding the relation between the building and transport.

AB agrees that transport is critical to the sustainability of the building. The context of transport hubs should be taken into account and generally transport is a key part. That holistic approach and site context is really important.

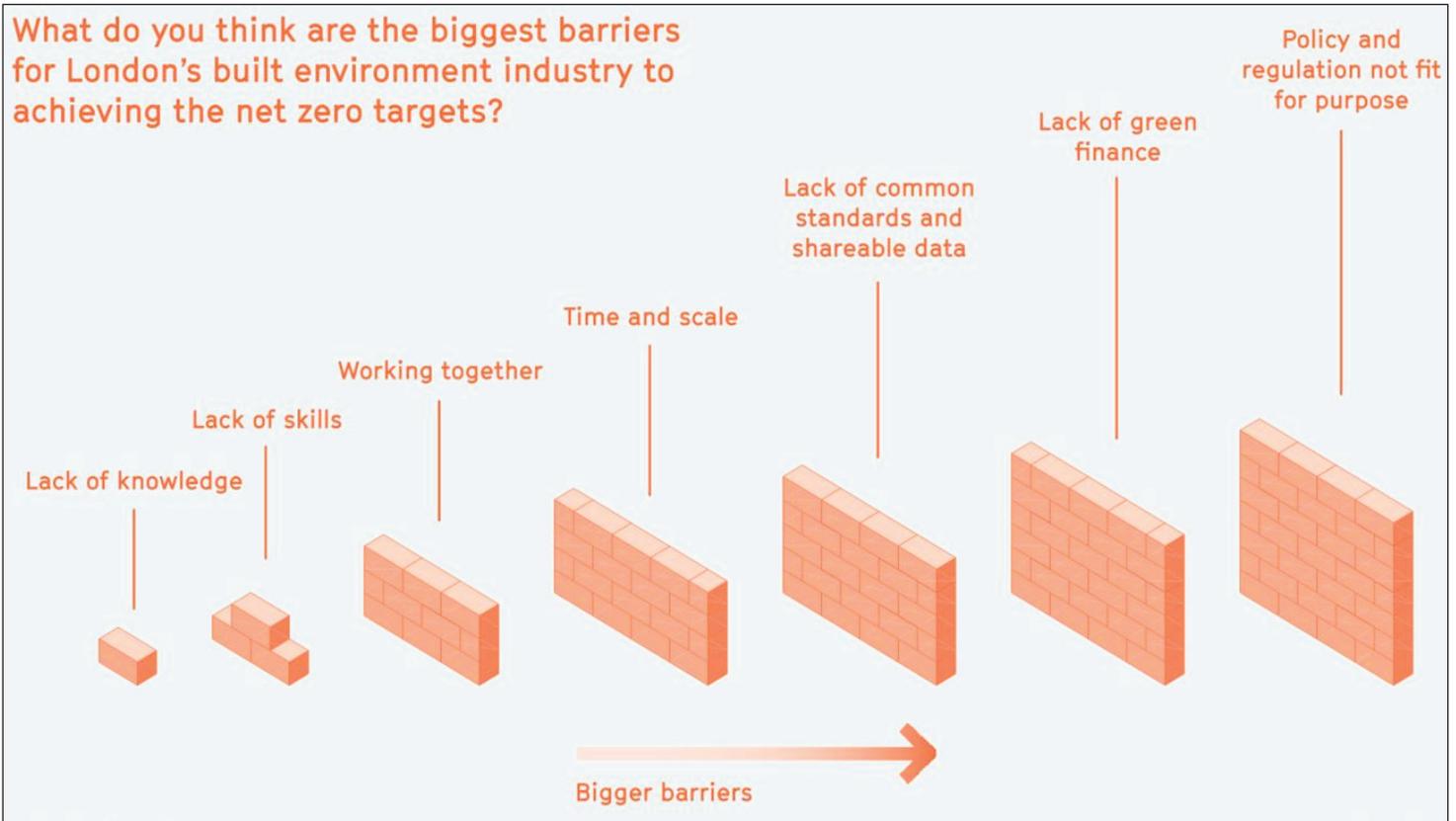
- He provided an example of the building that was difficult to refurbish and the solution was part demolition and rebuilding a new side to be more adaptable. Taking a look at the length of the time – a new build was a more sustainable outcome.

-Brian Waters: asked a question about BREEAM and LEED. BREEAM does not take into account the embodied energy that LEED does. There is a great preference for using LEED as it is considering broader range of criteria. Is it possible to imagine an assessment as broad as discussed?

-Chris Trott : We are using standardised methodology – extension ISO methodology, and it is certified. LEED and BREEAM are specific tools and they did not grow up to do what we discussed.

-AB: - BREEAM is now part of the embodied carbon assessment agenda and it has evolved. It is suggested to be considered at RIBA Stage 2 and updated at Stage 4. BREEAM got better but can be complemented by other assessments methods.

## What do you think are the biggest barriers for London's built environment industry to achieving the net zero targets?



-AB responds to a comment about how far do we go at considering the users/uses carbon footprint? There are scope 3 emissions – 1-2 is about energy in the building, scope 3 considers the supply chain.

NLA report and survey findings:

-The survey showed that the issue of climate change has a higher level of importance on the individual level than on an organisation level.

-99/105 companies had either signed industry pledge or have set their own carbon reduction targets including a range of climate emergency declares.

-most NLA members felt that the government is not on track on meeting the net zero carbon emis-

sion by 2050. For London being on track, there is more confidence however the general feel is that is not enough.

-The biggest barriers for London's built environment is more about the policy and regulations for purpose.

-The action to have the most impact in achieving 0 carbon is retrofitting to become 90% of the work of all built environment.

-There is a general feel that increasing green infrastructure and adopt a whole life carbon assessment to all new projects could be implemented in the next 5 years.

-AB thinks that if the environmental imperatives are part of the property interaction conversations

maybe landlords will accept the interventions.

**Mitch Cooke**

Director at sustainability consultant Greengage  
**Planning, Climate Change & Sustainability**

-MC - Introduced himself and discussed several projects he worked on and the approach Greengage had taken on design:

-Greengage worked closely with Enfield Council – helping to set up the climate change declaration and carbon footprint. It became apparent that the greatest opportunity was to reduce scope 3 emissions. Greengage looked at building performances but also how to encourage people to commit on zero carbon. Engagement with other builders, owner or land owners or occupiers was really important.

Catford Masterplan. The masterplan- sustainable in transport and engineering . Located in the town centre in Catford, the proposal is looking at performance of the building and retrofitting. The aim was to create a green and resilient town centre from a social and economic perspective as well as resilient to climate change.

Low line in Southwark (*SEE left*) – bring forward the regeneration of the arches running from London Bridge to Bermondsey. Reuse of the spaces and repurpose of the buildings to make them energy efficient. The aim was to connect people with the places and making entrepreneurial central theme of food and beverage. As well as introducing green infrastructure and greenery.

Old Kent Road area action plan area – the proposal creates a new city scape and a new central >>>



area that delivers 2000 new homes & 500 sqft of new commercial and office space in Southwark. The >>> aims were to connect the green spaces, make people more active and for buildings to accommodate for the new climate change requirements.

-It is important to ensure that the spaces are modelled and there is an understanding of the impact on climate change.

Clapham Park – large residential development. Focusing around green infrastructure, building performance, and encouraging people to meet and mix. Ensuring the issues around low heating are designed out and natural ventilation can cool the spaces between the buildings. The scheme proposes over 2500 new homes.

Elephant and Castle – high level of greenery, biodiversity. The aim was to make spaces sustainable in terms of people use and climate adaptation.

-London is not the only location looking at the climate change. There is an area action plan for Swansea Council – delivering a new shopping centre and arena. Again, the aim was to deliver a sustainable design and reduce embodied carbon in the high efficiency, operation carbon understanding.

-James Mitchell: Where does UK stand internationally in relation to the approach to net zero?

-MC: Climate risk has been looked at an European basis. There are some variations when we start looking at America and Asia. Their perception of sustainability and what they are doing in terms of net zero carbon and ambitions sits within ESG (environmental, social and governance) approach. In UK – planning system delivers places rather than individual buildings. Covid has helped the debate. The connection with green spaces has elevated in that period.

-Jon Manns- With an increase in requirements for climate change, biodiversity, and sustainability - are we able to adequately resource this within the planning department or is it a skill shortage?

-MC: There was a shrinking of the industry and as a result the skill set that is needed is in short supply. Clients bring specialist to deal with climate change but there is a small pool of people dealing with sustainability and a high demand.

-MC noted that it is important when we talk about net zero and building performance to consider the people. They need to be brought into discussion as it is an essential element.



#### Will Hurst

Managing editor *Architects' Journal*

#### RetroFirst

WH : Introduced himself and the RetroFirst campaign which is in favour of reuse existing building and against unnecessary and wasteful demolition.

-The AJ's ticking clock gif - the campaign ran on Feb 2019 as a response to Intergovernmental Panel on Climate Change report published 4 months earlier - suggesting that there are 12 year to directly cut carbon emissions to avoid catastrophe and limit global warming to 1.5 degrees above pre-industrial levels. The report suggested the carbon emission must fall by 45% from 2010 levels by 2030 to achieve this goal.

- the headline of the front cover of the print- 'Architects your house is on fire' - aimed to wake up architectural profession and galvanise them into action.

-The AJ campaign had a much wider context: Greta Thunberg inspired school strikes and her visit to Bristol, Extension Rebellion Actions, Parliament's own declaration of climate emergency and people blocking the M25 in favour of a new insulated written campaign.

-In June 2019 the government made a legal commitment of net zero economy by 2050 – and more recently Boris Johnson made a shorter term target even more ambitions with the target of cutting 78% by 2035 which remains unsupported by policy at the central government level.

-Architects –more of a problem for the climate emergency than a solution. They work in an industry where the whole carbon life emission is 45% of the UK emissions according to the government's Technology Strategy Board rebranded as Innovate UK. This figure includes both embodied and opera-

tional carbon emission.

-LETI estimates that embodied carbon is responsible for 10% carbon emissions. Example by building type shown in a graphic by Sturgis carbon Profiling based on data from the RICS: 35% carbon of the typical office will already been emitted while the figure for residential is over 51%.

Embodied energy of the materials in construction: -Cement - 8% of the global emission according to Chatham House;

-Plastic–construction industry consumes 25% of all plastic globally and they are single use plastics, according to NBS. It is seconded to packaging as the UK biggest producer of plastic waste by sector.

-Aluminium - the construction industry consumes 26%

-Steel- construction industry consumes 50% -Much of the waste goes to landfill when it could be helping to avoid new mining, new excavation, new industrial processes. The 200m tonnes of waste generated in Britain, 63% is construction debris according to Defra (department of environment, food and rural affairs). 50.000 buildings demolished.

-While more than 90% of the resulting waste material is recovered much of this is recycled into less valuable product of material rather than being reused. (downcycling)

What is the answer?

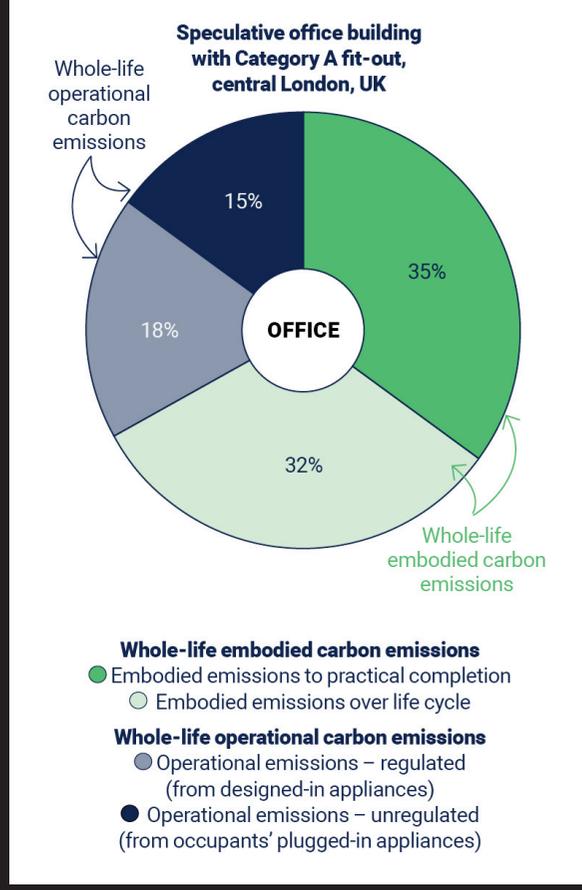
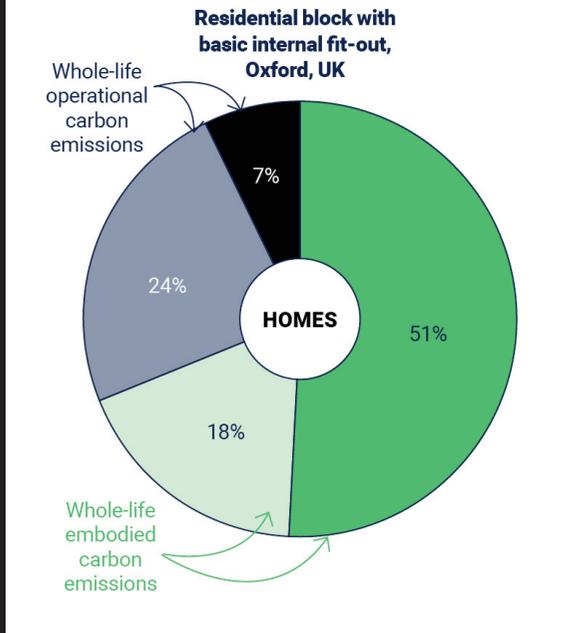
An example of a solution – Glasgow adapted a solution by high quality retrofitting of 3 council blocks Cedar Court by Collective Architecture. This project aimed to tackle fuel poverty as well as exemplifying the city councils shift towards retrofitting its high rise housing.

RetroFirst is directed to government.

There are 3 demands and 3 key areas:



## Carbon comparisons



• Source: Sturgis Carbon Profiling/RICS

- Whole-life embodied carbon emissions**
  - Embodied emissions to practical completion
  - Embodied emissions over life cycle
- Whole-life operational carbon emissions**
  - Operational emissions – regulated (from designed-in appliances)
  - Operational emissions – unregulated (from occupants' plugged-in appliances)

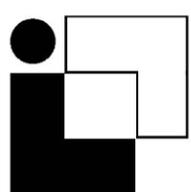
- >>> 1 Tax - The VAT rate on refurbishment, repair and maintenance to be cut 5% or below
  - 2 Policy – Promote the reuse of existing building stock and reclaimed construction material by introducing new clauses into planning guidance and the building regulations.
  - 3 Procurement – Stimulate the circular economy and support a whole-life carbon approach in construction by insisting that all publicly funded project look to retrofit solutions first.
- How is RetroFirst progressing?
- published a second special issue on RetroFirst
  - the campaign had been covered by many national media and received much support from names such as Thomas Heatherwick, Norman Foster, David Chipperfield, as well as property giants such as British Land, Canary Warf Group, Urban Splash, and RIBA, RICS, UK Green Building Council.
  - 2 of the recommendations have won backing from the Commons Environmental Audit Committee announcing a new inquiry into whole life carbon in construction.
  - now the campaign is focusing on lobbying government and raising awareness among the wider public, as well as the Environmental Audit Committee which it was submitted to cabinet ministers, the Comprehensive Spending Review, The Suburban Task Force and the consultation on the planning White Paper.
  - there are some signs that the campaign is getting

through as planning minister in the Lords Stephen Greenhalgh said that the lessons of the campaign will be fed into the planning policies as it evolves. -despite all the support, it is difficult to spread the message across especially to ministers and others in power

Brian Waters: In the past RIBA published fee scales and the works to existing buildings were always a different scale from designing a new building and it was

double the % fee. The ACA (association of consultant architects) did a survey with the AJ – asking architects the time they put in to do their job – the response lead to calculate a new fee scale. The result showed that the amount of work needed of the existing buildings was not significantly different from new buildings. The ACA and AJ established that the fee scale was the same. The campaign resonates well with most architects.

-WH: The campaign is helpful to the heritage >>>



**London Planning & Development Forum**

**NEXT MEETING**

**Monday 29th November on Zoom**

email [jm@axiomarchitects.co.uk](mailto:jm@axiomarchitects.co.uk) if you would like to join the discussion and receive the link

>>> lobby because it points to an architectural and historic interest as the main things we should be concerned about when demolishing a building.

It also helps to have an understanding of the value of the box standard building in terms of the embodied carbon without clashing with the government priority to beauty.

-Brian Waters: We should propose permitted development right which permits automatically fattening of a façade where is a zone half a meter deep where you do not need planning permission as long as it is not a stick a brick and it is not in a conservation area. With all the constraints, one cannot extend forward of the building line at all. If wanted to insulate the building externally you have to ask for planning permission which is a make work and not a productive process.

Andrew Catto: The planning system is geared to prevent changing existing buildings.

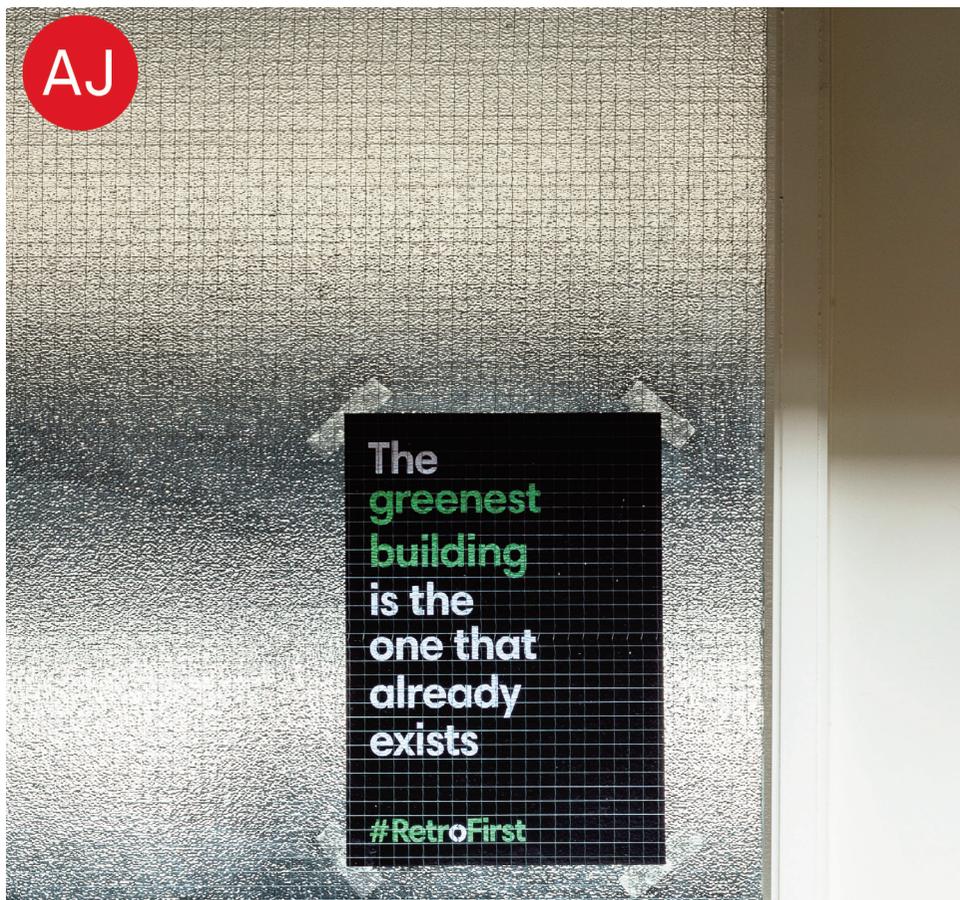
Brian Waters: The campaign has more of a planning dimension looking at this kind of issue. The priority should be the VAT and once you get through the planning system – it has a bias to fight the change of existing building.

WH: Convincing the treasury to change that will be very difficult as they resisted for decades and even if it is a stronger argument they do not want to lower the rate of the new build VAT which will equalised it and make the cost neutral in theory. The VAT is a bigger win but planning reform is easier to achieve. Nevertheless it is difficult getting through to ministers or senior civil servants at MHCOG (ministry of housing, communities and local government).

Ashley Bateson: There is tension on refurbishment buildings to make them lower carbon. Low carbon refurbishment has visual impacts we are not used to. Is this something that you addressed in the article that has the objective to significantly reduce carbon?

WH: The campaign is not calling on massive programme on retrofitting although it is implicit. That is the focus of insulated Britain campaign. We did not write a great deal about the technical challenges as it was not the focus of the campaign.

£9.2 billion was promised in 2019 manifesto to



programme of retrofit housing, schools and hospitals. But nothing has been heard since then.

Tim Gough: project manager of the closing of M25 as part of insulate Britain. Until the government will respond, the M25 will remain closed. The demands are that the entire housing stock of the UK being retrofitted to 0 carbon standard by 2030.

Looking into the feasibility of getting things done by 2030 the requirements are 100 billion pounds per annum, taking about half a trillion and trillion pounds over 8 years. To achieve this will require the doubling of the size of construction industry and it will require the complete overhaul of the planning system.

Jim Fennell: View from a planning and development perspective – government has been preoccupied with housing crises. Climate change, carbon net

zero – probably another five years will have to pass to be considered in the same light as the housing crisis.

Replacement of the gas boiler with ground source heat pumps was covered in the media. For the retrofitting to work involves massive public subsidies by government. The government is struggling with it. The planning policy is part of the answer but the building regulation should mention subsidies. An important part in beginning to solve some of the problems.

Jonathan Louth: For Catford Masterplan– St Laurence House is proposed to be demolished and 3 taller buildings put up in its place. The heat loss to use area in this new building massively exceeds that of the existing building. Often, demolition is not necessary.

When it comes to buildings - we are installing a huge number of labour saving-energy using devices in the interest of management of the buildings. The interest should move towards something that although takes longer can be done by hand using food energy rather than carbon energy.

WH: Demolition it became a default. There are times where demolition has a good reason but many times does not – it is about not being profitable. They need to be reminded that it is a big hidden cost that all we will be paying for.

The next meeting of the Forum will be Monday 29th of November subject to confirmation. To be discussed if the meeting will be in person or on Zoom or both. ■