

Environmental Audit Committee

Oral evidence: Sustainability of the built environment, HC 76

Wednesday 19 January 2022

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Members present: Philip Dunne (Chair); Duncan Baker; Sir Robert Goodwill; Helen Hayes; Cherilyn Mackrory; Jerome Mayhew; John McNally; Dr Matthew Offord; Valerie Vaz; Claudia Webbe.

Questions 181 - 249

Witnesses

I: Adam Mactavish, Director, Currie & Brown; and Alexia Laird, Sustainability Manager, Landsec.

II: Eddie Hughes MP, Parliamentary Under-Secretary of State (Minister for Rough Sleeping and Housing), Department for Levelling Up, Housing and Communities; Catherine Adams, Director of Net Zero and Greener Building, Department for Levelling Up, Housing and Communities; The Lord Callanan, Parliamentary Under-Secretary of State (Minister for Business, Energy and Corporate Responsibility), Department for Business, Energy & Industrial Strategy; and Damitha Adikaari, Director for Climate Science and Energy Innovation, Department for Business, Energy & Industrial Strategy.

Written evidence from witnesses:

- [Department for Levelling Up, Housing and Communities, Department for Business, Energy and Industrial Strategy, and Department for Environment, Food and Rural Affairs](#)



Examination of witnesses

Witnesses: Adam Mactavish and Alexia Laird.

Q181 **Chair:** Welcome to the Environmental Audit Committee for the final oral evidence session in our inquiry into sustainability of the built environment. We have two panels today, our first panel with representatives of the construction industry in its various forms and, secondly, we will be joined by a panel of Ministers.

I will start our first panel by welcoming Alexia Laird from Land Securities, and Adam Mactavish from Currie & Brown. Could you explain to the Committee what your roles are and, therefore, how suited you are to give us evidence today?

Alexia Laird: I work for Land Securities, as mentioned. I lead on sustainable design for all their development activities, of which we have an extensive pipeline. My role is to ensure that the ESG strategy and the net zero carbon commitment translates into our development activities.

Adam Mactavish: Good afternoon. I am a director at Currie & Brown in the advisory services business unit, leading on sustainability services. My work over the last 15 years at Currie & Brown has focused on the costs and benefits of low carbon and sustainable buildings. That has included work on building regulations, certainly the last iteration of building regulations in 2021, and with the Committee on Climate Change.

Q182 **Chair:** That is a very good lead into my opening question, which is to you, Adam. Could you explain to the Committee what the commercial rationale is for architects, developers and contractors to adopt a low-carbon approach to construction?

Adam Mactavish: Can I just clarify, do you mean construction materials or—

Chair: Why is it in their interests, what are the commercial advantages to the individual companies of going down this route?

Adam Mactavish: There are a number of advantages. The most prevalent one that we see at the moment is the expectations of clients or stakeholders. If you are a developer—and I am sure Alexia will talk more about this—your investors and occupiers are demanding it of you. If you are a contractor, your clients are demanding it of you. If you are a consultant, everyone is demanding it of you. Therefore, it is a necessity in large parts of the market.

Within our business we have seen a very significant increase in demand for these sorts of services and advice across the whole of the UK in the last 18 months to a level that we have not seen before. It comes across all the sectors that we operate in and from public and private sectors. Probably the only exception to that is in parts of the UK where there is less commercial pressure from occupiers and less land value. The overall



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demand, demonstrated particularly on embodied carbon, for implementing good practice is slightly lower.

Q183 **Chair:** Is this demand primarily driven by regulation, that occupiers feel that they will be compelled to occupy, or is there a financial benefit in being in a well-insulated building meeting good net zero credentials? Perhaps Alexia will answer this from Land Securities.

Alexia Laird: I think it is a bit of both. There is an element of companies where it goes into their brand. They want to be seen to be occupying low-carbon places that inherently then lower their bills. That also feeds into their own corporate reporting. Typically, it is commonly said that one of the two main ways for a company to reduce its emissions is through travel and by occupying a lower net zero carbon building. There is an inherent benefit to that in meeting their own corporate commitments to carbon reduction measures.

There is also an element of knowing that regulation is going that way. We are seeing MEES tightening to an EPC B by 2030 and we are getting an increasing number of questions from current occupiers about what that means for their business. We have committed to going beyond that. We have an investment fund to decarbonise our existing asset that will in and of itself then attempt to meet the MEES regulation. There is an element of both.

Q184 **Chair:** Is that investment fund a corporate fund where you have set aside some money to retrofit buildings?

Alexia Laird: Absolutely.

Q185 **Chair:** Are you also seeing pressure from investors to do this?

Alexia Laird: Absolutely. The ESG strategy is becoming an inherent proof point of business resilience. Especially in the last few years I am getting increasingly pulled into conversations with investors because they want to understand our strategy and ensure that it is solid and credible and will meet the test of the future.

One of the interesting things that came out of the announcement of the £135 million fund that I just mentioned, which was announced in November in the half-yearly results by our CEO, is that a large number of the questions from investors as a result of our half-yearly financial results were to do with the fund itself and what it meant for the business and how it was going to be funded. The general interest in ESG strategy is absolutely on the rise from our investors.

Q186 **Chair:** What proportion of your existing estate will be able to be retrofitted by a £135 million fund?

Alexia Laird: A very good question. Within the £135 million fund we will be undertaking feasibility studies on all of these assets. You are right that not all of them will be able to be completely decarbonised but a large number of them will. The £135 million includes the feasibility studies and the measures to be implemented within those to achieve our science-



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based target by 2030, which is aligned with a 1.5 degree scenario.

Q187 **Chair:** Have you made an estimate yet of what the cost per square metre is of retrofitting to the right standard?

Alexia Laird: We have not, no. I will double check that with my team, but from my knowledge we have not. It is something that we hope to clarify.

Q188 **Chair:** You do not know how far the £135 million will go; it is just a demonstration of intent at this point?

Alexia Laird: It is a fair estimate and it is based on a number of months of research into our existing assets, looking at how they are running, looking at various levels of intervention that we could be undertaking, and an estimation of the decarbonisation, moving towards air-source heat pumps, so swapping out gas boilers to air-source heat pumps. I can't tell you a pound per square foot right now but I can try to dig it out and come back to you.

Q189 **Chair:** I ought to know the answer to this question, but where does Land Securities rank in the scale of assets that you manage, that you own as opposed to developing?

Alexia Laird: Until very recently we were the largest property holder in the UK. We have an extensive development pipeline. As it stands, we are looking at about 12 million square foot of development in the pipeline, quite extensive. We are very concerned about and active on the embodied carbon side of things.

Q190 **Chair:** Presumably you have not been building to that kind of standard for any of these buildings, or very few, until recently.

Alexia Laird: I would not say any of them. We have been doing whole life carbon assessments for about 10 years now, since Simon has been involved with Landsec. We have been doing it for a number of years and Landsec has a track record of innovating and trying to find new ways of doing things. It is true that given the extent of our property ownership, a large majority of them will not meet the right standards.

Q191 **Chair:** Have you issued green bonds that are related to greening your portfolio?

Alexia Laird: We do have a green-bond framework available, yes.

Q192 **Chair:** This is not your area, probably, but does that have a pricing advantage to the company in being able to issue green bonds? Is the demand such that you can get cheaper financing?

Alexia Laird: I am not able to answer that but I could get back to you.

Chair: It would be very helpful if you could write to the Committee when you have had a word with the finance director about that.

Alexia Laird: Of course.



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Q193 **Chair:** Adam, if you have been advising Land Securities, is Land Securities an outlier in this respect? You said that much of the industry is moving in this direction. Have you seen other companies setting aside specific amounts of money to retrofit their properties?

Adam Mactavish: Yes, to a greater or lesser extent. I am not sure of others that have made a public commitment to a specific amount, but we are certainly working with a number of London property companies that are in the process of doing exactly that review of what they need to do to each of the buildings in their portfolio and trying to determine the budget cost and investment required to make that happen.

Q194 **Chair:** Do you think there is a need for Government to get in the way here in providing some kind of financial support for a low-carbon construction within the commercial sector or should they focus any available resource that they have on households?

Adam Mactavish: From my perspective, the prime London and city centre commercial market does not need further support. There will be valuable secondary and tertiary buildings that if they were asked to achieve an EPC of B would struggle to do that viably and would therefore be taking valuable space out of local economies and local community business start-up space and things of that sort. Those might be areas that would benefit from support from the Government at whatever level. I am sure, Alexia, you have a view on the need for support within the central London developments, but that is where I would prioritise within the commercial sector.

Q195 **Chair:** I am going to stop asking and move on to other colleagues in a second, but one of the issues that we are grappling with in this inquiry is whether the embodied carbon of existing buildings is worth preserving as against demolishing and building in its place. Major city developers like Land Securities have, generally speaking, demolished and built new. You are suggesting, Adam, that there may be tertiary areas where there is not the value and the cost of retrofitting cannot be justified. That suggests to me that the corollary of that might be that if a building cannot be retrofitted to the right standard, it might make sense commercially to demolish it. How does that square if you are adopting an embodied carbon approach? Do you have a view?

Adam Mactavish: It would depend on whether the building can be made suitable to the local market requirements. There is no point in refurbishing a building to a low-carbon standard if it is not functionally suitable for the intended use that it will be put to. If, however, it is still suitable in its configuration and the nature of the space, it would typically be less expensive to refurbish than to rebuild but it would need support because it may still not be economically viable to do either. It might not be a case of it being rebuilt, it might just be space that is then lost. The embodied carbon saving from refurbishment or renovation as opposed to redevelopment is far more significant than the financial saving, so it should be prioritised on that basis.



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Alexia Laird: I echo that. It is dangerous to try to make blanket statements when it comes to these things and it is important to look at them case by case, and we are discovering that every day through the work that we do at Landsec. Every project is different. Some of them lend themselves well to retrofit and refurb, some of them do not, so it is dangerous to try to cover it in a blanket statement.

Q196 **Chair:** You are doing that analysis now?

Alexia Laird: Yes.

Q197 **Chair:** Did you do that before and until recently?

Alexia Laird: When you say before?

Chair: For how long have you tended to consider a refurbishment as opposed to a new build on a site that you have acquired?

Alexia Laird: As long as I have been involved, and even before I have been involved, Landsec goes through a long process of due diligence of exploring every single option on the table. That usually includes some kind of light refurb. Then we talk about repositioning, maintaining, if possible, the building and building in and around it, expanding it and the demolition. That has always been an audit trail that we have to go through.

The weighting of carbon is probably increasing in that decision making. It may not have been part of the decision making before but now it absolutely is. It is not just about financials, it is about how it will help us meet our corporate targets.

Chair: Thank you.

Q198 **John McNally:** Could I move you on to the costs of conducting whole life carbon assessments? My first question is to Adam and it is fairly straightforward. What are the consultancy costs of undertaking whole life carbon assessments, and do you consider these costs? How significant are these costs?

Adam Mactavish: They are very variable. There is a wide range of software tools available now that have made the costs considerably lower over the last three or four years than they have been previously. I first did an embodied carbon assessment of a housing development—it was a millennium community, which tells you that it was about 20 years ago—and it took about four months and was very labour intensive. We could probably do a similar exercise now in an afternoon in getting the data together and coming up with the same sorts of recommendations. The speed has significantly improved.

That is not to say it is a straightforward exercise. If you have a complicated, mixed-use commercial building, it is a significant undertaking and may cost tens of thousands of pounds to do the analysis. If you are, however, doing a much simpler structure, it can be done proportionately much quicker. In the future, if that were to be done



routinely, you would have a significant economy through people having standard solutions and element build-ups that they could just drop into their models and enable that to be done much more quickly than it is now. As a professional community, we are still doing our first couple of tens of embodied carbon assessments. When they are being done across the whole of the UK at scale, that assessment will be much quicker and more efficient.

Q199 John McNally: Following on from that, does the cost of the technical equipment that you are speaking of now vary for smaller developers? Is it proportionate to the size of the developer or the housing estate, whoever is conducting the assessment? Could you give us a wee bit of information on how that might vary for a small developer who started off renovating 10 houses or who has built new things as opposed to somebody in Westminster, where I am at the moment, with 200 flats in the whole estate that are all being looked at? How does that become workable for a small independent compared with someone who is really big?

Adam Mactavish: If you were to do a one-off assessment of a smaller building, it would be proportionally more expensive, the benefit being that if you are looking at a smaller building you tend to have a more standardised set of specifications and mix of materials that you are using. Clearly, if you were to do a single detached house that had a zinc roof and all sorts of fancy design features that you would not normally put on a standard house, that would take a bit more time. But if you were doing a brick and block or a timber-framed house and you had a standard set of specifications, if you are working with somebody who is experienced in that specification, you can put that information into a modelling tool and get an answer in short order. It is not a complicated exercise because they are relatively simple pallets of materials.

John McNally: Do you want to add anything to that Alexia?

Alexia Laird: No, I completely agree. When we started doing carbon assessments they were quite rare and few people were able to do them. The market has fundamentally changed since then. Ever since the GLA now requires it as part of referral planning applications, we are seeing a huge number of people getting trained up in it. That can only benefit the mass market. As Adam was saying, if it gets standardised, more people will be trained and it will lower the cost generally for the likes of the smaller housebuilders.

Q200 John McNally: That is one of the points that is of interest to us, about training people up to carry out assessments. How easy is it to train somebody up? Is it part of their whole architectural training, is that a specific areas that needs some sort of specialism, or is it just a tweaking?

Alexia Laird: I am not a modeller myself. They tend to be engineers. You do not have to be of a specific background to become a lifecycle analysis modeller. You can train up into that qualification. But the types of backgrounds that we tend to see are the likes of engineers primarily—

John McNally: That qualification is readily available to train up?



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Alexia Laird: Yes, absolutely.

John McNally: That is interesting.

Adam Mactavish: I make a distinction between a study where you were trying to break new ground and do something different and be at the very leading edge of performance and examining every little part of the specification, and the same for operational energy. If you do that, you will get a team of engineers and they will test everything and innumerable options, compared with if you are just applying a relatively standard specification and want to ensure that you have hit a particular threshold. That is more like a set model and somebody does that and could do that very quickly and efficiently. Different skills are needed. The first is due diligence, care and attention in translating a design into the model and the other is understanding all of the elements of the detail to be able to see where they can push and pull to improve performance.

Alexia Laird: That is exactly right. To your point about what it costs, it completely depends on the scope of the appointment. Typically, Landsec tends to get the embodied carbon consultants to embed into the design team and be involved in all the optionality, all the engineering and the decision points to ensure that we are choosing the lowest carbon options.

It does not have to be that way. You can strip it back to its bare bones and get more high-level input that gives you an appreciation of the impact of your project without necessarily going into the depth of that advisory piece. Again, we are seeing the demand for that rising for because clients like us start to question the designs to ensure that they meet our targets.

Q201 **John McNally:** I think I am getting the message here that the costs are less prohibitive because of the developments in technology, so for any kind of developer the costs should not be prohibitive so they try to cut corners in any way. Am I right to say that? My second question is to Alexia. What is driving Landsec to reduce embodied and whole life carbon emissions? What is the driving force behind that?

Alexia Laird: Our company is deeply rooted into its purpose and we have for a number of years been actively tackling the climate crisis. We were the first property company in the world to set science-based targets in 2016. It drives a lot of our business decisions.

Going back to what I was saying about the investment fund, we are seeing ESG and net zero claims as a key proof point to a credible strategy. That then translates into a long-term investment opportunity that is more favourable towards the strategy. We are a listed company and have a fiduciary duty to our shareholders. We have to prove that what we are doing is delivering value, but for us the value is in meeting our ESG strategy and meeting our corporate commitments, which is to limit the impact that we know the real estate environment can have on the world.

Q202 **Duncan Baker:** Adding on from where John left off, costs of materials



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and a general approach to the availability of those materials are probably two barriers for why we are not seeing more sustainability in our building environment. Do you agree with that?

Alexia Laird: Low-carbon construction methods have two sides. There is the lean design of things, which inherently tends to correlate with the cost plan. The less you build or the less material you use, the cheaper the cost plan. But when it comes to low-carbon materials, there are some prohibitive factors still. To your point, there are things typically like by going into more innovative low-carbon materials you restrict your supply chain and then you lose the competitive nature of the supply chain and can end up paying more. There is a big issue around insurances. From anecdotal experience, we tried to use earth-friendly concrete, which is a cement replacement—

Duncan Baker: We have had inquiry evidence on that as a particular issue and in our second session we will cover that with Ministers. We understand that that is a particular problem.

Alexia Laird: Building on the novelty of some of the lower carbon, we are facing a skills gap in the supply chain. There is definitely room for training up in carbon assessments and in things like retrofit and the installation of low-carbon materials. We still see trades get a bit nervous when we talk about the more innovative materials that they are not used to dealing with.

Duncan Baker: Yes, a bit of a cultural change.

Alexia Laird: Yes.

Adam Mactavish: It is important to remember the potential size of the benefit before we also talk about the costs. Most of the benchmarks would say that a typical building has around 1 tonne of carbon per square metre, as a rough business-as-usual benchmark. Based on the Government's own carbon valuation methods, that is £250 a square metre for carbon impact. For a typical semi-detached house that is £20,000 to £25,000 worth of carbon impact in that building.

Duncan Baker: That is embodied carbon?

Adam Mactavish: Yes, in the embodied carbon in year one. For a 10,000 square metre office it is £2.5 million. That buys you a lot of improvement. We are not saying that you could get that to zero but that certainly justifies spending time looking at it. It also means that some things that might be marginally more expensive from a social perspective and a cost-benefit analysis would be very favourable.

I will just put that to start with. I agree with what Alexia said, but we recently did a cladding comparison study and found that the four lowest cost cladding specifications were also the lowest carbon cladding specifications. That will not apply to every type of development and this was looking more at rendered finishes and facing bricks and things of that sort compared to metal panels. You can go to niche products or



emerging innovative products that are low carbon within a group or you can say that you will change the aesthetic and do something different. You can use lower-cost materials and lower-carbon materials to get an outcome that you are happy with. There are different ways of looking at it. It is not necessarily just cost; it is what we are prepared to design as well.

Q203 Duncan Baker: Following on from there, the obvious answer to me is that we need some sort of legislation in this, but I would say that because I want to bring forward my Bill on this. Am I allowed to say that, Mr Chairman? What can the Government use? Where are their levers to try to promote the availability and the use of low carbon? I know it is not just pure legislation and adopting Part Z but there are other things that can be done as well. Do you have any comments on that?

Alexia Laird: It sounds like Part Z has already been mentioned a number of times, so I will not go over it, but we are signatories of that and fully support it. I think the regulation is No. 1. The standardisation of the methodology so that—

Q204 Duncan Baker: That is a big problem, isn't it?

Alexia Laird: It absolutely is, because I get different reports from different consultants that I cannot even compare because the input has been so different or the methodology has been a bit different or the tool use has been different. Standardisation that could come through the regulation of it would help solve a lot of problems.

From my point of view, something that would help unlock all this is the Government taking a lead in procurement, putting it into their procurement. We see in France that there is now a commitment that 50% of new public buildings must be made out of bio-based materials. I would strongly encourage that and we would very much welcome it because it sends all the right signals to the market. Typically, as an example, we are looking to develop our first timber hybrid steel and CLT, cross-laminated timber, building in Southwark. We have had a huge amount of pushback and obstacles that we have had to overcome.

Duncan Baker: Is that in London?

Alexia Laird: It is in London; it is Southwark. It is called Timber Square.

Q205 Duncan Baker: Are you getting pushback even when London authorities are very keen on this?

Alexia Laird: It is not so much pushback, it is obstacles. We have had to undertake our own fire testing. The construction insurance is coming in at 20% to 30% premium. We have not quite sorted out the building insurance yet. All of these costs we are able and willing to take upon ourselves because we are a big developer but they can be quite off-putting for other people. If the Government could send a clear market signal that bio-based materials are safe, and put it into the procurement, that would then engender and automatically create a demand for it that would help to lower the costs, which still can be prohibitive now.



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Adam Mactavish: Two things, and they are very similar points. The biggest gap is clear, good quality information that is comparable. I mentioned 1 tonne per square metre as a benchmark, but the reality could be quite a considerable margin around that. There is not the source of good data that the industry can look to. That is one of the benefits that will come from regulation and is a precursor to setting those more challenging targets rapidly once that data is in place.

I was involved in work that was done by WRAP about 10 years ago on recycled content in materials and noted that the way in which it approached it—which was largely through procurement, public sector procurement and major developers and other industry leaders setting out a requirement—transformed that market very rapidly. There is already a strong willingness to go into looking at embodied carbon within the construction product sector. But by setting some clear goals around what Government look to do in public expenditure, I am sure that the private sector would come in and support that. That would give people the willingness to want to invest to decarbonise their products further. They are already doing it but it would help accelerate that process.

Q206 **Duncan Baker:** We are getting the Minister next, who will sit where you are and who I gave quite a hard time to when we very first started to talk to him about this.

Chair: He will be hiding now.

Duncan Baker: He is behind me, is he? One of the points that was made then was that some of this was cost, which we have just covered, but also being market-led. I think the market will be there for this if we give people the incentives to take it up and bring people along with us. Do you agree with me? I think that most people out there, consumers, do care about the environment and they want to do their bit. We have over 125 people signed up to Part Z now, from housebuilders right the way through to architects, so there are people out here who care passionately and want to bring this along with them. How are we going to get to that space? We will get there if the consumers start to demand that. Are you beginning to see that happen?

Adam Mactavish: Embodied carbon is particularly challenging because it is not visible to most consumers. It goes under the radar and I think this is an area where having some clear performance metrics—I am not for one minute advocating an EPC-type presentation of embodied carbon information but knowing that it has been done—

Duncan Baker: Oh, I would like that.

Adam Mactavish: —in an assured way and that information can be provided helps people to be discerning consumers of buildings and that is a big benefit. As I said at the outset, the top end of the market and the public sector can take a lead here and is doing so and in so doing will move the product sector so that everybody benefits subsequently. If the composition of a concrete block is changed so that it has much less



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cement in it, everyone who uses that benefits whether they ask to or not. That is a way of permeating it through the industry from that leadership.

Duncan Baker: Thank you, that is a good answer. Alexia, just quickly and then the Chair will growl at me to get a move on.

Alexia Laird: That is absolutely fine. I completely echo what was just said.

Chair: Thank you very much to you, Duncan. Thank you, Adam and Alexia. We will move on to the next panel who are waiting outside. Thank you very much. You are welcome to stay if you would like.

Examination of witnesses

Witnesses: Eddie Hughes MP, Catherine Adams, Lord Callanan and Damitha Adikaari.

Q207 **Chair:** Welcome to the second panel for our final oral evidence session in the inquiry into sustainability of the built environment. We are very pleased to welcome back some well-known witnesses to this Committee from the Department for Levelling Up, Housing and Communities. Eddie Hughes is Minister with lots of responsibilities, in particular housing. You are responsible for climate change, net zero and energy efficiency and therefore building regulations within the Department. Welcome, Minister. Could you introduce your director, please, Catherine Adams?

Eddie Hughes: I think you have done it. Catherine Adams is the director for the Department with regard to net zero and here to help.

Chair: Thank you. Welcome back also Martin Callanan, Lord Callanan, from the department for Business, Energy & Industrial Strategy, a regular visitor to this Committee. Your responsibilities include energy efficiency and clean heat within your Department. Could you introduce your director too, Damitha Adikaari, and his responsibilities?

Lord Callanan: You have also done that, Chair. Damitha is with me to support me on the technical aspects of this.

Q208 **Chair:** Thank you, you are all very welcome. This is quite a big day for building safety with a debate probably under way in the House of Commons now. I will ask both Ministers to start by giving a general overview of how you see the significance of introducing new rules on construction methodologies, materials, the taxonomy of introducing carbon into the calculations of how buildings get built, at the same time as introducing requirements on developers, contractors and owners of buildings to invest significantly in buildings that have been poorly constructed or have safety risks, as we are hearing about in the main Chamber today. I will start with Eddie with your perspective on the relative priority of dealing with these issues.

Eddie Hughes: Thank you, Chair. I will begin by saying that I started life as a civil engineer. As I have said many times, I remain a very proud



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member of the Chartered Institute of Building and I have been involved in construction since I was 20.

I do not see these things as being mutually exclusive or necessarily conflicting demands. It should be possible to build a building that is both safe and environmentally friendly, fully accepting the fact that given the business that is going on in the Chamber we have seen some dreadful examples of where this has gone wrong. The use of the term “value engineering”, which used to mean switching or substituting materials to improve cost but also maintain the same standards, seems to have become tainted by the idea that an ever-demanding cost pressure has sacrificed safety sometimes.

I feel the same should be true when it comes to the environmental ambition that the Government and the sector have. We have already seen many of the big builders joining the UN-sponsored Race to Zero, signing up to not just ensuring that the products that they produce, the buildings that they design and build, are energy efficient but also ensuring, in light of the current legislation and the focus post-Grenfell on safety, that buildings are more safe and secure.

The chartered institute has done a lot of work on this and there is great buy-in from the big building companies and the small ones that understand now that safety and construction and the finished product are paramount. The focus that the Government and the country are now putting on net zero means that that is rocketing up the agenda as far as the public is concerned, as well those who procure, design and build the structures that we will see in the future.

Chair: Thank you. Lord Callanan, do you have anything to add?

Lord Callanan: I agree with Eddie’s comments. From a base perspective, we very much recognise the importance of embodied carbon and whole life carbon. Of course, if we are to achieve net zero, we have to decarbonise both of them. In the net zero strategy we set out some initiatives on embodied carbon, including on infrastructure and major products, industrial goods, the construction sector and so on and, as Eddie says, exploring maximum levels for new builds in the future. There are various initiatives going forward on that in the Green Construction Board, the road map to zero, avoidable waste and so on, the details of which I am sure we will get into shortly.

Q209 **Chair:** I am pleased to hear that you regard it as an important priority. If we look at comparable countries, the Netherlands, for example, have had a requirement for residential and office buildings larger than 100 square metres to have whole life carbon calculations and carbon mitigation cost estimates since 2013. That is eight years ago. In France, I think it is imminent. I am not sure if it has done it yet but it is on the point. We heard from our previous panel that 57% of materials need to be bio-based for new construction in France now. Many other countries in Europe have other regulations. We do not seem to have anything yet. There have been some suggestions from advisers to Government that we



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need to get on with it. What can you tell us about the current Government approach to introducing—I know that a consultation has been under way. Where are we getting to with establishing a national policy to measure whole carbon impact of buildings?

Lord Callanan: We have to start by recognising that it is a very complex area. There is no standard agreed methodology yet. In the examples that you quoted, different countries are interpreting it in different ways. There are diplomatic trade-offs, what you do about imported products, world trade implications, supply chain implications and so on. We accept that we need a standardised, widely accepted assessment methodology and we are exploring that and, as you mentioned, we have the call for evidence. We are committed to taking it forward, but I think the best way to approach it is to do it in concert and in partnership with business and construction companies and others going forward. Many of them are committed to doing that through the Green Construction Board and others.

Q210 **Chair:** The construction industry tells us that it is very keen to get on with this and is, by implication, suggesting that the Government are being sluggish in bringing the issue to the table. Where are we with standardising UK methodology and tools for whole life carbon calculations? We have heard that RICS, for example, has drafted something. We have had evidence from a number of sessions that there is a standard out there. I appreciate that we are in a consultation. Can you elaborate a little bit on the options that are facing the Government at the moment?

Lord Callanan: We accept that we need to address embodied carbon and we need to do it to achieve net zero, but there is the RICS methodology that you mentioned. That is quite complicated. It would incorporate advances in carbon assessment methodologicals and reporting. It is one of the options that we are considering for taking forward, but there are alternative views as well and there is some opposition to that.

Eddie Hughes: Chair, can I add very briefly to that? My understanding, as Martin says, is that it is complicated. I think, if I remember correctly, that the RICS approach is fundamentally a paper-based approach where you have to fill in forms and calculations along the way, whereas in the 21st century we need some sort of online process that feeds into the data. But to get to that position you need all the constituent data that then feeds into the process to be available. We are seeing some developments in this.

While RICS is the system that has been around the longest and has gathered momentum for that reason, it needs to be a bit slicker and a bit smarter. That is on the one hand. Secondly, and we saw this when we were designing the standards assessment procedure, the database of information that is used to feed into that process also needs to be regularised. We need to have a settled format for it because, depending



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on which database you are drawing your information from, it brings different results.

Chair, if you will indulge me for 10 seconds to say, because you and I might be of the same age, if we remember VHS versus Betamax, we had two competing systems. Betamax had better picture quality and better sound quality but the public went for VHS. I strongly suspect that had the Government legislated at the time, we would have legislated for Betamax and the public would have gone and chosen VHS and we would have looked like muppets. Sometimes it is best to let either the sector or the public arrive at a settled conclusion without necessarily Government intervening. Sometimes I think that we should let the professionals decide what is the best approach.

Lord Callanan: Perhaps, Chair, Damitha could provide some more technical details for the benefit of the Committee on the RICS approach.

Q211 **Chair:** That would be very helpful. The Minister has given us a very interesting analogy. Is that something that you recognise as the debate that is going on? Are we looking at a couple of existing systems or are we thinking about designing something that does not exist yet? There are other examples that we can all recognise from Parliament where Government and IT do not necessarily work as smoothly together as people might wish. The NHS app is an example, in contrast to that, where it has worked very well but perhaps through an emergency.

Damitha Adikaari: Thank you very much, Chair. I recognise the Minister's articulation of the problem associated with the existing tools and the scientific bases that those tools are built on. Of course, the RICS methodology is one of the advanced ones, one of the most recent ones. The Department is working with the authors at the moment to explore what additional requirements there will be to ensure that we can assess and manage the risks associated with the methodology before going towards a policy response in using those tools.

The methods that are available are based on a number of different standards, for example international ISO standards, European standards as well as adopted by British standards. However, the issues associated with the reliability of some of the databases that they rely on, measurement metrics, which RICS itself is looking to update at the moment, and the implication of those, associated with the issues that Lord Callanan mentioned around risks in international deals and trade and associated rules, makes it quite a technical area. It needs careful evidence gathering and approaching in a systematic way. That is what we are setting out to do.

Q212 **Chair:** Can you give us a sense of the timeframe that will be required before you reach a conclusion? Industry is typically, as I understand it, using the RICS standard up until now but it has not got the chop of approval from Government and perhaps, as the Minister says, may be quite clunky to impose on small businesses that do not have the resource to be able to undertake the work. How long will it take to come up with a



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system?

Lord Callanan: I do not think we can put a precise timeline on it, Chair. We are working on it and we are looking at the different methodologies and so on. We are keen to do it and we are keen to get on with it but it is important that we set up something that we have to get right. We have to get a system that is widely accepted and supported by all parts of the industry.

Q213 **Chair:** Are we talking this Parliament, are we talking next Parliament? Can you give us a broad scale of ambition?

Damitha Adikaari: The first step is the call for evidence where we aim to establish what the industry is actually using, because there are diverse users of different standards. I must highlight that at COP26 we pledged that under the industrial decarbonisation initiative with India, Germany and Canada we would look to disclose embodied carbon in Government public infrastructure.

Chair: By when?

Damitha Adikaari: By 2025. Embodied carbon disclosure by 2025. That work was launched at COP26 and there are working groups looking at what methodologies and evidence we need to ensure that we can consistently disclose the necessary metrics.

Chair: Thank you. We will move on to a former colleague of Lord Callanan's in another Parliament, Robert Goodwill.

Q214 **Sir Robert Goodwill:** I am pleased that we finally got to a date. I am one of those people who, if I have to write an article, I put it off and put it off and then do it at the last minute. I hope that not only will you have the date for it to be there but the waymarks along the way so that we do not get to 2025 and decide, "Oh, we're behind schedule, we're going to have to make a little bit more progress". I have heard words such as, "We're considering", "It's complicated", "We're exploring". Certainly in this Committee we want to see a much more ambitious programme.

Turning to building regulations, I think Eddie might be the best person to ask about that. Currently, decarbonising the structural fabric of new buildings remains entirely voluntary. Will the Government consider amending building regulations to require whole life carbon assessments and, in time, whole life carbon targets for buildings?

Eddie Hughes: Maybe, Chair, to refer to my previous point about trusting the sector and industry to get on with some stuff, part of the problem that we have as legislators is that truism that if the tool that you have is a hammer, everything starts to look like a nail. As legislators, that is what we like to do. We like to be in the Chamber and changing stuff. That is not completely necessary because we have a big building sector of those who construct and produce products who are doing a pretty good job of pushing this stuff themselves.



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It was fantastic to be able to go to COP, albeit only for 24 hours, and hear people like Lendlease. Lendlease is a big international company. I understand it has a pipeline, they said at COP, of something like £8.4 billion. It is signed up to the UN Race to Zero and it is already doing lots of this stuff without the Government needing to legislate. It has a big scheme in Birmingham, very close to home for me. It is already looking at this sort of thing.

If I give you an example, which was the type of thing that it said, let's say for the sake of argument that you are an investor and you are about to invest £50 million in building an office block and you expect returns from that for the next 30 years, perhaps as part of a pension fund or something like that. You are already intuiting what the Government will do, because the Government have set the guidelines. We already have the strategies that we have referred to, the net zero strategy, the heat and building strategy. We have already set out the parameters and we have a clear end date for our ambitions by 2030. When you are investing significant amounts of money with long time periods, you want to make sure that you are ahead of the curve. It is already working on systems to reduce the carbon, reduce emissions from the buildings, making sure that it is using products that are more efficient. That in turn is driving more efficient, lower embodied carbon products from the sector.

I had the opportunity to speak to the people who make steel and concrete and hear about the innovative things that they are doing. I understand and completely accept your frustration and your impatience of wanting to move on, but having said that—my apologies for that long preamble—clearly the building regulations are a fantastic tool for us to be able to make these adjustments. In the first part it is secondary legislation, so it is something that can be done. From a legislative point of view, we do not need to look for a slot to fit in in the Chamber. We have already seen what we have done with things like, very recently, the Part L uplift in the building regulations, which should achieve a 30% reduction in emissions from houses that will be built from this year and also the recent introduction of the requirement for electric vehicle charging points, which should be introducing another 100,000 charging points into the country.

Sorry, I already sense your impatience; I will get to the end. The building regs remain an option. They are a very favourable option because of the ease with which they can be tweaked. However, I would like to think that we will just take our time to see where the sector is taking us, learn from them. I chair the UK Building Council and have the opportunity to plug into people who are very experienced in the sector and understand from them where they would like the direction of travel to be and how we can help them achieve it. The building regs are a tool for that. Sorry for the long answer.

Q215 Sir Robert Goodwill: Going back to your VHS/Betamax comparison—we had a Betamax at our house.



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Eddie Hughes: That is because they were expensive and you are posher than me.

Sir Robert Goodwill: You are saying that rather than being very prescriptive in the building regulations, which might limit you to 50 millimetres of Kingspan, some other new, innovative product comes along and builders may not want to use that because it does not fit with the building regulations and there will be a delay in that. You would rather look at outcomes rather than mechanisms.

Eddie Hughes: The building regs are agnostic about material use. For example, we do not specify the thermal conductivity of a product. In specifying a U value we do not care what achieves that U value as long as the value itself is achieved. However, having said that, there are other areas where we are expecting naturally that there will be a progression—and perhaps we will touch on this later—towards extended use of timber, because the Government are enthusiastic evangelists for modern methods of construction and those methods frequently include more timber. We are agnostic about the product; we are focused on the performance and the building regs will allow us to do that.

Q216 **Sir Robert Goodwill:** I suppose there is more than one way to skin a cat. The other way through this would be to approach it from a planning perspective. I know some local authorities are already mandating whole life carbon assessments. Can we expect to see whole life carbon assessments being a mandatory requirement across all planning authorities within the Planning Bill?

Eddie Hughes: Sorry, I was nodding until we got to the last bit, because the Planning Bill is clearly for the Secretary of State to determine. However, having said that, you are absolutely right about the innovative work that other councils are doing and it will be good for us to see how they progress and how other people embrace it.

Let's face it, Robert, we are putting a lot of pressure on the Planning Bill and the things that we are expecting it to help us with from a governmental priority point of view. We will expect it to do some levelling up, help us meet our home build target, improve infrastructure and help us with net zero. There is an obvious symbiotic relationship between planning and building regs and we need to work as Government to make sure that we maximise that.

Q217 **Sir Robert Goodwill:** Going back 30 years to when we built our house, it was all about meeting the minimum building regulations. Have you looked at maybe having some enhanced opportunities so that you cannot just meet the minimum standard but go over and above for people who particularly want to have a much more sustainable house, particularly if they are building for themselves?

Eddie Hughes: I am not sure that we need to. I will give you two extreme examples. I have already mentioned Lendlease. On the one hand big developers will want to get ahead of that curve. I am also a big fan of the self-build market and clearly one of our colleagues is constantly



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pushing this for building plots. Invariably we find that self-build projects are more environmentally friendly because if you are involved in that detail in the self-build of a property, you are interested not just in the aesthetic of the product but it becomes part of you, an extension of you, and you are interested in every constituent element of it. We are finding, as the public become more aware and more thoughtful about net zero, that the natural development will happen anyway.

Sir Robert Goodwill: We are taking the roof off this summer and doing some serious retrofitting because the minimum standards back then were not very good.

Catherine Adams: Can I build on what the Minister was saying there? The other thing with building standards is that they are minimum standards. The Part L interim uplifts are already starting to stretch us towards where we want to be for the future home standard in 2025, which is the next step, literally the interim step in between that. But there is nothing to stop individual developers, as the Minister has said, going above and beyond those, with things like passive houses or very high levels of insulation within the housing fabric, if they wish to under the current rules or under the interim uplift rules.

Also, local authorities can go above and beyond them for planning procurement. We see that happening in local authorities in specific areas where they have chosen to go further than the minimum standards and what they are expecting to see in their local area, often trying to put that in the context of making sure that it still does not prevent housing from coming forward in their local areas.

Q218 **Sir Robert Goodwill:** That comes to a point that people often raise with me, which is why they do not put solar panels on houses when they are building them. The answer developers come back with is, "It would make the house more expensive and we are in a competitive market". The upfront cost has to be compared with an ongoing saving over a number of years. If you have the deposit and you can make the payment, you may not be able to afford the house if it has another £5,000 worth of energy-saving innovation in it.

Lord Callanan: It is also the case that it depends on the individual circumstances. If it is a north-facing roof there is less point in putting solar panels on than if it is a south-facing roof. If you mandate anything for people to do you get a lot of bad side effects because some are less effective if you did it in every circumstance. It is best to leave it to individuals to decide for themselves.

Q219 **Chair:** This is an interesting debate and I completely agree with you about that, Lord Callanan, but the energy performance certification regime needs to be updated to reflect good practice to encourage people to put solar panels on and get credit for it rather than not, which is where we are at the moment.

Lord Callanan: As you are aware, Chair, and I agree with you, we are having a review of the EPC certificates now, not so much because of that



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but the incentive on EPCs at the moment drives people towards bill savings rather than decarbonisation because of the disparity of electricity and gas prices.

Chair: You will be pleased to hear that the Committee has just agreed to write to you on the EPCs, so we do not need to go into it here. A quick comment from Valerie. I point out to colleagues that we have 40 minutes with the Minister and we have five sets of questions to get through.

Q220 **Valerie Vaz:** This is just a quick one. You said that some local authorities are mandating the whole life carbon assessment. Is it possible to get a list of those? How do you meet your COP26 requirements if some are mandating and others are not? You are leaving others to do what they want to.

Eddie Hughes: We are early in the process. A list might be ostensibly London but we will check and come back to you with that. This is a developing theme. Once we see progress and how engaged the sector is, we will naturally follow up to encourage everybody in the same pace and the same direction.

Q221 **Cherilyn Mackrory:** Good afternoon. I want to talk to you a little bit about Government procurement and practices. Lord Callanan, the 2020 "Construction Playbook" requires whole life carbon assessments for all public works projects and programmes. Since 2020, what percentage of public projects have undertaken whole life carbon assessments?

Lord Callanan: I cannot give you an exact figure for that. We do not have the data available. The Infrastructure Projects Authority may provide more information on that. It is based in the Cabinet Office.

Again, it is a new process. Some of the big infrastructure projects have carried out these assessments. High Speed 2, the Lower Thames Crossing and some of the National Highways projects do that. A lot of other Government cross-departmental work is going on as well. In direct answer to your question, I do not have a definitive list or quantities at the moment.

Q222 **Cherilyn Mackrory:** Will we need to write to the Cabinet Office to get that information specifically?

Damitha Adikaari: It is likely to be the IPA.

Q223 **Cherilyn Mackrory:** In the industrial decarbonisation strategy, the Government committed to using public procurement to drive demand for low-carbon products. Given this commitment, what plans do the Government have to acquire all public infrastructure projects to monitor, report and reduce whole life carbon?

Lord Callanan: The "Construction Playbook", as you set out, sets key policies and guidance and it supports contracting authorities to adopt and acquire whole life carbon assessments. For instance, the PAS specifications do that. Under new procurement policies, all Government suppliers bidding for contracts above £5 million will be required to



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disclose the carbon footprint of projects. If they do not comply with net zero provisions, it is possible they could be removed from Government procurement lists for the future.

Q224 Cherilyn Mackrory: Given what we heard earlier about the standardisation not being quite there yet, how do we measure, for example, the embodied carbon net zero target?

Lord Callanan: In this case, suppliers will sign up to the net zero target or commit to net zero. We require them to measure their supply lines and their embodied carbon. Many big companies are being forced under guidelines to disclose their carbon footprints now.

Q225 Cherilyn Mackrory: In France, it is mandated that all buildings must contain at least 50% natural materials. Would we consider a similar stimulus here? I know that they are trying it in the private sector already. It is a chicken-and-egg point. We heard in the first panel about Timber Square in Southwark, where they are trying their best to do this but have come up against huge obstacles such as building insurance and various other safety questions, I guess. The point being made was that a lead from the Government on this would be a great signal to the private sector to go forward, such as in other countries. Where are we on this?

Lord Callanan: Alongside the industrial products call for evidence, we published an external report outlining measures towards that. We are inviting people to come back to us with views. We will consider that and look at all the implications, but I do not want to give you a definite commitment at the moment that we will do the same as France.

Eddie Hughes: Can I add something? I fully appreciate that I am trying to shoehorn something into your question that does not quite fit.

The Government encourage modern methods of construction, which we expect will be more efficient and will probably include more timber in the products. That is an example of the type of thing that will drive up the use of natural products in not just the construction of homes, but the construction of buildings. For example, we expect an element of modern methods of construction in new build schools and hospitals.

In our affordable homes programme, originally we set the expectation for strategic partners bidding into that fund that 25% of their homes are built using modern methods of construction. The bids received so far are at 40%. It feels like there is some enthusiasm from the sector, although we have some catching up to do. In Scotland, they seem to have more enthusiastically embraced the idea of timber framing in properties, partly because they tend to build lower-rise buildings and so it is easier for them to do. We have mandated that 25% have modern methods of construction through the affordable homes programme and the sector has responded enthusiastically.

Q226 Cherilyn Mackrory: That is good. It goes back to our earlier frustration, though, about the standardisation of that measurement. If they can do it in France and in other countries such as New Zealand and the



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Netherlands, is there one standardisation methodology coming out even from those overseas practices that have been going a bit longer so that we can speed this up? When you say we have 25% coming in, we will know what that means for the rest of the industry.

Eddie Hughes: Part of the problem with the example that you used—and I am very excited about the Olympics being in Paris—is that that is partly driving their ambition to talk big about green in the run-up to 2024.

Going back to the building regs, as I said part of the problem is that they are agnostic about the use of materials. France is selling this to say that they will be using natural materials in their buildings, but actually to a degree—and I hope it is not blunt to put it this way—we care less about the natural materials and more about the performance of the materials. Otherwise we will stifle innovation. It is possible that people right now are designing exciting, lightweight, highly efficient, low-carbon products that might not necessarily be classed as natural.

Sorry, to your point—and we will keep coming back to this—I completely agree that it would be damned helpful if we had a standardised method of measurement. It feels like progress is being made at the other end of the table.

Q227 **Cherilyn Mackrory:** You have partly answered this anyway, but I feel as if we have the industrial decarbonisation strategy and COP26 and the G7 presidency has all happened. What joint commitments on public procurement have been made that we can look to now?

Eddie Hughes: Sorry, I have exhausted all my public commitment element, which still feels pretty impressive—25% of £11.5 billion—for the homebuilding element and the fact that, as I said, we will be making that requirement for new build hospitals and schools.

Sorry, something just occurred to me. When we allocate levelling-up funding, any buildings that are built as a result of that funding have an inherent element of the expectation of a net zero focus. It is getting there. It is a theme that now runs through all the things that the Departments do. It is now prominent in people's minds when they think about new projects or new funding schemes.

Q228 **Helen Hayes:** I have some questions about encouraging retrofitting and reuse. The Government's written evidence to the Committee states that the Government "are promoting the benefits of reusing and retrofitting ahead of demolition". What exactly are you doing to achieve that?

Eddie Hughes: I guess through encouraging people to use permitted development rights, is an example.

Q229 **Helen Hayes:** What does "encouraging" mean? Does it just mean you say you would like them to? Is there any other policy substance behind that intention?

Eddie Hughes: Sometimes I do not feel that there always needs to be more substance. Once you give the sector the opportunity to do



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something, it tends to respond in kind. For example, because we have moved to working from home and people are less inclined to go back to offices, they take the opportunity to convert buildings that used to be office blocks and would have otherwise remained empty to residential. We take an appropriate approach to that to allow them to do it because we already have the buildings.

It is certainly much more efficient to reuse a building like that rather than starting from scratch. The building regulations still apply in the same way whether you talk about new build on greenfield sites and standard planning complications or permitted development rights. The building regulations still apply whether you add another storey to an existing building or building a new house.

Q230 Helen Hayes: I will come to permitted development rights in a moment. On the broad policy, we know that the carbon reduction targets the country needs to achieve to get to net zero demand a step change in the balance between retrofit and reuse of existing buildings and demolition and new build. That is straightforward. The science tells us that we have to stop knocking down buildings to the extent that we are at the moment and start refurbishing and reusing existing buildings. Surely that demands from the Government a policy framework, if not also a legislative framework, to deliver it. Surely it is not enough simply to say to the sector, "We like it if you demolish less and we encourage you to do that".

I will come to permitted development rights because there are some important questions about that particular policy element but, in broad terms, what are the Government doing to drive that shift in emphasis from demolition and rebuild to retrofit and reuse?

Eddie Hughes: To a degree, I can say again, if, for example, a financial focus is driving the sector, frequently, it is easier and cheaper therefore to reuse something rather than to start again. Catherine might have something to add.

Catherine Adams: Thank you, Minister. We can point to a couple of different things on the policy framework. In addition to the permitted development rights that the Minister has spoken about, the national policy planning framework and the national model design code both emphasise a preference for reuse and retrofit and reducing waste. Those things together pull you away from demolition towards reusing buildings. Similarly, DEFRA's forthcoming waste prevention programme pushes you towards reducing waste and that leads you away from new build towards reuse of buildings. Those are some of the policy framework pieces that are in place.

Q231 Helen Hayes: But unless there is anything in the planning framework that gives the local authorities making the decisions about planning applications the tools to drive that change through the planning process—they are relatively soft measures is what you're saying. The Government's approach at the moment is to say that you would prefer it



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and encourage people to do that, but there is no framework as such that will drive a significant shift from what has always been the case to a change in practice around this area.

Eddie Hughes: But to a degree, the national code that Catherine just mentioned is exactly that. It is a national code. The local authorities that are particularly enthusiastic about this cause can then have a local code based on their local circumstances.

It feels to me that we have a difference of opinion. The Government's job is to set those guidelines and then for local councils frequently to interpret them as they see appropriate for their local area. It feels to me that the best work is done when the Government are being least prescriptive because they allow people the latitude to innovate locally. I trust local councils to understand how they can apply the national codes in a local way.

Q232 **Helen Hayes:** They can only do that with backup from the Government. Otherwise, they get taken to appeal and their decisions get overridden by the inspector.

Permitted development rights has meant a major deregulation of planning policy that we have seen taking place over the last seven years. From the then MHCLG's own analysis and independent research commissioned by MHCLG, PDR was found to produce lower-quality housing. The further relaxation to allow demolition appears also to have perversely incentivised landowners to demolish buildings rather than to reuse them. Do you have any plans to reform permitted development rights so that they align with net zero policies and with social wellbeing objectives?

Eddie Hughes: I am not sure that I recognise the premise of your question. This is just my limited knowledge, I am afraid. The only research that I am familiar with from the Government's point of view was stuff they commissioned and that reported in 2020, I think. It was a paper done by UCL and Liverpool University and I remember some negative commentary following the production of that, but, having read the report rather than the headlines, I do not think it is as clear cut as that. In fact, my recollection is that the word "nuanced" was used in the report a few times. When they were making the comparison, for example, between buildings built through standard planning permission versus permitted development rights, my vague recollection—and I might have to write to you if I am wrong about this—is that they said that the comparison was pretty much parity in energy efficiency, for example.

Q233 **Helen Hayes:** My point is that the report was critical. It was a very detailed report and it acknowledged that some of the homes that were built were of an inadequate standard for sure, but since then the Government have further deregulated by expanding PDR to include demolition as well. If we are talking about the objective of needing to switch from demolition more to retrofit and reuse, that particular policy has perversely incentivised demolition. It is easier.



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If you own a disused office building under current policy, it is much more straightforward often to demolish it and build a new building than it is to work out how you turn a building that was built for one purpose into something else. Therefore, that policy has perversely incentivised demolition. Do you plan to do anything about that in the world of a climate crisis that demands that we move very quickly to less demolition and more retrofit and reuse?

Eddie Hughes: With the example I gave earlier, the idea that there may be more office space that will not be used as a result of the change in working patterns following Covid, if those buildings are now converted to residential use that strikes me as it can—

Q234 **Helen Hayes:** You can demolish it under exactly the same policy that allows you to convert it. Now you can also demolish it. That is the point.

Eddie Hughes: Largely, that is not what is happening. I can only say I have seen lots and lots of examples of the conversion from commercial to residential and that seems like an appropriate use. You also said the further deregulation of this legislation has happened fairly recently and so it would be interesting to see how that works, because one example of what we are allowing is people to build up. If you have a building that already has the foundations in place and so on, and most of the superstructure, and you are simply adding an extra floor or two to it, that is a very environmentally friendly way of adding more buildings and increasing the number of homes that we have.

I completely understand your point about that in some circumstances there are unintended consequences with people taking the type of action that you are explaining. I am not altogether sure that it is of a significant enough nature at the moment for us to change the legislation. However, having said that, these are the types of things that we constantly should be revisiting. You are absolutely right that the Government intend one thing but devious developers spot an opportunity and take an alternative route.

One of the things that we saw, for example, was because there were no minimum specified space standards, people were creating flats that were too small to be habitable. We have addressed that. There were some properties that were converted with rooms that did not have windows in them, so I completely understand why you are concerned and the Government are monitoring these things to keep up when devious and inappropriate development takes place.

Q235 **Helen Hayes:** Bascially, a new loophole has been created around demolition and you might reconsider that in the light of this conversation about reducing carbon emissions.

I have a final question. It might be more appropriate for Lord Callanan. Witnesses have repeatedly raised concerns with us, and indeed concerns have been raised over a long time, about the inequity of new builds being zero-rated for VAT while retrofitting is charged at 20% VAT. Do you agree that this runs entirely counter to net zero goals and are you



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recommending to the Treasury that a new VAT regime should be introduced that equalises VAT on retrofit and new build?

Lord Callanan: I certainly understand the point that you are making. The Committee has made that repeatedly. Many others in the retrofit market have made the point as well. Energy saving materials are, of course, charged at 5% and there are various other exemptions built into the rules, but I totally understand the point that you are making.

We have made this point to the Treasury before. Tax policy is of course a matter for the Treasury. I am sure the Chancellor would want to argue that reducing his take of VAT affects the money that can be spent on other public services, but for a precise justification for why the Chancellor has not so far done that you would need to refer to the Treasury.

Q236 **Claudia Webbe:** I will move on to some questions about encouraging design and use of low-carbon materials. Why is green infrastructure not given greater priority in the National Model Design Code?

Eddie Hughes: This feels like a bit of an extension of the theme that I have given previously about the purpose of something like a National Model Design Code, which is that the Government are there to set intentions, direction of travel, to give broad-brush guidance, and then it is for people to interpret locally to ensure that their interpretation and use of that code best suits their local circumstances. Sometimes I think less detail is better because that is less prescriptive and allows for more innovation.

Q237 **Claudia Webbe:** In a sense, it only makes cursory mention of things like embodied carbon, misleadingly referring to it probably as “embodied energy.” Why is there no explanation of how to assess it, how to deal with the impact, how to mitigate emissions?

Eddie Hughes: A number of those things come either from other documents or they are allowed to be interpreted and the sector has done that. I have mentioned examples of big building companies that have already taken this approach. They are already doing those calculations. We are seeing some, but not all of the big product manufacturers who are listing embodied carbon elements in the products that they are producing, and so sometimes it is not necessary for the Government to be prescriptive about something. The sector can interpret the direction of travel and then respond appropriately with either product development or the approach that a developer takes to decide what is in its best interests in the long term in how it approaches those sorts of codes.

Q238 **Claudia Webbe:** In a sense, there are too many stakeholders that are saying that the Government are not being ambitious enough in the design code in addressing the climate, ecological and nature emergency that we find ourselves in. There is no explanation, for example, of whole life carbon in the code.

Eddie Hughes: I think we have touched on the explanation as to why there are some difficulties settling on a calculation method although, as



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you referred to earlier, a significant amount of work is being done to move us in the right direction.

The other thing that I think is important to remember is pace. Some of the people that you have heard of may be at the bigger end of the spectrum, either producers or developers, and so they can cope with certain things that we throw at them with legislative obligations whereas the smaller developers cannot. We need to be able to bring the sector as a whole with us rather than just enforce a pace of change, which is fine for the biggest developers but not necessarily for the medium-sized and smaller ones.

Q239 Claudia Webbe: Will the Government look at all to refine the code to address the concerns that are raised? Perhaps Lord Callanan can address that.

Eddie Hughes: I think that is with me. We regularly take that feedback and we are happy to tweak and amend, as is appropriate, but it is important when considering any changes that we take feedback from as wide a range of people as possible so that we are not just reacting to those who are biggest and loudest. We are open to change. That is my point.

Chair: This should be your last question because we have two more sections.

Q240 Claudia Webbe: Yes. Perhaps Lord Callanan can answer this. How will the Government work to promote resource efficiency in construction?

Lord Callanan: We have the industrial decarbonisation strategy particularly playing towards steel and cement. We have something like £2 billion worth of funding going into things like carbon capture, usage and storage, the hydrogen strategy and so on. All will contribute towards helping what are difficult to decarbonise sectors, particularly steel and cement, to reduce their carbon footprint and to produce greater resource efficiency.

Claudia Webbe: It looks as though I have run out of time.

Chair: I am sorry. We have a hard stop at 4 o'clock. We have two more sections to get in. Thank you, Claudia, very much.

Q241 Duncan Baker: Lord Callanan, in light of Grenfell the Government brought in the combustible materials ban. The problem with that is it has not differentiated between cladding and structural wood, for instance, in building walls and so on. Can you see the Government clarifying their position on that? If you envisage that laminated wood can be up to 10 times stronger than steel, it can be made so that it is non-combustible, surely we are stifling innovation to get to where we want to with sustainability of building products.

Lord Callanan: If we are talking about the use of cladding, wood, and so on, I think that is probably a matter for you to look at, is it?



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Eddie Hughes: I think it is. First and foremost, it has to be to focus on safety. While I completely understand that we are having a discussion about sustainability and so on, in light of Grenfell, and given the debate that is going on in the Chamber at the moment, our pre-eminent focus has to be on safety.

However, having said that, I mentioned earlier things like in Scotland the amount of timber that is being used for timber framing of new build homes. Is there a future for timber and is it going to be very significant? It absolutely is. We need to continue to work with the sector and those who are developing further products to make sure that they are tested appropriately and that we keep pace with new products that are designed.

Q242 **Duncan Baker:** Therefore, safety is paramount. What commitment will you make, as a Government Minister, to put in testing of wooden products to move us in the direction we want to get to? Bearing in mind that, in the 25-year environment plan, DEFRA has said that we want to move in this direction, can you make a commitment now that you will ensure that the Government will research and make sure appropriate testing goes into the safety of these products?

Eddie Hughes: Zac, Lord Goldsmith, has convened a committee, across Government Departments and interacting with industry, to look at how we make best use of timber, what the blockers are to it being used and ensure that we work with the sector to develop that testing. The question of finances is outside my Department, I am afraid, although my understanding is that DEFRA will be making money available—I think £1.5 million—through the forestry work to help improve the use of timber products.

Catherine Adams: The Government have consulted on proposals about the ban on combustible materials on external walls of buildings. We are still considering the inputs into that response, and so the Government response on that consultation is forthcoming.

Q243 **Duncan Baker:** Adjacent to this problem, we also have the one of insurance. We can do all that we possibly want to in proving that it is safe. That will probably help the insurance market in the long run, but we have had inquiry sessions where the evidence has been that multiple projects have been stopped and shifted from a wooden construction to a steel construction because people cannot get the right insurance. What can the Government do to try to support the insurance industry to back these projects?

Eddie Hughes: That is a very valid point. We have seen the challenges that tenants have had with insurance companies post-Grenfell. There is ongoing dialogue between Government Departments and big insurers to make sure that they take a proportionate risk-based approach to these products.

I guess the natural progress is that as we continue to test the products and approve their appropriateness for use in different circumstances, it



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will be incumbent on us, as part of the Government, to work with the insurance sector to make sure they keep pace with those developments and, as I say, take that risk-based approach. I completely understand the circumstances you are talking about—the challenge—and the Government are alive to it and our Department and DEFRA will be working with insurance companies to bring them along.

Chair: Duncan, commendably concise. Valerie Vaz to debut on this Committee.

Q244 **Valerie Vaz:** Thank you. I want to touch on skills and training. There was an excellent report from this Committee, before I became a member, on green jobs. The Government have also produced the Green Jobs Taskforce and the heat and buildings strategy but there did not appear to be anything in that. The Committee's report suggested that the Government should have a programme for upskilling across the construction industry. How are you getting on with that?

Lord Callanan: I totally agree with your point. We need to have a massive transference of skills, as an example, from the gas industry. Many of the hundreds of thousands of people who are working in the gas industry will need to transition towards installing more electrified heat systems. We are doing a lot to try to encourage that. A lot of it is going on in the private sector already, which I will talk about in a second.

We have the construction skills delivery group. It is a joint BEIS and DfE group set up in November 2020 to try to identify where the skills gap is and do what we can to fix it. Under the Green Homes Grant Local Authority Delivery, we allocated £6.9 million—which was oversubscribed—towards upskilling various parts of the workforce. We are working with the DfE to expand the green skills bootcamps in different areas of the country. That provides free training courses for 16 weeks for adults, including on in-home retrofit management and so on, and finally, £95 million from the Green Skills Fund to fund adults without existing level 3 equivalent qualifications to take those level 3 qualifications.

In addition to that, which is Government work, it is quite interesting to see the work that is taking place in the private sector. If I can give two examples. I visited Octopus in Slough a couple of months ago. It is training literally hundreds of people to install heat pumps and it is massively expanding the offer using the boiler operator scheme that will come in from April next year. Also, a mention of Daikin, another company that has set up a number of training operations throughout the country and I went to visit one in east London.

Therefore, there is a lot going on in the private sector, where they can see the opportunities that are coming and the massive transformation that will be required for the electrification of heat, but we are doing our bit in government to support the transference of skills.

Q245 **Valerie Vaz:** You mentioned a delivery group. When will that report? You mentioned some of the jobs coming online but what about the end date



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for all of them? Who is holding it all together?

Lord Callanan: It is an ongoing process. I do not know that we have a precise date for when it will come to an end. We want to continue to work with the industry to deliver the training courses, to see where the gaps are in the market. There is a lot of Government-targeted intervention with the heat and building strategy, through the Chancellor's resource allocation. Something like £3.4 billion will go in to kickstart the market over the next fiscal cycle, primarily aimed, of course, at low-income families. There is a huge amount going on in this area to encourage retrofit and electrification of heat, all delivered through many local authorities up and down the country, which is helping to drive the market and helping to bring costs down for other homeowners as well.

Q246 **Valerie Vaz:** You mentioned encouraging consumers. Are you setting out a campaign to have consumer confidence in retrofit?

Lord Callanan: Again, you are right, there is a number of areas that we are concentrating on and the important thing is to ensure that the right standards exist. Unfortunately, there have been some examples of quite shoddy workmanship, through Government funded schemes and private funded schemes in the past. All new modern schemes that we are supporting have to be Trustmark approved. The companies have to be registered with their appropriate standards organisation—the MCS for heat pumps, the Insulation Association for insulation standards and so on—and all the work needs to be accompanied by a two-year insurance-backed guarantee, so there is consumer redress.

On informing consumers, we have a number of different Government websites and information campaigns to give them confidence in the sector, to make sure that the work is of the appropriate quality. In my view that is the best way to encourage consumer confidence, to know that the work will be done to the required standard and that they have appropriate redress if, unfortunately, something goes wrong.

Q247 **Valerie Vaz:** To touch on our report, are you intending to report back to us on the recommendations that we made?

Lord Callanan: I assume we will do at some point. We will come back to you on that.

Q248 **Valerie Vaz:** Minister, Lord Callanan touched on working with the Department for Education. Can you say what is being done to encourage not just university degrees, but other sectors, for example? We both know about Walsall College, but other apprentices and those sorts of areas.

Eddie Hughes: Yes. Martin talked about the private sector that is already doing this. They see the direction of travel inasmuch as we will move from 32,000 heat pumps a year to 600,000—those are numbers that we need to achieve. I think they are already responding in kind by engaging people—you're right; through Walsall College and apprenticeships. There is an excellent partnership already going on



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between colleges and local providers. So, amen to that and let's hope there is more of it, particularly in Walsall.

Q249 **Valerie Vaz:** It is more than about heat pumps, isn't it? It is across the supply chain.

Eddie Hughes: Across all green jobs.

Lord Callanan: I am sure there are other initiatives outside Walsall taking place.

Eddie Hughes: There are, sorry.

Lord Callanan: As important as Walsall obviously is.

Valerie Vaz: Thank you, both.

Eddie Hughes: Sorry, Chair, just a final comment on what Valerie said about the public. I feel that this is such an important part of this project. It is all very well us saying that we will change design codes or building regulations, or whatever it is we are going to do, but I think we collectively all have responsibility to engage with the public, engage with our constituents to work with them to make sure that they buy into the green programme. We are seeing that more. We are seeing with electric vehicles that we were at sales of fewer than 25,000 five years ago and now we are up to plus 100,000. If we continue to highlight the benefits of this change in direction to them and engage with them, I think their natural direction will be to come along with us.

Chair: Thank you very much for that. I agree with you. I think that there is a big job for Government to try to explain that the benefits are not just for the planet but also for the householder in housing and the costs of heating as heating costs with conventional fuel sources are going through the roof. Investing now to save for the future is a powerful message and it is in people's own interests to do this financially, not just for the wider interest of the planet.

That takes us almost exactly to our voting hour and the end of this session. I will conclude by thanking Ministers Hughes and Callanan for joining us with your directors Catherine Adams and Damitha Adikaari. Thank you very much for joining us today. Thank you to our clerk Medha Bhasin who prepared our brief. We look forward to providing you with our report with some recommendations, to which you will doubtless respond in due course.