

DIVA SOCIAL MARKETING SPECIALISTS

ZERO CARBON EVENT

PRESENTATIONS

JOB ID: 19939

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Time-codes	Dialogue
00:00:13:08	Rory Bergin Good morning everyone. If I look at my phone occasionally it's not because I'm expecting an urgent phone call it's because my notes are on here. I don't have a better place to be.
00:00:25:10	Rory Bergin If you just say next I'll be your ...
00:00:25:06	Rory Bergin Fine OK. So I dare say most of you have seen that image at some point in the recent future so it's good to be able to say that we've slightly moved on from that. That was the sort of pre planning, pre early design stage images, so the ones I'll be showing from now on will be of the current scheme which has now been submitted to the planning at South Gloucestershire just before
00:00:50:07	Christmas and we expect a permission in March or April. Next. HDA for those of you who don't know who we are we're a multi disciplinary consultancy based in London and Edinburgh. We've just turned 40 this year which in itself is important because we feel that having been housing specialists for all of our career we're an organisation that we think we can.
00:01:19:05	we think we speak knowledgably and convincingly about housing issues. We've been at the forefront of many initiatives about housing over that 40 year period. And we're very happy to be deeply involved in Zero Carbon agenda. That's not to say that we support all of it but we feel we can at least speak about it from a position of knowledge from the thick of it rather
00:01:43:02	than from the periphery. Next.
00:01:49:04	Rory Bergin Three things we really wanted to achieve for this project. One was sales.

Identify sustainable product that sells in the UK speculative market. We're not terribly interested in working around the edges. We're not terribly interested in niche products although we're happy to design specific solutions for specific requirements. But when you're working for a house builder like

00:02:10:21 Barratt you want to be able to produce something which you're confident will sell generally. So this wasn't. This was never going to be from our point of view a project which was only going to appeal to the sort of core group of environmental enthusiasts. It has to apply to the wider market. We wanted to introduce the idea of sharing services into the UK housing market.

00:02:34:15 The typical housing product in the UK is one where you've got your own house, you've got your own garage, you've got your own forecourt. You've got your own entrance. You've got your own gas boiler. Everything is your own. My house is my castle and neighbours keep away. So we wanted to change that paradigm a little. Not so much that we would scare everyone off

00:02:54:03 but change it so that the idea of perhaps sharing some things was introduced into the market. And finally to demonstrate that all of this can be achieved in an environment which creates and allows for an attractive lifestyle. So it's not negative. It's not you know if we don't do this we're doomed. It's this is going to be a really nice place to live. These other things will happen as

00:03:20:06 well but they're slightly in the background. We want to create lovely places for people to live, for people to enjoy, to grow up, but there shouldn't be a sense of doom about it.

00:03:33:09 **Rory Bergin**

So standards that we're achieving on this project sustainable homes level six and Zero Carbon. Building for life gold. So for the designers among you building for life gold is not the easiest thing to achieve. Lifetime homes for all the homes secured by design. EP space standards. There's a question there about whether or not the HCA are going to adopt them as their

00:03:57:16 space standards. Mixed tenure across the development. So again in terms

00:04:18:09 of the current economics we can't just turn around and say right we'll build all the affordable now and wait for the sales to follow on because the affordable and the sales are inextricably mixed. And there's no difference between the two types. Everything is the same. In fact I think it's the only development the only housing development in my career where there's absolutely no difference between the two property types. We have to meet the CIBCI overheating standard so people who are worried about highly insulated, relatively airtight dwelling overheating on warm days so we had to meet a CIBCI standard to ensure that that didn't happen and we had to do the

00:04:38:17 thermal analysis to make sure that that worked. A new standard for us was Sequel which is an engineering standard. Essentially it's like BRIAM for street works, road works, engineering works. And then BRIAM and then we had to meet BRIAM for the listed building on the site. BRIAM excellent.

00:05:02:23 **Rory Bergin**

So you can see that there was an existing listed building on the site in rather poor condition. The NHS really looks after our assets well. Everything that made this a listed building is actually gone so the kind of architectural quality of the building was all inside and that was ripped out in the name of health and safety. So again the big question about the cost of all of this

00:05:26:05 We're spending a fortune protecting a listed building and the reason for listing it has long since disappeared. Why would we do that?

00:05:35:23 **Rory Bergin**

Lot of good ecology and biodiversity on the site which we're taking great pains to protect and preserve. It's a really it's an early win for a housing development to have good ecology and good biodiversity on the site because it's one of those things that makes every site attractive. So it was one of the things that apart from the code and the standards and so on that we had

00:05:56:09 to preserve actually there are very good sales reasons, very good marketing

reasons commercial reasons to protect this and value it and design around it rather than designing across it.

00:06:11:03 **Rory Bergin**

So scheme is 195 units with a wide mixture of types. Over 55. 1 bed. 2 bed. 3 and 4 and even some five bedroom houses. So the majority are family homes and there is other uses in the listed building. So the listed building we're converting into commercial and community use. We did consider briefly turning it into residential use but turning a listed building into residential

00:06:38:03 use is really asking for trouble and we needed to fit in those other uses. So that all worked out quite nicely in the end.

00:06:48:13 **Rory Bergin**

So in terms of the sort of three pillars of sustainability the sort of economic end is taken care of around the entrance to the scheme. Those blue buildings are at the entrance. The large blue one is the listed building which we're converting. And then the other range of blue ones is essentially an innovation park. So we're building one of every type first. So these are the first

00:07:11:03 code level six houses for sale that Barratts are building. They want to build them one at a time. Check that everything works. And then move through the rest of this scheme. So we're not taking any risks here. The bit in between, the lighter blue part, is the energy centre. So that will need to be up and functioning as a visitor centre, sales centre, and also as a community

00:07:33:04 space from an early point in the scheme. So the other things we're doing is in terms of the sort of economic benefits to the area so that there will be jobs, mixed use and so on, in that listed buildings and we'll be bringing a lot of visitors to the site and to the area for the first few years of the schemes life.

00:07:55:17 **Rory Bergin**

Environmental strategy then the green square is the energy centre again so

00:08:21:08 that provides the heat and the power for the entire development. So it's a sort of one stop shop. Combined heat and power plant. In one place and then a heat network and a wire network to the rest of the development. That means that the housing is freed up essentially from many of the environmental considerations. The blue land then is the sustainable urban drainage scheme which runs through the middle of the scheme down to the east to an existing pond. So we're using the existing water courses to drain the site and the site, as has to have in these situations, has less run off than a green field. The light blue ones are all the shared parking spaces, some of which are on street,

00:08:46:24 some of which are in parking courts. And they're some of the shared things. So in a way all the sustainability strategy elements are the shared things. So it's the shared heat and power network. Shared on street parking or shared parking courts. The bin stores are all there together as well. so you go to your car, you drop off your rubbish, so we don't have wheelie bins

00:09:12:08 on all the front gardens. And then the outer edge, the green edge up to the east of the green belt and to the north, there's a piece of land we couldn't develop on. So and the sort of blobby bits are the existing retained planting. And so the site is surrounded by greenery. In there there's an orchard, some allotments, and in the middle the green bar along the middle of the blue

00:09:40:15 system that's a set of greenhouses. So we're going to use some of the spare heat from the CHP to heat some greenhouses. So we can grow really big tomatoes.

00:09:54:19

Rory Bergin

And then from the social point of view again in the hall there's shared community rooms. There will be work spaces to rent. We're connecting into existing road networks. The line through the site going through to the east is connecting to an existing cycle route, apparently the most popular cycle route in England, from Bristol. From Bath to Avon. There'll be a development

- 00:10:19:17 trust on the site which is essentially a site management trust. Sort of garden city type organisation which will own the site and be responsible for its maintenance and upkeep. So we're having some interesting discussions with the local authorities about what's adopted, what's not adopted. One of the big things that we have to deal with when you're trying to do a zero carbon
- 00:10:39:09 scheme like this is how many of the existing rules that people live by and work by how many of those rules do you have to break? And in breaking them how many hours of negotiation do you have to go through? For example we've negotiated successfully with the local authority in some cases with some people that they will take over the management of the sites and then
- 00:11:01:16 when it comes down to the people who actually do the work they say no we can't do that. None of our equipment will work. None of our processes work. Health and safety says we can't do this by hand or that by hand. So quite a lot of all of this argument is about not what we have but what we have to stop doing or what we have to undo that's already out there. That other
- 00:11:21:12 people sort of live by and insist on living by and say you know use the god of health and safety as the reason why they can't change to a more sort of sustainable set of behaviours. So long often tedious painful process which is very little to do with zero carbon but everything to do with generating sustainable environments. So mixed tenure. Mixed family types.
- 00:11:47:02 Allotments and greenhouses. Introducing people children and so on to the idea of growing your own food. Food comes from here it doesn't come from a supermarket shelf.
- 00:12:00:21 **Rory Bergin**
The sustainable living centre then is both the energy centre and a place where the management company will exist. So people who need things done will go there and the caretaker will help them out. It'll also be a place where people will come when they first buy a home for a little bit of educational, what are the interesting aspects of this particular scheme. Currently it's

- 00:12:26:01 planned to work on a biomass pirololysis scheme for the techies among you. It may end up being a bio methane plant rather than a biomass plant. We're reaching zero carbon by overproducing and selling electricity for some parts of the year and then that gives us the opportunity to shutdown the plant for periods of the year in the summer when we don't need it. If we've got
- 00:12:47:08 spare heat we're negotiating with two of the neighbours. There's an NHS building next door and the doctor's surgery next door. So we're planning to sell spare heat to them when we've got the capacity. And interestingly that's been quite welcomed. So that was one of the sets of negotiations which I wasn't expecting to go as well as it has. But I think in the current
- 00:13:09:01 energy market alternative supplies which might be pegged to a lower baseline than gas is welcomed. Sorry can you just go back? And on the house side you can see that in terms of the equipment in the house there are just two things. There's a hot water cylinder and there's a mechanical ventilation with heat recovery. So that's the kit n the house. The mechanical ventilation
- 00:13:33:19 with heat recovery system provides a heating system because the demand is so low that we could have heated with incandescent light bulbs if we wanted to but we're not allowed to. So the point there is by centralising everything you make the houses quite simple. OK next.
- 00:13:58:05 **Rory Bergin**
- We spend a lot of time on the landscape master plan so developing, planting types, developing the road network, can you just go onto the next one David? Thanks. So we've developed we've designed this in quite a lot of detail. So that's the entrance square. So that's the first sort of arrival space. So you come in and there's the space to arrive to which is opposite from the
- 00:14:21:00 energy centre. So that's the first thing that we would build. And you can see there's mixture of the darker green existing vegetation and the lighter green new planting. So we've spent a lot of time and energy on designing this very carefully to be a nice place to be. OK next.

00:14:39:00 **Rory Bergin**

In terms of routes through the scheme we're more interested in prioritising the place and the people and how they want to move rather than the needs of vehicles. And again that comes back down to although we've designed it to be adoptable it comes down to whether or not the local authority will actually adopt something which has shared services going through it and

00:14:59:08 is made up of different types of materials and so on. So our focus has been to design a great place first. Next. Next.

00:15:10:21 **Rory Bergin**

So one of the things that we wanted to create for example was spaces like this which is a small public space in front of homes but which is supervised by them and where we can see that families can meet, children can play without cars being a concern. So sort of taking back some of the street scape back for people to live in and occupy rather than just a place where cars

00:15:35:09 drive by. OK next. Next.

00:15:40:07 **Rory Bergin**

The homes themselves highly insulated. SIPS schemes so structural insulated panel from Kingspan. Very simple construction. And living upstairs generally. So living downstairs and upstairs. And the point there was that we're in a place which has very nice views, great landscape surrounding so why not take advantage of that. and also with the mono pitch roof

00:16:08:00 you get this wonderful cathedral kind of space inside. So we hope that what we've created are really nice houses that people will want to buy. Next.

00:16:20:18 **Rory Bergin**

Because of the overheating requirements we have to have these shading systems so it's all manually operated. There's nothing electronic or electric or

- 00:16:40:09 automatic in any of this. It's all as simple as we can possibly make it. so it's manually operated shutters so that when people leave in the morning they can close the blinds and come back in the evening and they shouldn't have an overheated house. Next. Next. Next.
- 00:16:47:11 **Rory Bergin**
Those are the town house types. Next.
- 00:16:53:14 **Rory Bergin**
And that's the green space. So looking from the bottom of the green space back up towards the energy centre and existing hall a lot of activity there. A lot of different things to look at and enjoy. The SUD the SUD system we wanted to make a place where kids can play. Get themselves a bit muddy. Landscape should be fun not something that's sort of kept away from the homes.
- 00:17:16:05 Next. And then the veranda space that we've created. So the shading creates a space between the house and the shades which is a veranda space for people to sit out and occupy and have a cup of coffee and enjoy the view. Supervise their children playing in front of them. And so on. Most of the design team at this stage want to live on the scheme which if it
- 00:17:40:00 works out that way we're going to have some interesting conversations in a few years time. OK thank you.
- 00:17:46:24 APPLAUSE
- 00:18:09:07 **Brian Mark**
Hi ... if I had another couple of things I do it helps understand where my interests are. I'm also on the technical steering group for the Code for Sustainable Homes on the industry advisory group for the changes in the building regs in 2010/2013/2016 but for this group I am the lead contributor to the energy section of the INAUDIBLE manual for sustainable cities. And

00:18:42:12 the hot house cities are represented here. I'm going to give a very quick
rundown of what is expanded in there. As we heard it changes incredibly
quickly in sustainability. And what I wrote there is already out of date. Dave
already mentioned this which is the consultation it's the con doc for the
definition of zero carbon. Came out the week before Christmas. Consultation
00:19:16:09 responses back by early March. I'm responding wearing different hats. It's
quite a remarkable change if you look. There's one image which actually
badges everything. That triangle. It basically says we are going to go forward
with the energy efficiency measures previously in the Code for Sustainable
Homes and proposed changes to the building regulations. So heat loss
00:19:51:11 parameters of 0.8 will probably remain. You then get a second stage which is
called Carbon Compliance. That's talking about how to deal with controlled
energy. That's part L of the building regs. What's remarkable is this image
goes throughout this documents. It's about four or five times. It actually says
in the main image in brackets on site plus connected heat. That 1
00:20:30:08 means that it's recognised that on site generation of electricity from micro
generation is too expensive in most cases. They are very much pushing the
concept of connecting to heat networks. That's why it actually says connected
heat. In the document it mentions an indication that you will have to deal with
the CO2 with 70% of the CO2 covered by the building regulations
00:21:16:10 from onsite electricity production and from connecting to heat networks. The
rest of the energy required under building regulations and appliance load
energy will be dealt with by allowable solutions. No one knows what these are
yet. It almost certainly involves connecting to community level energy
supplies. And it's beginning to talk about carbon offset funding. Right
00:21:51:11 that's that. So basically what we understood as Code 6 before is not going to
be code 6. We can almost certainly say this now after the work that UK Green
Building Council carried out. That informed this very much.

00:22:10:16 **Brian Mark**

Here's another really significant document as you know carbon reduction is being wheeled out through the building regulations and through planning. The planning and climate change supplement to PPS1 is a ground breaking document. It's only 22 pages. I'm a plumber. I had to learn to read planning documents. I can understand what this says. It's worth reading it.

00:22:43:02 A bit of a giveaway is it uses the term, what's the bloody term? Sorry. Decentralised energy 17 times in 22 pages. Basically it's a responsibility of all regional and local planning authorities to carry out an evidence based asset survey of the renewable energy opportunities on their patch and then to change regional spatial strategy or court area strategy. Have it go

00:23:22:24 through an inspectorate, an examination in public, to maximise the uptake of the renewable energy sources they identify efficiently. That means not small scale. I was very involved with the bidding stage of Hannam Hall for other short listed developers. And at that scale the cost of heat networks is expensive per unit. If you can scale up particularly a combined heat and

00:24:03:19 power plant to municipal level, ie dealing with the town or the city, you actually find that development does not have to support it with capital investment. It can pay back all its finance costs. Pay back its profit. From energy sales only. I've recently completed a PPS1 study and for London Borough of Swindon. Swindon Borough Council. When you

00:24:40:03 look at the renewable energy assets of any high density area that's a town or a city you tend to find that the sun falls equally on everybody and it's a bit tricky to use in Britain although today is a sunny day. You're very lucky if you have an opportunity for large scale wind. But the renewable energy resource which every high density area has is the biomass content of waste.

00:25:13:10 The renewable obligation draft order came out last week. I've been sent it because I'm a statutory consultee. I won't explain the logic of this but if municipal waste is up to 90% fossil fuel it's classed as 50% biomass. That is rather an odd statement. It happens to be in law. It means that waste is going to receive considerable incentivisation payments. I'm very involved in

- 00:25:51:23 bringing in the renewable heat incentive scheme. We've already got the rock arrangement. We've now got rock banding. CHP fibre biomass gets two rocks for the electricity. That's 8p from the government to support its business plan. Fundamentally if you put together a waste to energy combined heat and power scheme you provide district heating pipe work to serve probably
- 00:26:26:15 existing the process needs of existing industry first but also later the existing stock. You can analyse the carbon out of the electricity. You can provide your own electrical distribution network to service future development sites so that they can just connect to it and don't have the capital burden of micro generation to bear. By factoring in energy sales income, renewable
- 00:27:02:13 heat income, renewable electricity income and waste treatment income you can yield over 30p a kilowatt hour. A coal fired power station and most planning permissions for power stations are coal ... finances itself, pays for the coal, and yields the profit from an income based on selling brown electricity to the grid. That's 4p a kilowatt hour. If you compare 4p and
- 00:27:36:09 30p there's a shed load of money in this. And basically far more money than is needed to finance the infrastructure and the new generation. I believe the additional super profit should be amortised back over the length of the lease to operate the systems and should belong to the city. I actually believe in communal ownership of things. And I think there is such a potentially
- 00:28:09:10 huge super profit it can actually be used to buy a very high equity percentage in the new energy supply systems on behalf of the city. And that is the future. Go large. Over to Peter.
- 00:28:48:17 **Peter Walker**
Thanks good morning everybody. Super sizing. I mean I'm a great advocate of super sizing. I'm super profits I quite like the sound of that as well. Being a very commercial enterprise what we've concentrated on is to provide the commercialisation if you like the methodology behind the ever changing landscape of low carbon and renewable energy infrastructure. And how

00:29:16:14 do we reflect into a commercial structure the kinds of things that Rory and indeed Brian have been talking about. So constructing a financial model in our view becomes essential so that we can make decisions about low carbon energy infrastructure. When we take on board Brian's definition this definition of zero carbon and when we start to factor in the complexities that

00:29:44:08 we've already got on our plates with regard to what technology do we choose. How do we design the heat networks? What's the coverage? What load centres are we going to pick up? We now have to factor in another layer of complexity on these things called allowable solutions which is a bit of smoke and mirrors currently as regarding this last 30% of CO2 reduction

00:30:09:13 that we've got to magically find with off site or near site measures that could be some sort of quasi investment model or maybe a community based generating asset. Now that highly complex number of elements needs to be captured by commercial model because as Rory said Barratts don't want to build something that may well have a zero carbon status, may well

00:30:36:18 save the planet single-handedly but they can't sell any houses on it. And so capital costs become an absolute prime consideration because if you're a private developer indeed if you're any developer then that commercial model has to work for you. So our reason for being now, and we've evolved as a business over the last seven years, is to provide financial modelling

00:31:04:02 so that decisions can be made about that energy strategy that refer to a commercial model. So there are four cornerstones to providing a financial solution that's commercial. And that's the carbon reduction performance. The capital costs to build the infrastructure of whatever scale, and I'll come back to scale in a minute. The operational revenue and costs so looking

00:31:27:12 forwards into the future what we're going to be generating in terms of revenue and what the costs are of delivery. And the fourth probably the most important one is how does all this financial model affect the consumer in terms of the cost of their energy. So having that four cornered financial model in mind we now overlay that onto scale. And as I think we've already identified it's

00:31:55:06 extremely expensive to overlay that template onto small schemes. When you get to a medium sized scheme and I would put Rory's project in the small bracket to be honest 200 dwellings and other mix of uses and above to say to 2000 I'd call a medium sized project. When perhaps the energy services solution with heat network, bio fuels, you know other mixes of

00:32:22:00 technology may well raise capital through revenue, below that scale it really struggles and the capital costs are very high. But when we get into large scale developments and multi plot developments with community linkage the whole financial model starts to look extremely attractive. Now just to give you an example and I'm very conscious of time a very large development in

00:32:48:22 North Kent. We've just completed all the financial modelling for the project. We don't do Brian's job. We don't do the engineering. Tell us what engineering you want to use we'll put it in a financial model. This is a 10,000 dwelling development over 20 years and it's a highly complex phasing particularly in this economic market. What we've done there is to look

00:33:11:18 at a community based generating asset that allows the developer to make it, it's a principal developer, to make a decision about investing early stage in getting a planning permission for a bio fuel fired power plant. About 15 megawatts which will provide enough power and heat for the development in North Kent. Land Security so some of you will know a bit about that

00:33:37:24 project. The financial model shows that that generating asset is self supporting. As Brian says if it works for coal fired power stations it'll work for bio fuel fired power stations and actually it works even better for waste to energy power plants. The distribution financial model is separate but linked to the generating financial model, the community generating asset model,

00:34:03:01 which then generates finance through selling energy to the end users across the scheme. And using a very clever financial tool within that revenue stream to generate capital at the front end. Now you can play tunes on those financial models to change the types of generating technology. You can change the phasing. You can change the profile of development but what the financial

00:34:32:04 model does is it tells you whether you're still meeting those four commercial criteria of end user cost, revenue streams and cost to deliver, capital costs, and carbon performance. So we're talking about an ever changing landscape of carbon zero carbon definition but you need to have a bedrock of commercial modelling so that you can reflect those changes and understand

00:34:59:21 what those changes mean. Waste to energy is a infantile technology in the UK but it's not overseas. In Scandinavia they have large scale waste to energy plants using lots of different types of technology and mass burn. Porolosis gasification, plasma torch, all types of different waste to energy technologies. The financial model for waste to energy even down to

00:35:27:20 four megawatts of electrical output generate significant levels of revenue. And as Brian says what we need to be able to do is to structure the financial model to show how the benefits of those revenue streams can be ploughed back into the community at community level. Thanks very much.

00:35:43:15 APPLAUSE

00:36:10:07 **David Roberts**

Thanks David. I do have some pictures to liven us all up a little. Whilst David is looking for those David sort of introduced me as a mixed use developer. I think the perspective I'm trying to come from here is as an institutional investor. To try to give a kind of slightly longer term view on sort of macro economic issues. Things that are happening across the whole market and

00:36:38:06 really why anybody should invest any private sector money into developments which are sustainable. So I'll explain a little bit about Igloo. And I'll tell you when David yeah. OK so Igloo is an investor developer which is a partnership of pension and life funds providing equity into real estate. But our focus is entirely urban regeneration. We've been doing this for some seven

00:37:11:09 years now. Our focus therefore is to do quite a big of silo busting. Many of you in this room will be aware and will be frustrated by the silos that exist within

the world of social housing, or mixed use regeneration generally where there are frustrations trying to do things outside of your particular silo. And of course if you're involved in the sort of cross cutting nature of urban regeneration silo busting is really essential in all key areas of our

00:37:50:11 work. Our work and your work. So whether it's funding, public policy, planning, landlord and tenant arrangements. Trying to deal with green leases that need to come forward. And obviously from what was said earlier there are big steps being made in planning but there's a huge amount of education needed across all of our sectors to understand the challenges that are

00:38:14:00 ahead and I'll talk a little bit about that. Challenges that need to be overcome. If the government targets on sustainability are to be achieved. So back in 2001 when we established Igloo we took a decision to signal the breadth of our ambition by stating that all of the funds investments, all the decisions would be made on a platform of sustainable development. A platform

00:38:39:15 placed on the three pillars of urban regeneration, environmental sustainability, and quality design. We've stood true to our promise adding third party auditing of the work we're doing and overseeing all of our decisions by an independent committee chaired by Sir Jonathon Porritt and with Paul King the Chief Exec now the Chief Exec of the UK Green Building Council

00:39:05:18 on our committee. And we continuously sought to improve the policy as the sustainable development issues have moved forward through the years and we've added issues on health happiness and wellbeing. Happiness would be a little nice thing to focus on in the current issues that we're all facing in the economy. And we've added some capability with the ongoing issues

00:39:30:07 that when you've undertaken development you've then got management of those developments are important. And clearly critically important to achieving long term sustainable development and we now have a company including creative space management who some of you may know in Sheffield are developing the electric works in Sheffield. David do you want to just

00:39:55:14 change the slide? So in the next ten minutes or so I'll tell you of Igloo's

ambitions for sustainable urban neighbourhoods. I'll tell you what we see as the critical actions as an investor. The critical actions that need to be taken by UK government agencies during this recession that we're facing if this programme of sustainable development this programme really of mixed use urban regeneration. That that has been started over the last five to ten years if that programme is going to continue. I'll tell you why it's critical for everyone in this room to learn about and fully understand the depth and breadth of the challenges ahead of us in achieving that. and I'll tell you why sustainable development in that context is really the only game in town. David. OK so a little bit about what we're doing elsewhere. Next slide David. This is Cardiff Bay and a scheme that we've been involved in with the Welsh Assembly government initially through a developer competition. And then engaged through a development agreement with the Welsh Assembly to undertake comprehensive development scheme on the 38 acre site bounded in red on that photograph. Such a big site it doesn't actually fit on the screen. Go to the next slide David. In an area of you know former industrial land not land that had attractive buildings on it. It didn't have expensive bonded warehouses. Essentially this part of the ... empire was where coal from Wales was shipped out around the world. So it was all about taken a valuable commodity and sending it around the world. So essentially the site that we're dealing with was a large set of ... railway sidings. Next slide. And it's a community where people travelled from around the world, through the ships, into Cardiff docks. And set up homes there. So we do have a really strong social history in the site. So whilst there isn't the strong physical history there's a huge amount of social history there and a rich mix of mixed communities. Next slide David. And with a strong track record in good local food sourcing as Tommy the fish used to travel around Cardiff Bay as well. Next slide. So interestingly how Igloo was selected to undertake this development, next slide, we put our pitch forward as saying that we would focus on this site being a comprehensive redevelopment. The Welsh

Assembly government took a very bold step in undertaking this type of procurement. Looking for one developer to deal with them with the whole site. It would have been, at the time it would have been very attractive to them to sell of some of the initial parcels to the house builders. They would have got a significant amount of money for the initial sectors of the site but really

00:43:07:18 how would that have dealt with the full 38 acres. So the approach that we took here was saying that we would work with them to really target over a ten to 15 year period a whole process of private institutional investment into delivering something which would be truly world class and be on the world stage. Transformation for Cardiff. For Wales. And indeed for the establishing

00:43:36:04 a global neighbourhood for the emerging markets in creative industries and life sciences and so on. And yeah next slide as well. Next slide. So just a little bit about the way we've been developing this over the last two years. We have moved forward particularly with a programme of trying to understand well what do we have here? If we have an empty site how is it

00:44:05:03 connected to the local community because it's the social history that we're using as being a very important driver of the whole scheme. Next slide David. And so ... particularly during the last 12 months we've been really making it clear to all of our stakeholders that this is not something where we're going through a process now of a quick planning submission. We're not

00:44:30:12 parcelling up this scheme to deliver blocks of flats. We're looking at the whole scheme to deliver a whole community based development project. Next slide. And we've through agencies such as the Design Commission for Wales we've been progressing towards a series of community based workshops and this was a two day session. Next slide David. That we held in Cardiff Bay

00:44:55:21 actually in the Bute Town area of Cardiff. So this is essential to some of the components that we began to touch on about the importance of community based economic development and community based thinking for the way in which new sustainable urban neighbourhoods will have to work. This is the very early stages of that. many people tell me that we are not a fast

00:45:19:07 moving developer. I'm prefer to take the make the statement that we're much more about slow cooking because if these are going to develop and be successful in the longer term they really need to embrace with a whole new way of undertaking major development of this type. Next slide. OK next slide. Now that's ... we're incredibly blessed I would say to be able to deal

00:45:48:10 with a site of not only of such size but in terms of one which is totally within our control. Some of you may know Holbeck urban village in Leeds. Next slide. And to a large degree we're wishing to take the same approach but it's an approach for an area of Leeds where we do not have control over the whole area. But we're wishing to develop with Leeds City Council

00:46:14:21 an approach with other developers which is based on the same principles. Next slide. OK next slide. That's the area of Leeds that we do have control over in the yellow dotted area which is to the south of Leeds. It's about ten minutes walk south from Leeds station and immediately next door to the Leeds round Foundry and the round Foundry media centre which

00:46:39:06 we also own. Next slide. Next slide. That's the fly through which isn't going to work so if we go to the next one. OK. So the outline planning consent that we've achieved for this part of Holbeck urban village is for mixed use with 200 apartments, a large amount of workspace, total development area of about half a million square feet. Next slide. But the thinking embodies the

00:47:10:16 principles of mixing residential with workspace. Next slide. And here we're trying to demonstrate that we very much want this new development to integrate with some of the existing uses which are there. You can just about see on that slide, I think, the ... redundant railway viaduct which has your fairly typical railway arch uses with car breakers and so on. What we're trying

00:47:36:18 to do is to incorporate into the scheme perhaps a slightly cleaner version of that but very much focusing on a workers row or providing commercial space which has got high ceilings and flexible spaces to enable people to make things. So whilst we're developing with the cit council the concept of this being a creative media quarter it will also incorporate the ability for what's

00:48:02:15 what is still quite a strong heritage in Yorkshire for manufacturing. Perhaps manufacturing will fundamentally take place overseas but the some of the thinking and the prototyping is still happening in Yorkshire and we're looking to integrate into our scheme spaces where business which are doing that kind of prototyping can be placed here and people who operate those

00:48:28:13 businesses can also live there. Living above the workspaces. Next slide. But how do we get to this kind of development during a recession? Next slide. That's fine. These are sound principles for long term development projects. But the challenge in achieving each of those five dots can be immense. I talked earlier about silo busting. It's important as an institutional

00:48:57:17 investor for us to see that there is joined up thinking with the public sector agencies. But we recognise that we need to explain why that's important to us and how our money will flow in with the appropriate level of support. And I'll come to that final point. Funding. Next slide. So I think just a couple of points I wanted to make about the current market. Let's be in no doubt that

00:49:26:23 we are in a mess from an economic point of view. We talked about perhaps Swindon not having a particularly high land value. Well ... no land has a high value at the moment. It is impossible to obtain money from the banks and from equity investors to put into property at the moment. And this is something which we've been lobbying for some time to just make sure

00:49:52:04 that that is fully understood. This situation will be here for sometime as ... second stage effects start to come in. further bank failings are quite likely. So we have to deal with that as a reality and also recognise that we are in danger as a sector, whether its in terms of it being mixed use sector or people trying to undertake sustainable development we're in danger of if we stop

00:50:19:06 and wait till the market comes back to us we will lose capacity within the industry. And it's taken some time to get to this level of capability with the industry it's really important for the public sector bodies to recognise the importance of putting money in to the sector to keep momentum moving forward. These are conversations that we've been having with the

00:50:38:20 Homes and Communities Agency through an organisation that we formed with other likeminded mixed use developers. So ourselves, Urban Splash, Elliott Lipton's company, First Base, Duncan Sutherland's company in partnership. Form of something called a mixed use regeneration alliance. Just trying to present to government the issues that are facing proper mixed

00:51:00:04 use sustainable development which are different to those facing single use house builders or major commercial developers. And this is a statement coming out from that group and the Homes and Communities Agency. There are five tools that we're discussing with them which will enable things like underwriting and gap funding and so on. Where we're taking that

00:51:25:20 forward with local authorities is to establish the connection as part of the single conversation that many of you will be aware of, which is the Homes and Communities approach. And stating that if the single conversation can deliver some support at this stage then we believe that our equity raising that we'll be doing with institutional investors can be applied into this type of urban

00:51:53:00 regeneration project. Next slide. OK so this leads into the case for sustainable development I think. Those statements are not my statements. There's a consultancy called Woodson Wyatt who advise the fund management world. And in the autumn they came out with a paper called Unlocking Future Value in Commercial Real Estate. It's really the first

00:52:23:10 time that I've seen an advisor stating that there is potential value in taking a sustainability approach seriously. What they're really saying is that in these times where there isn't any easy money to be made anywhere it's not like let's just obtain a planning consent on a piece of land and the asset will go up in value. At a time when that world has gone. So much more emphasis is

00:52:46:24 being placed on the risks to investments and it's recognised now that dealing with sustainable development seriously is very important to manage those levels of risks. Next slide. And I'd go so far as to say that ... we know from our conversations with investors into property certainly into commercial property that the ability for a scheme to deliver long term sustainable development

00:53:16:10 is now being recognised. And I think the approach that we've talked about earlier for community based approach to delivering sustainable energy for the first time I'm seeing investors being interested in the concept of community. Almost the first time to become interested in the concept of society which of course society doesn't exist does it? the much misquoted Margaret

00:53:40:23 Thatcher. Next slide. So again I believe that that is that's the game that we have in town. If we want to get the projects to move forward we need to really embrace the concept of mixed use mixed tenure sustainable community based development. It's something which the Homes and Communities Agency want. And something which I believe that when we do our

00:54:08:07 equity raising in March April and May we will start to open the doors in the city. OK. Thanks.

00:54:19:09 APPLAUSE

00:54:43:04 **John Dales**

Well hello. As David I'm John Dales. Director of Transport Movement and Consultancy Initiatives. We do a lot of master planning which involves as you'll see in a little while some major residential developments. Urban initiatives it's a key to where we work in urban areas. And actually that's a lot about what I'll say. in a sense I've got quite a few slides, quite a few

00:55:08:02 pictures I'll rattle through them very quickly. That's the idea anyway. And at the heart of what I'm saying I suppose is the question I've often asked myself or a similar question to the one I've asked myself many times before. I don't know if you ever have done. My wife is absolutely insistent that when we recycle our big plastic milk bottles they're supposed to be washed. OK.

00:55:30:03 It says you know don't make them dirty make them washed. How much water is it worth my using washing that bottle and how hot should the water be before it's not worth recycling it. Another example is suppose I'm making a journey that I would be making in any case by car but my local authority

- 00:55:59:10 doesn't recycle plastic yet. I'm not picking on plastic it's just that one. They recycle everything else but not plastic but I'm very keen on recycling. The journey I'm making I'm making anyway. There is a recycling centre that I can divert to to drop off my plastic because I'm very keen to do that. How far away from the route I'm taking and of course it depends on the gas guzzling nature of the car I'm using and how much plastic do I need to take before the eco budget is blown? In other words I've diverted too far and I
- 00:56:22:14 should have just binned the stuff except I shouldn't bin it because there's some trade off there with what happens to the landfill. So water, landfill, energy used, different types of recycling, how on earth do we make sense of that? And in a sense what I'm trying to achieve what I'm going to be talking about when these ... slides come up.
- 00:56:42:04 UNABLE TO FIND SLIDES
- 00:57:08:24 **John Dales**
- 00:57:27:11 But anyway it's worthwhile blather at the beginning I hope you'll find because in a sense what I'm talking about is trying to get the transport element into what we're talking in terms of sustainable housing because I think it's lost quite often, for very good reasons, and I'm not saying that everything we've spoken about so far isn't fantastically important. But it's a bit like saying we've got the recycling sorted but we just can't get the stuff to the recycling centre. So I was asked by David to talk about these particular issues. Transport scale and location. You may just have seen. This is the heart of what we're told about the house. It's all about location location location. And that's what Phil and Kirstie think in any case. How does that actually
- 00:57:45:20 work out? So I just want to talk about some particular examples. Some that aren't mine. Some that are related to the work I do and how this all works out. I gather from the information I've just received in my pack that one of the things that TSY have done in this programme is been down to Bed Z here in

00:58:06:22 London and let's just have a look at some of the characteristics of
Bed Z. 59 dwellings per hectare. However I've worked out that there can be
only 1.4 hectares of it because there are only 82 dwellings with some
workspace units as well. It is in built up London but it's not that close to the
nearest over ground station which isn't that powerful a transport network all
London things considered. It's about 1.2 kilometres from the nearest
00:58:31:24 tram station. That only takes you to Croydon anyway. Oh sorry or
Wimbledon. And it's miles from the tube. There's only four buses an hour.
This is London so that's not so good. Right past a site. Some nearby. None
of them take you directly to the station interestingly enough or the nearest
station. They just. The ones that are nearby you have to go to the station
00:58:53:01 to get and the one that passes the station turns off before it gets. Passes the
site turns off before it gets to the station. Nevertheless it's called the first large
scale carbon neutral community and I just wonder, and in a sense that's what
we're talking about today, there's a document here which I should have read
obviously but hadn't been seen before today so how on earth
00:59:09:07 do we define? Do we define it just in bits? And what about the other bits which
are all part of the deal. Just very briefly the red circle there is roughly where
the site is. It's near the 127 bus route as you all knew. Hackbridge station is
just to the south. Mitcham junction to the north gives you the tram and you
can see that there's a tube station somewhere up to the northwest there
00:59:28:06 but not that easy a walk. And it's this matter I suppose I very simplistically call
internal as opposed to external sustainability. The development itself the
buildings may be absolutely fine but what about everything else? Wonderful
carbon free homes that aren't easy to access by sustainable modes. High
density but relatively low numbers. I'm going to come back and
00:59:49:13 summarise a lot of this in a little while. Here's another development called
Mallator. Don't know if you've ever heard of it. It was featured on Grand
Designs. My wife loves Grand Designs and so I watched what's his name
McCloud eulogising about this thing. It's award winning architecture. Oh yes.

01:00:13:12 It has serious carbon zero carbon credentials. But the densities are very low. Around about a dwelling per square mile. It's close to a dwelling per county actually. And the scale is very low because it's exactly a dwelling and the location is officially the brochure says in the middle of nowhere. In fact that's mostly the point. Here is Mallator. And here's it from another angle and here are the people who live there. LAUGHING. There it is

01:00:40:19 and if you go in that direction you get to the USA after a while and if you go in this direction you get to the nearest town sometime. Actually it's not that far to a city in fact but it is Britain's smallest city, St David's and that's quite some distance away. So there's Mallator for you. Here's another development no far from where I hail from in fact which is Whitley Bay up near Newcastle

01:01:04:00 This is Northumberland Park. Got a good name anyway. It's in North Tyneside. It has no particular pretensions to zero carbon credentials as you can probably. Let's quickly go back. You know just fairly ordinary. There's nothing wrong with that necessarily but it has no particular pretensions to that. It's in Tyneside who don't have any pretensions to anything frankly.

01:01:23:06 suburban character. It's easy to access by highways. You saw that huge roundabout. It's in fact surrounded by the kind of infrastructure that frankly people like m shouldn't be building anymore. If I find who they are. Right. When I used to work for local authority transport section there was this letter we always wanted to write to people which was just basically we know

01:01:41:06 where you live. There's a lot you can do when you find out where people live. Easy highway access but actually beyond you don't need to remember from the picture but it's fairly standard stuff. Everything is surrounded by a big eight foot palisade fence. Within, it's alright, outside you wouldn't walk anywhere. There aren't any particular footways. And yet, this has got its own

01:02:03:10 metro station. Brand new. Actually there used to be there when I was a kid I went through called Backworth but they wiped it out and rebuilt it again. If only they'd thought like all those people who are ripping out ten years 15 years ago ripped out original fireplaces. If only we'd kept them we would make a

01:02:20:00 fortune sticking them back in now in all the Victorian and Edwardian houses. Ten trains an hour to Newcastle which is where most people want to go. Not on match day anymore. Roundabout 1500 new homes within walking distance it says. There's tons of stuff around there not just Northumberland Park itself. And that's needed to feed the demand for the station. This is where we get into issues of scale. You know you

01:02:40:01 need. There's not much point in building a station for a relatively small number of people. There's lots of people around there. And of course you need to pay for the blighter as well. And this was mostly I think from Belway. Sorry large chunk from Belway and large from Northumberland Estates or something like that. and the point eight came from the local transport

01:03:01:24 plan. So that's not a very high proportion of the total cost. The developers bore the rest. Moving on to Coltishall eco town. I don't know what you think about eco towns. Whether you've been involved in any or not. From my particular perspective when I saw the list of potential eco towns there's always a clue for me is have you ever heard of the places? If you haven't

01:03:24:08 there's a good chance they're not near anywhere. Coltishall actually I had heard of because as a child I misspent my youth as a plane spotter and was once arrested looking at Jaguars from the perimeter fence. But obviously I was so angelic that when they arrested me and took me there they said you're alright then and showed me all around the Jaguars which I sabotages

01:03:41:01 consequently. It's a brown field site it says. OK your former RAF base. And this brown field site I looked up on some of Coltishall's publicity is near the pretty village of Coltishall and the heart of the Norfolk Broads. Featuring a picturesque staithe and charming little shops. Yeah that sounds urban. That sounds sustainable but nevertheless recognising perhaps it isn't

01:04:03:12 as close to stuff as it might ought to be it does have a sustainable transport strategy. Of course it does. Hooray. And these are elements of the sustainable transport strategy even though a large range of services are provided. Interesting. Are provided. I don't think it's there yet. Residents

INAUDIBLE ... really? Still want to travel to Norwich. You think?

01:04:25:15 And so the sustainable transport strategy is underpinned by this major highway improvement which will improve junction improvements, local INAUDIBLE road widening and therefore creating a high quality vehicular link with Norwich. I don't know why because everybody is going to walk or cycle surely because it's eco. And further new western link road as a bypass.

01:04:44:17 So one major road improved significantly and another one built altogether. Never fear because although the nearest mainline station is six kilometres away there's a local narrow gauge railway is going to be upgraded. Course it is. New station will be built on the edge of the site to the south. I daresay. A new platform will be built at that nearest mainline station and then a

01:05:04:19 new what? Light eco train service. Yes. No really. Whatever the hell that is. And of course there will be an extensive network of high quality footway cycle way facilities. Of course there is. There always is. Whether they get you anywhere once you've got off the site is another issue. There'll be a new regular bus service to the Norwich city centre. There better be coz there

01:05:26:17 ain't gonna be a train frankly. And of course there'll be a travel plan like most travel plans will include a wide range of travel incentives and awareness initiative measures that everyone who's got a car will blithely ignore. And most of them will because they'll have to have one because they won't be able to get anywhere if they don't. And this is the developer.

01:05:47:02 coming on to just a couple of projects that I've been involved with. This is as you've recognised from this public transport accessibility levels map part of the London borough of Southwark. The sort of darker bit up the top is Elephant and Castle. That's our site. And basically the warm colours show better public transport accessibility and the colder colours not so good.

01:06:06:10 so there's a wide range there. This is all London standard. So good London. It's excellent. Most other places that's not to belittle other places but it's just to understand that in context because even where the green and the blue stuff is there are a couple of bus routes go up there. And around about 5000 homes

01:06:27:23 will be developed by delivered under this master plan if it can be got
away of course and there's always a big q question about that. Those 5000
homes are roughly double the existing and there's a big economic issue there
of course and interesting to hear that very brief discussion beforehand. You
need to build twice as many in order to still provide as many socially rented
homes are there already and you've got to create the value to do the
01:06:46:05 thing in the first place, therefore tons more. It's between a couple of busy
bus corridors. And a couple of bus routes through the site. It's not far
reasonable walking distance and your bus doesn't come so people walk along
the bus route. So you can walk to Elephant and Castle where there's tons of
stuff. There will be new and improved bus routes to the site. Greatly
01:07:03:16 improved walk routes to the main bus corridors. It's a bit of an issue at the
moment. There aren't streets. They are a little bit mean streets as things are
at the moment but it's a big site. Opportunity really to improve streets is
something that Rory mentioned earlier the importance of making streets nice
and walkable. Low parking standards that is acceptable and accepted
01:07:22:09 in this particular area. High density in large numbers. It's still not a given
though. We will still have to work incredibly hard on the costs on all these
other, on delivering these two extra bus services and possibly doing a bit
more. In other words it's not going to fall into our laps. This will inevitably be a
really sustainable place to travel to and from. The other example is in
01:07:42:06 West Newcastle in Scotswood. Features heavily in the well Scotwood Road
does which is along the bottom of the site in fact. This doesn't work. Oh yes it
does. A little bit there. Scotswood Road from the Bladen Races you're all
familiar with that song I'm sure. Around about 1800 maybe 2000 dwellings. It
kind of depends at the moment. And the city centre not too far but not
01:08:04:13 really walkable. There are some pretty mean streets off to the east there let
me tell you. Newcastle Scotswood. So that's what we're talking about with
some other mixed use as well. Car parking is much higher than in London.
They're vacillating about that because like many of you will have experienced

01:08:24:15 it's all very well having low parking standards in theory, in practise people will have more and park them all over the shop. How do we manage that? How do we really make it work? There are lots of existing bus routes. We're going to make them better. In other words working with something that's already there. Link that doesn't exist at the moment from the main spine down to the Scotswood Road INAUDIBLE ... whether they get more bus routes

01:08:41:02 but they're currently there. They don't exist effectively for the site because there are no good links. We reckon depending on our estimates and this is all about whether our travel plan works or not. Whether these things are actually delivered there'll be tons of new bus trips because there are lots of people and therefore that will help to drive those improvements. One of the good

01:08:59:22 things about buses of course is they're pretty flexible to deliver better services. But the downside of that is you know providers will tend to wait until they see the numbers and by then it could be a bit too late. Those new bus services will also hopefully make existing development that little bit more environmentally sustainable in terms of travel patterns at least. But

01:09:17:21 again it won't just fall into our laps. You know this has got to be joined up and worked on very hard. Quickly reviewing those schemes then. Just very, very briefly. So there's Bed Z. This is just my rating. I'm not doing INAUDIBLE sustainable homes but the buildings are pretty sustainable. The location and transport is alright and the scale not good enough to deliver anything

01:09:36:15 more than was there already. There must be more in terms of housing if that were to deliver better transport. Mallator. Fantastic buildings. Rotten location. Rotten scale. Must sorry. Northumberland Park. Building I don't know but you know nothing special in terms of their environmental credentials. Location was good. Scale for transport was good.

01:09:58:02 you don't necessarily. Is that what we want to see? I don't know. But mustn't grumble it's delivered something. It's delivering a brand new station and people are using it in large numbers. Coltishall let's say the buildings would be fine. Location for transport is poor. Scale I actually don't know but let's

01:10:20:13 assume it's good. You know. New Aylesbury. The buildings will perform well. There was requirement of the plan. Some perhaps exceptionally well. Good. Good. Still have to make it work. It won't just happen. And I'm sure many of you out there know much better than I do about that. Scotswood. Good potential but we must try hard if we really want to make a sustainable in transport terms. Just then turning to this particular document which

01:10:39:09 David I hate to say this, can you pass me that? You shouldn't have held this up because actually if you read the document that looks like that on the front it says this green thing is ditched. So there we are. This is what it looks like now. It's a much prettier book isn't it? Just looks like all their others. That's really sustainable. Maybe they've just recycled them all. Just didn't

01:10:59:14 you know different contents. This however talks about the whole home. This business of internal and external and it goes through all these issues. Absolutely central that we do look at all of these. But we need to do more. So this issue of internal not external is the thing that really I've been asked to speak about today. The only mention in this book about transport

01:11:18:18 is about cycle storage. So in other words in terms of how we might deliver transport it actually whatever I might do cannot deliver a different code because there's nowhere for it to be valued within the code for sustainable homes. You can't deliver it. It's just not there. It's not valued. You know alright the code just does what it does. But if you can focus on the code

01:11:38:01 and you forget about the transport you can still deliver anything. There's nothing there about scale at all as far as I could see. Nothing about location three times. So as a consequence of that that's why I think you can get eco towns sounding like a good idea. Like Coltishall because internally they might perform wonderfully. Externally not at all. You might even get more

01:11:59:11 Teletubby homes. Maybe fewer of the New Aylesbury's that I was referring to later. That'll do for now. Thank you.

01:12:08:01 APPLAUSE

01:12:31:15 **Dr Richard Simmons**

While David's leading that can I just say how fantastic it is to be here because I spent six years at Sheffield University. Three of which were studying the urban morphology of Sheffield before the development of the planning system in the 19th century. So for me it's fantastic to be here in one sense but on the other hand the fact that there are no longer all the cutlery workshops

01:12:49:07 and steel factories down in the East End and down here it's slightly sad in some ways. I am aware actually from sitting at the back that the acoustics in this room are probably not designed for this kind of event so if you're having trouble hearing me can you just wave? I can see somebody there in the green top so you're my acoustician so if you can't hear let me know. I'm

01:13:10:23 Richard Simmons and I'm Chief Executive of the Commission for Architecture and the Built environments. We're the government's statutory advisor on architecture, urban design and public space.

BREAK FOR GETTING MACHINE UP AND RUNNING

01:13:31:20 **Dr Richard Simmons**

And we've been thinking very hard about this question of scale and sustainability. So when I was invited to come and do this talk it was a great opportunity um to talk about something we've been road testing with the core cities for about 18 months now. But first of all I want to start off with some principles. So I'm sorry if these have been covered already. My

01:13:50:17 train didn't get here till 11 so if you've heard all this before I do apologise. Can we go to the first slide? The first thing to say and this is something on which Bob Kerlake and I are inseparable. We're indivisible. And it's actually written into the Homes and Communities Agency requirements is that sustainable and good design are indivisible. Now this is actually surprisingly novel.

01:14:12:10 When I arrived at Cabe four years ago as Chief Executive and said one of the

things I wanted to do was give us a voice on sustainable developments and sustainable design I was told that Cabe had been told, possibly by somebody in government but I never found out who it was, that there was design and there was sustainability and they were two completely different things and

01:14:30:15 Cabe should keep its mouth shut about sustainability. Well sorry. The world has changed and we too have changed. Next slide please. I just want to remind you what this is all about. And I'm afraid these slides are a bit blurred. I should say by the way that there is one slide in this presentation with content of an adult nature so if anybody feels strongly that they don't want

01:14:57:21 to see that it's about four or five slides in. and I'll give you a warning I hope just before it comes up if you want to avert your eyes. The first slide though here is just reminding us that we're the problem. Several people have said to me oh it's China that's the problem. Actually it isn't. China is only making stuff for us and in fact you can see where the lights are on in the world that's

01:15:17:20 basically where most of the carbon is being generated from and folks it's us. And in fact it's also our empire as someone mentioned earlier. Our former empire. So when people say actually the Chinese and the Indians have got to sort themselves out we certainly have to show some leadership on this. So we do need to start changing and that's going to be quite a difficult task.

01:15:38:08 Next slide please. And just to bear in mind the consequences. The people who get hit most by things like sea level rise are actually people like the Mauritians who've already started buying higher ground in other countries to move to because they can see that their country will be underwater soon as a result of our carbon emissions. I don't think there's any doubt about the

01:15:57:20 science but if you want to have an argument about it afterwards let me know. Next slide please. Now this is a long slide. This is taken from another presentation I do which is longer. The thing I want to talk about is why this question of scale is actually problematic. And the reason is something which Jared Diamond who's book Collapse you should read the reason

01:16:18:23 is that something called the tragedy of the commons occurs. And the same

thing happens to fish stocks as well. It's really hard for human beings to share things. We find it really tough to agree about how to share things. If you have a young family you'll know that even in your family it's really hard to get the kids to share things like toys. When it gets to fish or carbon dioxide

01:16:40:18 it's much tougher and much harder. There are also lots of other issues about invisibility. The only other point I draw to your attention is from Jared's book, the one about we think the technology will fix it. actually all the societies that have collapse or most of the societies that have collapsed due to environmental strain like Easter island and some of the people in

01:17:01:12 Meso America, whose civilisations collapsed, were the most advanced civilisation of their time with the greatest artistic creativity and the best ideas about science and they're all dead and so is their culture. So just bear that in mind please. Next slide please. The other thing to remind you of is that people are looking for leadership. This is a survey that MORI did in 2007

01:17:21:13 and repeated in 2008. The green bars are important. Down the bottoms is what you personally think you can do about climate change. Almost nothing. Up at the top is what people think the government can do and then what they think industry can do and then what they think local government can do. Of course they play no part in any of those things in their own minds

01:17:44:07 it's them not us. So actually the onus is on us because most of the people in this room I think are from some form of government or from the private sector, from business. People are looking t use for leadership. Next please. The leadership they're actually getting however and I think Jeremy Clarkson is fantastic. I love him. I love driving fast cars really fast. And the fact

01:18:04:09 he gets to drive really fast cars and make lots of smoke coming off the tyres I love it's wonderful. And he's also very funny as well. The problem is he's also rather wrong about climate change. According to most scientists but actually this is him in The Sun saying it's all a load b something ks um and as soon as Gordon Brown starts flying in a plane powered by water Jeremy

101:18:27:04 will get rid of his car. So actually that's what most people are getting most of

the time and what they're probably listening to. Next slide please. Now this is a slide now sorry I did forget to give you the warning ... no no this is the slide now for those of you who can't see it very well I can first of all unfortunately my lights I just want to make it clear that his other hand is there.

01:18:54:04 This slide is a genuine picture taken from a house builders brochure for a housing development. Now actually as it happens it's in the Republic of Ireland. We've been doing a trawl of the major house builders and non of them are quite like this I have to say. But they're similar. They do have a young couple having coffee in Starbucks as a major selling point for their

01:19:19:07 houses even though they're nowhere near Starbucks. So in other words they're trying to sell you a lifestyle. Now actually this one was banned by the Irish Advertising Standards Authority but locally because I spoke at a conference in Ireland they gave me a copy of it and I've been using it relentlessly ever since because what this is doing is telling you what

01:19:35:07 they're selling you. And I was at an event recently where the managing director of a major house builder talking to us and the government about their responsibilities said we are retailers. We sell a box. Everything else is taxation. That's what he said. He is the managing director of one of the largest house builders in the country, or they were anyway, nobody is a big

01:20:01:11 house builder at the moment. I won't say who it was. I was moderately shocked. But his point was anything else apart from the box itself is none of our damned business unless you in the public sector make it our damned business and then we regard it as taxation. In other words it's a burden on what we do. That includes everything to do with climate change

01:20:17:01 by the way because the conference was about how they would like the burden of regulation lifted because they're afraid that they will not recover from the current crisis without getting a lighter ride on this stuff. Now why have I started with this slide? Well there are two reasons. The first is that in my experience, and I have four of them this kind of behaviour if not properly managed

01:20:38:05 leads to children and the question is where will the children play. And the second is a more serious point. However if we move to the next slide you'll see what's actually happening outside the home. We call this Narnia because of the lamppost in the middle there. This is actually the genuine landscaping strategy. That's where the kids play. This is the only space around the building and it's all for car parking. Next please. I've been criticised by the

01:21:01:13 house builders for showing that slide because they say it's not typical. This is a large development by Wimpey in Swindon as you can see. It may not be typical but this is several hundred homes which have car parking for play space. Next please. And so on and so on. Now the reason that I'm showing you all this is not to knock the house builders it's simply to say that

01:21:21:08 the attitude that we are selling a box and we're retailers and everything else is taxation is at the root of why the approach to zero carbon has started with the box. With the home. Because that's what the house builders think they're developing and the government until recently has listened to that and has said OK well let's work with you on making that box sustainable. Now what

01:21:41:14 that's led to next please is some very commendable work by Barratts BRE and other developers as well looking at how to get that box more sustainable. This is the code level six home that Barratt have built to prove its technically possible to build at BRE. If you move onto the next slide. And it's full of you can see this slide when they're circulated but it's full of passive measures

01:22:05:05 like heavy use of concrete to provide thermal mass. Triple glazing and so on and also some active measures like an air base an air sourced heat pump and so on. And electronic management systems to try and keep the building automatically in balance. And so a lot can be done. This scheme demonstrates a lot can be done with the box. The challenge though is

01:22:27:15 that this won't get you all the way. Not least because the house builders are saying they can't afford to build this. Nobody knows exactly what this one cost. But estimates are quite high. Now what we would expect is that triple glazing would come down in price. For example in Germany you can't get

01:22:46:07 anything but triple glazing for mass house building. In the UK you can't get it at all. But our former commissioner Paul Morrell who's a world famous QS will tell you that double glazing is cheaper to buy than single glazing if you're a house builder in England because it's the only thing available in the mass market. The same could happen for triple glazing. So we could see the economics changing. But to be honest the problem is that the home

01:23:05:13 is not the only source of carbon and we've just been hearing about that in relation to transport. So we can get a long way here but if we're talking about £30,000 added per home which is what the house builders are claiming, let's say we halve that to get to a figure that might be based on a more how can I put it a more future proofed approach to costing, it's still quite a

01:23:28:24 lot to add to an affordable home. But also it just won't deal with an awful lot of issues. Next please. So the next level of action has been as we've just heard places like Bed Z which I gather some of you have seen. And Bed Z is working very much at the neighbourhood level. And what Bed Z have tried to do, what bio regional and Bill Dunster associate and Peabody there

01:23:48:19 have tried to do as you will know is tried to produce an approach to sharing resources and can I have give me another press please of the button. So you'll see ringed in orange there the combined heat and power system and you'll know if you've been there that it doesn't work. It hardly ever has worked. It was the wrong piece of equipment to install at the wrong time and

01:24:11:03 there were lots of issues about worries in the local authority about noise from it which meant it was switched off for several hours at night which meant that tar built up inside it from the wood that was being burnt and so on. So technologically it hasn't been a great solution. The photovoltaic all feed into a central point. And certainly that's not what Bill's doing anymore.

01:24:28:17 Bill's now attaching photovoltaic to the individual home. The attempt to share things like energy here has not been a huge success and if you talk to Bio Regional they will tell you that they're now looking at how you can produce energy to deliver to a wider part of the community because this has just not

- 01:24:50:08 proved to be viable or workable. The same things happening on waste water in fact where Thames Water have come in with some new technology because what was installed in the scheme didn't work. And we've heard a bit about transport and so on. Now I won't go on only to note actually that one of the streets there is called Dunster Way which confirms everything I've always believed about architects as a town planner. Next slide please.
- 01:25:08:16 the other thing about neighbourhoods actually is it starts to get us into the density debate we've just heard about. There are two sides to this and this is a dilemma. To remind you a problem is something you can solve a dilemma is something you have to keep working on. Because there is no solution to a dilemma. It's simply something that you have to actually keep improving
- 01:25:25:12 your response to. On the one hand we've heard about the question of getting people together so that high density networks can be served and therefore saying we should build more densely. Another way of looking at that is the places we live our neighbourhoods are being driven by the viability of transport infrastructure and other things. And is that what people really
- 01:25:46:06 want? So there is a question here about whether we want our neighbourhoods to be designed in a particular way or whether we're compelled to design them in a particular way as a result of economics. Moving on to the wider community INAUDIBLE which many of you will know in Stockholm in Sweden is a great example of starting at the
- 01:26:04:00 bottom up. Master planning. Looking across a whole community. Not just a neighbourhood. But what is effectively a collection of neighbourhoods. And setting the target. They want to be twice as good as the norm. Whatever the norm is they want to be twice as good at it. So that's about continuous improvement. Now Hammerby is a wonderful place in many ways.
- 01:26:24:01 Next please. It tries to tackle lots of the issues, not just zero carbon but bio diversity and so on. It also has its problems and its issues. Some of which for example are about car use because they have a car club. They've got fantastic public transport. And everyone has got a car because it's a pretty

01:26:42:09 middle class place and nobody wanted to be without their car to get away for skiing and so on at the weekend. So they haven't really cracked some of the key questions that we face. This is a low carbon community for sure. But probably not zero carbon. Next please. Now before I go onto what Cabe is doing about this at the moment and giving you some clues about how we think we should think about this I just want to make the point

01:27:02:24 that thinking about sustainability at a level above the individual home is not new at all. It's what Ebenezer Howard was on about. Lot of Howard's people focus on Howard's ideas around garden cities but in fact he was looking at a whole eco systems when he looked at garden cities. He was looking about the relationship between food and where it's produced and where its

01:27:23:14 consumed. He was looking at transport. He was looking at trying to create sustainable places. His idea of town country isn't actually about suburbia as often been portrayed because the typology that was produced at Welwyn Garden City and so on looked pretty suburban. It was actually about

01:27:37:20 creating sustainable places on a large scale and much of it was about community and how people came together to live in communities. It's been interesting that the TCPA has been so closely involved in eco towns. But I think what they were hoping for was this kind of thinking about places that are networked rather than single point places would be taken on

01:27:59:15 board. But we're not actually here talking about something that's brand new for planning. So I get a bit depressed when people say oh it's all kind of very new stuff we can't deal with that. Actually planners and architects and designers have been thinking about this for a very long time. We should I think be realistic and recognise that. Next please. Just before I move onto

01:28:16:01 what we're doing very quickly the other think I wanted to make the point about was that everything I've talked about so far has been new development. It's been on brown field sites or green field sites. It's doing zip for the existing community. And most of the buildings that will exist in 50 years time are already there and they're not very sustainable. This is a project I worked

01:28:34:14 on in Hackney where the tower block that was retained had a tea cosy as they call it wrapped around it. This is about 10 or 15 years ago now. What's interesting is I went back there last year because there was a bit of an argument about whether the community were involved or not from an academic. The people from the community group said yeah we got

01:28:51:24 exactly what we asked for. And including the person who lives on the top of these flat who pays for nothing for heating in the winter because the insulation is so good that they have no energy bill for heating. And they were delighted by that. We have to think about the existing built environment alongside the new. Thank you. So what Cabe, and we'll go through these fairly quickly

01:29:07:20 what Cabe is doing is working with the core cities at the moment. Next please. Including Sheffield. To develop a web resource for decision makers to deal with some of those problems that were asked about earlier on. Next please. We're trying to look at the whole question of scale and what really delighted me about this conference today is that hardly anybody is talking

01:29:27:20 about the fact that you have to work at different scales to get to low carbon or zero carbon. You can't simply think about one scale. You've got to think also holistically about the sub region, the region and the city. Thank you. And it's got to be a cross cutting programme. It's got to be multi disciplinary. It's great to have highways engineers in the room. I'd like some food technologists and

01:29:48:12 some agriculturalists here as well next time. Next please. We have four touchstones that we think are really important for this. None of which you'll notice are about heavy insulation on houses although that's very important. They're actually about understanding the place you've already got and trying to tailor your solutions to it. Nurturing the genius loci. And using existing

01:30:10:16 tools like the UK climate impact programmes measures for local sustainability as your measures of performance. Next please. They're about using the spatial planning system to achieve sustainability. Now the house builders don't want us to do that. They say just use the building regs please. But you can't do this stuff without thinking about the wider plan. Next please.

01:30:29:23 It's really about civic leadership. That goes back to my point. Did you elect Jeremy Clarkson or did you elect a councillor? Are there any councillors in the room? No it's a shame because I usually say who elected you to produce second best for your community. Who elected you to produce an unsustainable community. Absolutely nobody. And so you need to be

01:30:48:14 reminded of that. And we didn't elect Jeremy Clarkson. He's great fun. He's enormously interesting. He's great to have an argument with. But the people who actually govern are the people who we elected to govern. And they're the people who need to lead. Next please. And we need to think about ecological footprint of the city not just about carbon emissions because

01:31:07:12 there are other issues here as well like toxicity. And toxicity in my world has two meanings now. If not three. One is about toxic debt. Another is about the toxic homes that were built that we won't be able to sell in urban developments and the third is about actually getting poisoned by the materials that are put in some of the buildings that are being built at the moment.

01:31:28:01 We have to look at all these issues. Next please. And we need to look at this holistically. So here's a couple of examples. One from London. Next please. Where they've been looking at London ecological footprint. Next please. And one from Hammerby which is the underlying model, I won't go into the detail of this now, but they have an idea about the whole place and how

01:31:46:07 it will deliver sustainability. That includes of course very sustainable homes but it also includes transport. It includes waste. It includes energy. Next please. So we think it's absolutely vital to think at all these different levels. It's right to think about the individual home. It's right to think about the individual materials of which homes are made. But we've also got to think at a higher

01:32:06:07 scale and that's when we launched this website in March exactly what we're going to be saying. Next please. And we're going to be looking at priorities across all these issues. Energy. Waste. Water. Transport and so on. Next please. And we're going to be running a learning programme with some of the core cities to actually embed this into senior decision making in

01:32:23:01 their cities. And I'll come back to senior decision making in a moment. Next please. I'm nearly done. Just a helpful remind for you because not everyone's picked up on this yet. It's now the law. The act of parliament which set up the homes and communities agency gave it a statutory duty to deliver good design and sustainable developments. The new planning act

01:32:45:09 that's just gone through gives all local planning authorities when considering planning applications a statutory duty to achieve good design and sustainable development. Now that's very interesting. You'll see if any of you are architects you'll have seen the RIBA saying that they were responsible for this change. Actually there was a number of us responsible for the change

01:33:05:071 including Cabe and the RIBA. We've worked together in a very successful partnership to get the government to change the act and this was done in the House of Lords. So it's now the law but how will we know that they've met their statutory duty. I think it's a really interesting question. How are they going to prove to us that they've done it? now we're working very closely

01:33:23:19 with the HCA at the moment to help them to be able to answer that question. And no doubt somebody will be pointing at me in some Select Committee in due course and saying Richard how's Bob done? And I'll be there to tell them and Bob will be there to tell them as well. And we hope we'll say the same thing. but it's going to be very interesting isn't it when the first judicial

01:33:39:15 review challenge or planning application or planning decision comes through saying you haven't met your statutory duty to produce a sustainable scheme. I'm looking for that moment with great interest I think. Or if you get a design review comment from Cabe in the future as well you may saying we do not believe that this development will enable you to meet your statutory

01:33:56:18 duty to produce good design. That's going to set the cat amongst the pigeons isn't it? I'm hoping to sign that one myself. So you have to do it. Now what on earth do you do? Next slide please. I would like to suggest we hear lots of stuff about hierarchies and we hear lots of stuff about holistic nature. Well I'd like to suggest that the Russian doll is quite a good metaphor for

01:34:20:06 what we have to do. These are nested imperatives. There is no one of them that is necessarily more important than the others. There are ones which will have different priorities in different locations. But first of all I'm fighting a campaign to get rid of the red line because as soon as you draw the energy requirements for example or waste or transport around an individual house

01:34:39:03 then you lose an opportunity. If you draw it around a new development and don't look at how that new development could connect to an existing development you lose an opportunity. Now that is actually very controversial. The deep greens believe that the house builders should not be let off the hook in making each individual new home sustainable. I'm more interested in

01:34:57:01 how you make whole communities sustainable and I think that involves not looking just within the red line. Functional green infrastructure and there's a commercial here. We are having a conference about this very soon. It's not for you. It's not for your boss. It's for your boss's boss. Unless you are the Chief Executive or the Director already. Because Park City is all about

01:35:17:22 functional green infrastructure. Tackling things like heat island effects, drainage, recreational use, transport use for walking and so on, of green infrastructure. We've heard a lot about travel. I won't go on about that. There are some very basic things you can do. The orientation of buildings. How many building schools for the future projects do we see that have

01:35:37:04 crazy ideas around south facing classrooms which will heat up during the day and not actually be usable. Natural ventilation. Thermal comfort. All these things don't require kit. They require different use of building materials. On site renewable energy. Of course you should look at that. Of course you should. But if you actually have a lot of ground source heat pumps and they

01:35:58:12 freeze the ground under the buildings as happened in some parts of the USA now they're probably not as useful as getting the thermal mass right in the building in the first place so you don't actually need them. But actually I think off site and on site together need to be looked at. We need to be looking at a mixed economy for energy and heat and so on. That means shared

- 01:36:16:06 networks. It means local authorities very often taking a lead through energy supply company and so on in creating the infrastructure at local network level which will allow that to happen. Now that's quite challenging for a lot of local authorities. It's quite risky in some ways. But it's not going to happen. We're not going to get zero carbon if we only go for the individual home.
- 01:36:37:01 And there's a whole load of other things we need to do which are not necessarily directly about zero carbon. The one I did want to pick up on because I've been castigated in the media about this by a very well known architectural critic is that we need to measure what's going on. that does actually happen at Bed Z. People at Bed Z allow Bio Regional to
- 01:36:56:09 check what's happening, whether it is sustainable or not and they produce a report which you can download from their website telling you what's working and what's not working. I think that's fantastically honest and open of them and it's great because they now know what they wouldn't do next time and what they would do next time and they're learning from it. And Bio
- 01:37:11:07 Regional have been doing some fantastic work in this area. And I think the honesty is commendable. Now what I was accused of being was a fascist for wanting to know how much energy people were using. I'm not actually interested particularly in individual energy use. I'm actually interested in whether or not if somebody comes along to you and says we're going to
- 01:37:26:23 build an eco town and you say alright then. Fantastic. We'd want more sustainable places so you can take our fields and turn them into an eco town. Supposing they lied. Supposing it wasn't an eco town after all. Supposing it was just standard house types. And they built a new bypass. I mean that could never happen could it obviously? But supposing it did.
- 01:37:49:13 how would you know unless you were checking? I think actually there is a responsibility placed upon us particularly as leaders of our communities and leaders nationally to be able to say that what we're doing, the changes we're making, the way that places are going to look different and have to be lived in differently in the future, are working. So it seems to me that checking

- 01:38:09:18 how it's going is as important in many ways and then learning from that and feeding it back into the system is as important as doing it right in the first place. I'm going to stop at that point. Thank you very much for listening. I hope I didn't go on too long. But the key for us is you have to work at all scales. There is no right or wrong solution here. It's the Russian doll.
- 01:38:30:05 We have to nest the solutions. We have to get the homes right. We have to get the materials right. We have to get the neighbourhoods right. We have to get the communities right. And if we do that we have the potential to certainly reduce carbon emissions. Now the one thing I would like to say as I close is that I'm a carbon based life form as are you so the concept of zero
- 01:38:51:15 carbon worries me a bit but the closer we can get to it I think the more we're going to be able to turn to the people who are in the dark areas of the planet as I showed right at the start and say we recognise our responsibility. We've taken responsibility. We're changing and we're going to support you as you change as well. Thank you very much.
- 01:39:09:13 APPLAUSE
- 01:39:11:11 CUT