

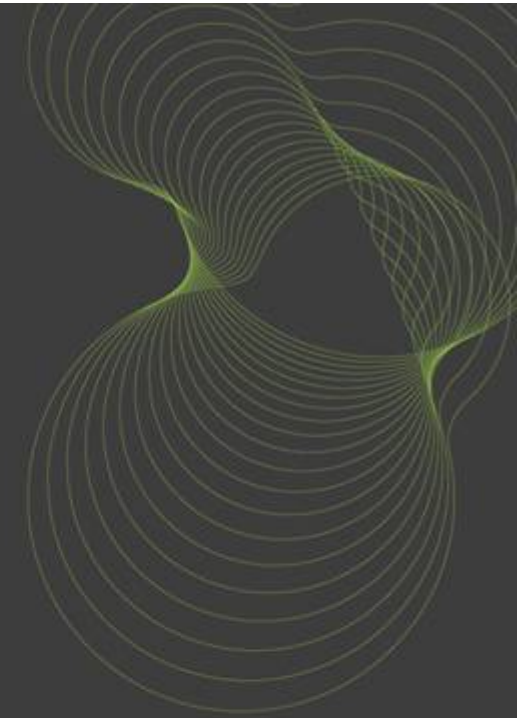
The logo for BRE, consisting of the lowercase letters 'bre' in a light green, sans-serif font.

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Beyond Carbon: GreenPrint for developments

Lynne Ceeney

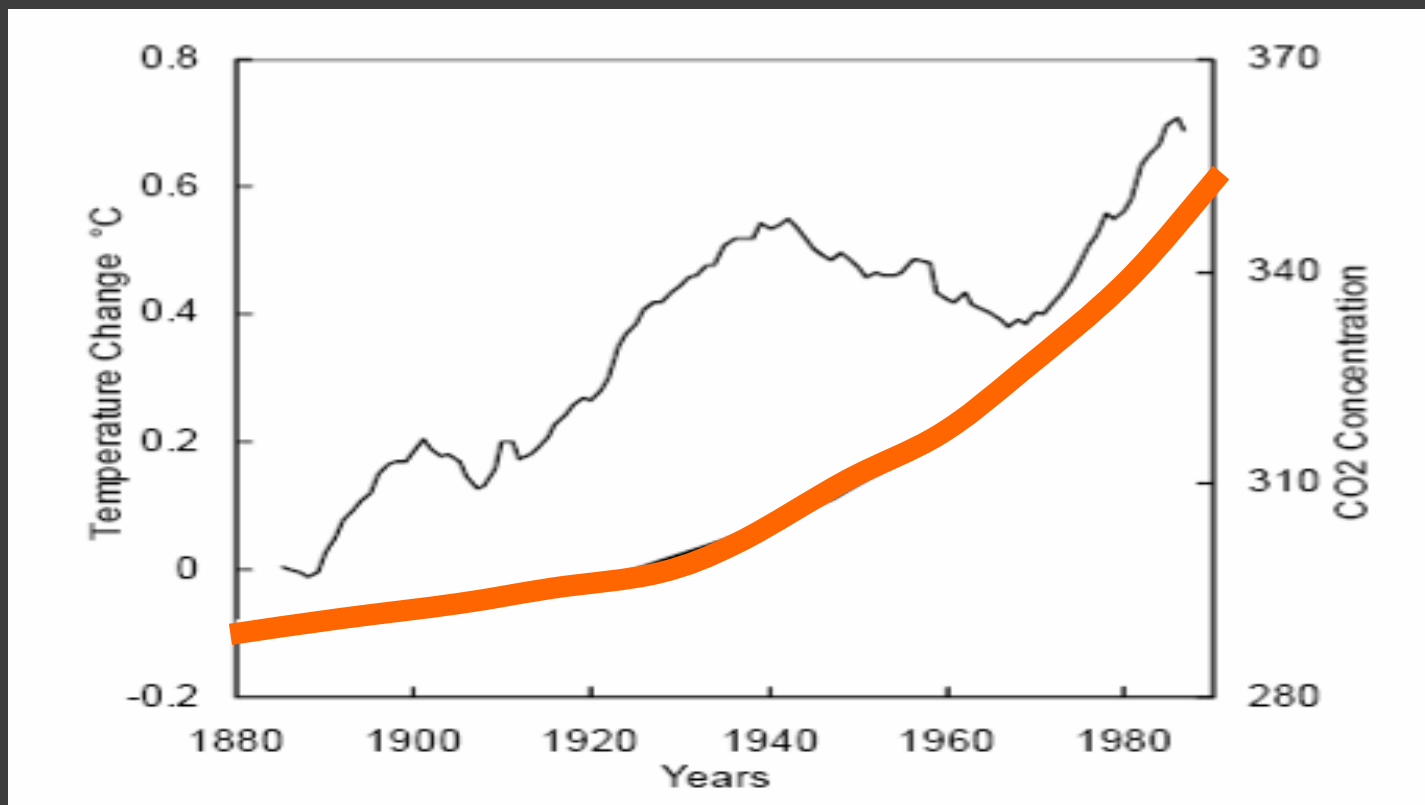
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CLIMATE CHANGE



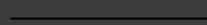
The scientific picture:



Temperature



Atmospheric CO2 concentration



... and the human misery picture:



RESOURCES



Resource considerations:

- Where materials come from – and how they get to site
- Scarcity
- How they are extracted or made (especially carbon)
- Undesirable side effects (smog / ozone depletion...)
- Using less (passive design / hollow beams ...)
- Using the bits that would be thrown away (glulam beams..)
- Re-using / repairing / recycling existing materials
- Making sure materials can be used yet again (choice of materials, fixing methods, coatings...)

Some tools:

- FSC timber and certification
- Green Guide to Specification
- WRAP website
- Construction Lean Improvement Programme
- Pre demolition audits & Site Waste Management Plans
- Life Cycle Assessments
- Modern Methods of construction



COMMUNITY



Egan: Skills for Sustainable Communities:

“Past approaches have failed to recognise the long-term impact that developers can have on communities.

People have to live with their products day in and day out over generations, and badly designed, poor quality neighbourhood layout or development can quickly have a detrimental effect on the quality of life – and even on the reputation and prospects – of people living there and nearby.”



PLACEMAKING



Do you know where it is yet?



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TRANSPORT



Designing for movement, not motor cars

- Pedestrian and cycle provision and priority
- Walkable neighbourhoods
- Passive design for speed – psychological traffic calming
- Car share clubs
- Public transport
- Permeability and desire lines
- Enable carbon friendly cars



The ultimate in psychological traffic calming??



BUSINESS



Making it work:

Mixed use developments reduce the need to travel - attractive to avoid commuting!

Reduces the risk of dormitory towns

Enable working from home

Local employment opportunities through construction developments

Make use of skilled workforces – play to strengths

Eco-symbiosis / resource parks

Flexible premises

Assorted sizes and tenure mixes



ECOLOGY



“Two for the price of one” opportunities



BUILDINGS



The building blocks of sustainability

The masterplan and the building design are integrally linked in delivering sustainability.

BREEAM and EcoHomes, Scottish Code?

Private sector client demands are increasing with requirements for EPCs and CSR



Bringing it all together - GreenPrint



What is GreenPrint?

- Methodology to maximise the potential for sustainable communities
- Workshop led approach involving the whole stakeholder team
- Sets out clear understandable sustainability objectives and benchmarks
- Prioritises sustainability issues most important to a development
- Independent appraisal of the final masterplan
- Provides an overall **GreenPrint** Score and Rating



Sherford, East Hams

- Urban extension outskirts of Plymouth city centre
- Very high sustainability aspirations from both LPA and Red Tree LLP (developer)
- up to 5,500 dwellings, and 80,000 plus square metres of business, commercial and retail space
- Community facilities including, sports facilities, schools, health centre and a community park
- two community wind turbines



Sherford – Highlights

- Two 1.8MW wind turbines generate up to 41% development energy demand
- 75% of buildings equipped with solar thermal systems and/or photovoltaic devices
- 80% of the development roof area used for rainwater harvesting
- Transport and movement strategy places the pedestrian and cyclist at the heart of the development with speed limits which are self-enforcing through street design
- Set-up of the Sherford Community Trust to promote “more sustainable lifestyles”
- 70 ha of new woodland as part of the 207 ha Community park
- Provision of wildlife corridors through the town from the west to the east and north to the south
- SUDS – swales, ponds, reedbeds



Figure 4
Greenways

RESIDENTIAL STREET

Sherford GreenPrint Score & Rating

- Sherford masterplan achieved an overall score of **85%**
- “Exemplar” **GreenPrint** rating



Napier Park, Luton

- 55 acre site – former Vauxhall plant - Mixed use development
- Close to city centre
- Constrained by airport / close to railway
- Laing O'Rourke/Explore Investments
- Up to 1,500 dwellings, office, industrial and retail space
- Key focus on ecology and green space, sustainable transport links and site energy systems

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Improved the Napier Park masterplan



GreenPrint Rating "Excellent"



Shannon Free Zone, Ireland

- Established at Shannon Airport by Shannon Development
- Ireland's largest multi sector International Business Park (243 hectares, 100 firms & 7,000 staff)
- New Master Plan for Brownfield regeneration & Greenfield development
- Aspiration to be the most sustainable business park in Ireland



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Shannon Free Zone GreenPrint Rating

- Targeting an “Excellent” GreenPrint rating
- Setting a minimum requirement for developers

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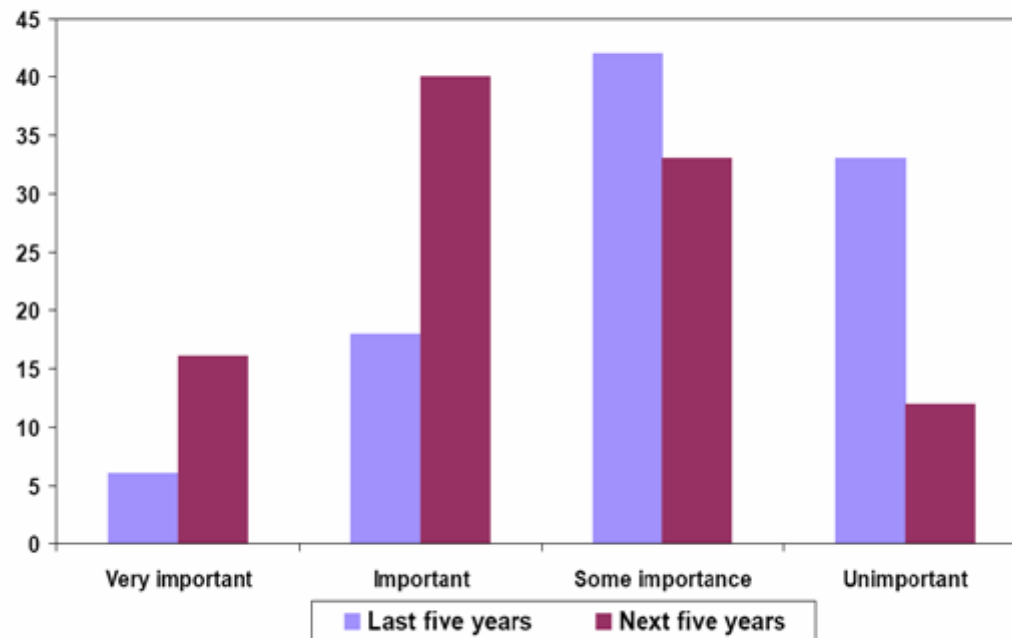


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The market place - offices

Accommodation Strategy -
importance of 'green' issues



Is it a niche market?

Not now.

Generally:

2% are innovators.

Eg Ecover / Findhorn

14% are early adopters

Eg M&S / BedZed

34% are early majority

Eg Barclays / Crest Nicholson

34% are late majority

pushed by legislation – EPCs etc

16% are laggards

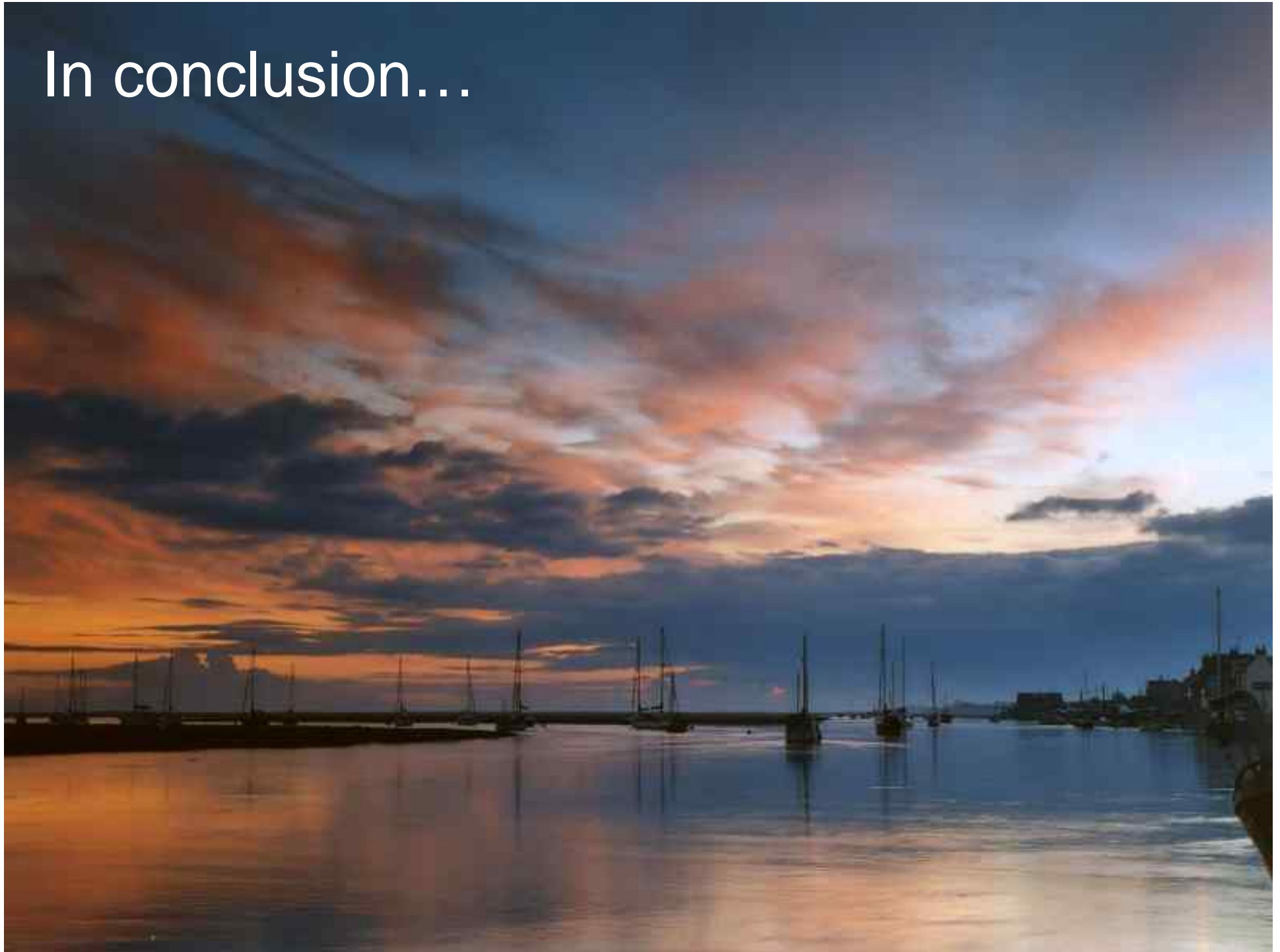
... so the momentum is growing

So how do we tackle skills and capacity in sustainable construction?

- ... sector pioneers
- Transferability
- Public sector exemplars
- Demonstration buildings
- Supply chain through large scale projects



In conclusion...



It's a big ask – but progress is being made

- We know what we need to tackle
- There are tools available
- Some organisations are doing it
- The market is growing
- There are examples to follow
- ... and there are good opportunities in Ireland to make it happen.

Thanks for your attention:

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