



TIMELINE TO ZERO CARBON

BUILDING CONSENSUS ON THE DELIVERY TIMELINE FOR ZERO CARBON HOMES

To coordinate the delivery of zero carbon homes and to monitor delivery against the Government's targets, the Zero Carbon Hub has been working closely with the industry to establish a common view on a series of broadly representative timelines.

PURPOSE AND USE

The timelines will highlight the key activities and tasks that need to be carried out and the outputs that need to be in place to support the housebuilding sector.

The delivery of zero carbon homes from 2016 requires a combination of:

- timely, coordinated legislation,
- achievable and clear standards,
- easy-to-use tools,
- appropriate training,
- clear guidance built on sound investigation and evaluation of options
- also, critically, the new homes must be attractive and a good marketing proposition for consumers.

These and other considerations have been addressed by the Timeline Workgroup that has been taking this exercise forward.

A consolidated form of the timeline forms part of the Zero Carbon Delivery Report presented to the 2016 Task Force and Minister for Housing on a quarterly basis.

SCOPE

A series of provisional timelines have been developed, showing:

- Headline overall timeline
- Delivery of fabric energy efficiency
- Delivery of on-site low/zero carbon energy and overall carbon compliance
- Delivery of allowable solutions
- Timeline for small housebuilders (this is illustrated in this leaflet)
- Timeline for larger housebuilders
- Scale up to full-capacity production of zero carbon homes
- Consumer engagement

REVIEW

Contributions and thoughts on the content and assumptions associated with the timelines would be very helpful at this stage of their development. The finalised timelines will be used to monitor progress and ensure that critical activities are kept on schedule to support the phased introduction of mainstream zero carbon homes from 2016.

THE TIMELINE TO ZERO CARBON MUST ENSURE SUFFICIENT TIME FOR THE DEVELOPMENT OF NEW KNOWLEDGE AND SKILLS SHARING. PROJECTS LIKE THE CREST NICHOLSON 'ELEMENTS' (ILLUSTRATED) CAN PROVIDE A WEALTH OF INFORMATION AND EXPERIENCE ON BOTH THE TECHNOLOGY AND THE IN-USE PERFORMANCE OF LOW AND ZERO CARBON HOMES.

IMAGE COURTESY CREST NICHOLSON PLC



SMALL HOUSEBUILDER PROPOSED TIMELINE MODEL

The Small Housebuilder Timeline featured in this leaflet is an example, showing the principles and the kinds of assumptions that are informing the timeline work. This and the sister timeline for larger housebuilders, should not be considered in isolation. Both have dynamic interactions with the other timelines that have been developed, helping to make links, for example, with key delivery points for Energy efficiency, On-site low-carbon energy generation and Allowable Solutions. The timelines have been designed to be used as a suite to help build an understanding across the industry over what is required for zero carbon delivery and to allow us to objectively gauge progress towards the 2016 target.

The Timeline Workgroup (contact via info@zerocarbonhub.org) welcomes ongoing feedback and comments on the developing timelines. They will be continuously updated and adapted in response to feedback and specific needs from the housebuilding sector. To help you to follow developments, a 'Timeline Zone' will be made available shortly on www.zerocarbonhub.org.

THE SMALL HOUSEBUILDER

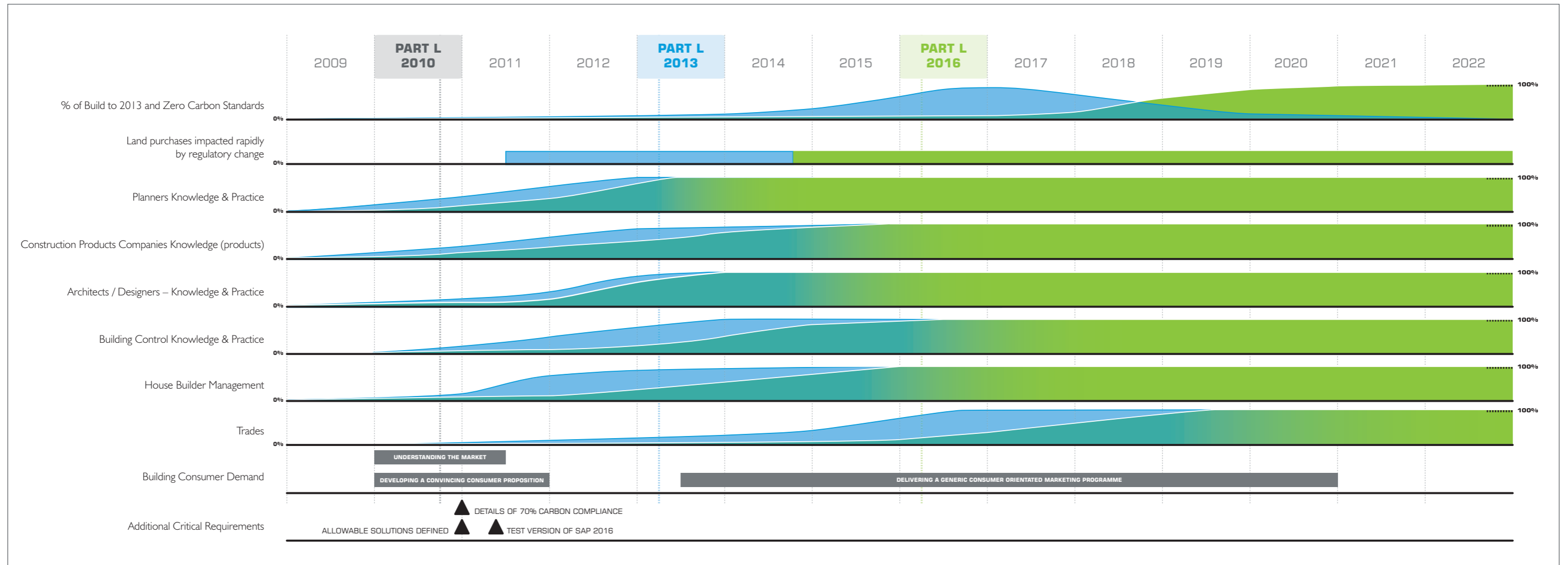
- This Timeline illustrates the situation for an 'average' small builder, without a land bank and highly reliant on external expertise to understand the changes to regulatory requirements
- Such companies are likely to have to respond to the changes in regulation more quickly than 'large' housebuilders (except where standards are brought forward such as HCA or planning conditions)
- They are less likely to be required to meet Code For Sustainable Homes requirements in advance of regulation
- Critical that they are supported by advice and guidance from multiple sources.

2013 STANDARDS:

The blue graph lines indicate the scale up of skills and knowledge for achieving the 2013 standards. The 2013 skills and knowledge are considered here to be fully transferable/ applicable to delivering the 2016 standards – and hence are shown to merge with the 2016 (green) graph line.

2016 STANDARDS:

The green graph lines indicate the scale up of skills and knowledge for achieving the 2016 standards.



ASSUMPTIONS AND BACKGROUND SUPPORTING THE SMALL HOUSEBUILDER TIMELINE

BUILDING CONSUMER DEMAND

- Without an established market to sell into, housebuilders will remain in a vulnerable position throughout the transition to zero carbon living
- The Zero Carbon Hub is stimulating strategic thinking on how low and zero carbon homes should be marketed
- Critical is the establishment of a clear 'proposition' for consumers: something that is understandable and attractive
- Key elements of a national marketing programme to engage consumers and influencers should be underway for zero carbon homes well before 2016.



PLANNERS KNOWLEDGE AND PRACTICE

- This timeline is indicating the significance of early engagement of planners
- There's a need and expectation that planners can rapidly gain the knowledge and skills necessary for the zero carbon agenda and assist the industry in a steady transition to zero carbon homes
- The timeline assumes the early establishment of local standards that are consistent with a national scale up campaign, and the presence of coordinated scale up initiatives ahead of national regulation
- It is suggested that the vast majority of the planning community is aligned (and able to offer informed and consistent advice to developers) at least 2/3 years ahead of the legislative changes in 2013 and 2016.



TRADESMEN

- This timeline is indicating the proportion of tradesmen with the knowledge and skills necessary for delivering homes to 2013 or 2016 standards
- The expectation is that 2013 standards will require further energy efficiency and some on-site energy generation (ie significant enhancement of skills beyond 2010 standards)
- 2016 standards will require full alignment with the minimum fabric energy efficiency standard and advanced skills in terms of on-site energy generation
- The Zero Carbon Hub estimates that the delivery of zero carbon homes will require an average of at least 13,000 additional tradesmen per year over the transition 2010 to 2020.



HOUSEBUILDER MANAGEMENT

- For the smaller housebuilder a number of management functions will be carried by a small team
- With two significant steps in 2013 and 2016, and with 2016 being particularly challenging, it is critical that design and practice changes at 2013 aim to ensure that the transition to 2016 is smoothed and effort is not wasted with cul-de-sacs. Many CEOs/MDs are already active in beginning to establish zero carbon thinking in their companies.



ARCHITECTS & DESIGNERS KNOWLEDGE AND PRACTICE

- By definition, architects and designers will be at the cutting edge of zero carbon homes delivery
- The timeline highlights the importance of early development of specific design advice and training for zero carbon homes
- The timeline is representing the proportion of architects that are involved with homes and who have adequate knowledge and practice skills to deliver homes to 2013 or 2016 standards.



BUILDING CONTROL KNOWLEDGE AND PRACTICE

- This is shown, for 2013 changes, as a typical transitional cycle for building control during regulation change.
- The zero carbon, 2016, targets are likely to require new skills areas within building control departments. Energy efficiency requirements will require close attention to detail, correct design and use of specified components. Low and zero carbon on-site energy supply will be mainstream. For this reason a longer phase of scale up of expertise is likely to be needed supported by pattern book details and robust accreditation and verification processes.

CONSTRUCTION PRODUCTS COMPANIES KNOWLEDGE AND PRODUCTS

- Construction products companies have a critical role in supporting the development of knowledge within architectural firms, housebuilders and consultancies
- The market-leading companies will need to have a clear understanding of the likely regulatory requirements to have the confidence to develop and demonstrate products as well as supporting the industry with CPDs.
- Market-following companies tend to engage at a later stage but in sufficient time to meet market demand.