



ZERO CARBON HOMES PROGRAMME DELIVERY TIMELINE

Item 4 - 2016 Taskforce Meeting to be held on
Wednesday 27 January 2010

Introduction

Previous timelines were derived from the “Callcutt Review” timeline which was in need of substantial update to include more detailed programme development and the short to medium term industry outlook. This update process will culminate in a wider stakeholder workshop at the beginning of February. For the time being this report should continue to be considered an initial view for further discussion.

As everyone is well aware, 2009 saw a stabilisation and initial signs of improvement following the significant fall in output of house-building during 2008. However, house-building is still at a very significantly reduced level of activity. This has implications for industry’s ability (house builders and supply chain in particular) to undertake the necessary development work to achieve zero carbon homes from 2016. Although it is important to differentiate between the short to medium term impacts on housing delivery and the medium to longer term timeframe for zero carbon homes, it remains vital that Government-funded house-building leads the development of the low carbon market.

Overall programme

Status – Amber, actions are required to ensure timescale is maintained.

Comment since last report - The statement in December announcing that the Minister was minded to accept all of the recommendations from the Energy Efficiency Specialist Task Group and the consult on the standard within the Code for Sustainable Homes Consultation was significant progress.

Further decisions were expected on Allowable Solutions by the end of 2009 these and these were not forthcoming. This and the uncertainty as to when the final Allowable Solutions mechanism and maximum costs will be known is a significant cause for concern.

General comments (Amber/Green)

For programme Gantt chart please see Appendix A

- Many factors influence the overall number of homes built - the programme status refers to mainstream/mass scale delivery of zero carbon homes, not a specific number.

- Despite the current state of the industry, some level of low and zero carbon development work continues to be undertaken. However, house builder initiatives remain low and appear to be decreasing as planning consents are renegotiated.

Key timeline assumptions:



- That the industry is able to recover to a reasonable level of profitability within a relatively short period.
- That government financial support via: TSB, EPSRC, EST, Carbon Trust, CLG, DECC, etc. is maintained/increased.
- That planning and CfSH requirements are set in a way to assist the overall industry transition and do not inadvertently impede it.
- The Minimum Energy Efficiency Level within the definition of zero carbon is within the bounds of the Task Groups provisional recommendation.

Energy Performance of Building Directive (EPBD) (Green)



- The recast of the EPBD will set minimum standards for buildings across the EU. The timeline and scope appears broadly consistent with the UK's ambitions, however, it is important to remain vigilant and ensure that future developments don't introduce uncertainties which serve to slow progress.

Definition of zero carbon

- The zero carbon definition, together with an updated SAP, provides architects, house builders, consultants, construction products manufacturers and energy equipment/service providers with the necessary clarity/certainty to develop solutions and determine cost effectiveness.
- Carbon Compliance (Amber/Green)
 - The definition of zero carbon is a fundamental point on the critical path and this had slipped. However, a policy statement was made in June by the Minister which set the Carbon Compliance level (70%).
 - Changes in Part L 2010 currently being considered by the Minister will have a bearing on how the 70% carbon compliance level translates into House Building and product manufacturers designs. Without clarity on carbon intensity assumptions, fuel factors etc. then firming up cost and designs is not possible. The significance this has for zero carbon homes from 2016 must not be underestimated.
- Minimum Energy Efficiency Standard (Green) 
 - The Minister announced in December that he was minded to accept the recommendations from the Specialist Task Group set up to consider a national minimum fabric energy efficiency standard. A section of the current Code for Sustainable Homes consultation is seeking formal views on the energy efficiency standard proposed.
- Allowable Solutions (Red) 
 - Increasingly land deals are being impacted upon, and / or financial risks being taken, due to uncertainty of the design and cost exposure of Allowable Solutions.

- The June announcement committed to providing a means where the costs of Allowable Solutions would be limited, which was welcomed, but the further decisions on Allowable solutions, expected at the end of 2009, have slipped.
- It is recognized that the development and finalization of the Allowable Solutions mechanism will take some time and we are very concerned that there is little visible progress being made and the timeline to final delivery is unknown.
- The timeline in Appendix A assumes circa four years' transition from implementation of building regulations through to mass scale build. Any decision for a shorter transition may have program delivery implications.

Standard Assessment Procedure SAP (Red/Amber)

- The implications of the zero carbon definition cannot be fully understood, and designs confidently developed, unless a version of SAP is available which is close to that expected for 2016. The critical importance of this has been reinforced through the Part L modeling and Minimum Fabric Energy Efficiency Standard work undertaken by the Zero Carbon Hub and the status has been updated to reflect this.
- A pre-release version of SAP 2010 was published in the Spring 2009 which has been used extensively in the modeling for minimum energy efficiency standards work although further work is clearly required prior to full release to Industry.
- It is apparent that further developments of the carbon compliance software (SAP) and/or the underlying assumptions will be required prior to 2016. Such changes could substantially alter the tools outputs and therefore impact building design. This would undermine the efforts of companies and house builders, create uncertainty and threaten the delivery timeline. To mitigate this, an expert task group has been formed. It is reviewing these potential areas and will take a view on the: likelihood, the effect, and determine how to forewarn of the likely impacts in a manner that could be used to develop designs ahead of any formal compliance tool changes. The output of the group would be a report with recommendations to CLG and DECC and is due in Spring 2010.
- It is noted that DECC are increasingly engaged in addressing this issue although the scale of the work required over the next 18 months is considerable and will require sufficient support including budget.

Low carbon pre-production homes (Amber/Green)

- Many -25%DER homes (energy requirements of Code Level 3) are in the design phase, however few have actually been built to date.
- Whilst some housebuilders are indicating that -25%DER is relatively clear-cut, concern has been expressed that there is currently a lack of detailed guidance to assist the small and medium housebuilders. These needs are being reviewed by the ZC Hub.
- Few -44%DER homes (energy requirements of level 4 of the CfSH) are in design phase, very few are built and this may well have an impact on scale up.

Zero Carbon prototype homes (Amber/Green)

- Concept designs zero carbon are significantly impacted by the lack of an agreed definition for zero carbon.
- Current economic circumstances are resulting in relatively little focus on homes beyond the -44%DER although a few examples are being pursued.
- A few examples of prototype -100%DER and zero carbon dwellings have been built and are attracting significant interest although there appear to be very few if any recent announcements of new prototype zero carbon homes.

- The HCA 'Carbon Challenge' currently has two sites at a detailed design stage. One now has detailed planning consent. These are being designed to the original zero carbon definition.

Scale-up (Red Amber)

- Slower roll out of prototype homes will impact the scale of the initial pre-production build. This in turn may impact the mainstreaming of knowledge and skills as well as the development of the supply chain. This will be reviewed over the coming months.
- In the current climate the Homes and Communities Agency, local authorities, regional assemblies and the devolved governments have an **even more** important role to play in building low-zero carbon homes volume. In order for this to be effective it is vital that the types of examples, scale and phasing are consistent with the wider industry's needs and feed a national delivery programme. The Zero Carbon Hub will develop this as part of its work.
- The introduction of Feed In Tariffs for new build homes is welcomed as this may partially offset some of the increased upfront build costs of low and zero carbon homes provided there is an adequate mechanism to 'deem' the value. However, there may be a tendency for house builders to take short term financial advantage by installing renewables at the 2010 and 2013 building regulation steps delaying the Energy Efficiency improvements to one large step in 2016 rather than incrementally. We are concerned that if such an approach was taken across the industry then delivery of the minimum energy efficiency in 2016 could be at risk. The CfSH consultation is seeking wider views on the recommendation that a minimum Energy Efficiency partial step should be introduced in 2013.
- In reviewing the pathway to low and zero carbon homes in volume terms Small and Medium housebuilders are likely to have to make this transition somewhat in advance of the Large housebuilders who are more able to manage land banks. This has significant implications as these are the sectors which will require the most support and help.

Assumptions / needs:

- The low and zero carbon new homes agenda continues to be led by government-funded house-building in support of design development and supply chain scale up.
- That local authorities' planning requirements, regional and local initiatives for low energy homes (or built to a Code level) are focused to **assist** the transition of the industry to low carbon developments rather than being ends in themselves (i.e. focusing on specific issues and practices, not just specific Code levels).
- High profile initiatives such as Eco Towns, Carbon Challenge etc. will continue to be needed.
- That government policy (all departments) delivers a steady and consistent trajectory to zero carbon from 2016.

Skills (Amber)

- Zero Carbon Hub is reviewing the skills and knowledge requirements in the context of the current market conditions, particularly those key roles required early in the zero carbon roll out such as planners, architects, technicians and building control. This is even more critical considering the significant demands of the parallel Government policies for low energy upgrading of Existing stock and Non Domestic Zero Carbon Buildings.

Miscellaneous (Amber/Green)

- Construction products manufacturers are investing considerable time and money in evaluating current product solutions for low carbon and zero carbon and determining future product needs.
- Whilst mass scale zero carbon house-building is only due circa 2020, the depression of house prices may last some considerable time making the 'overall' regulatory financial burden considerable and impacting financial viability of sites for the foreseeable future.

David Adams, Director Zero Carbon Hub
20 January 2010

Key:

Positive change of status since previous report



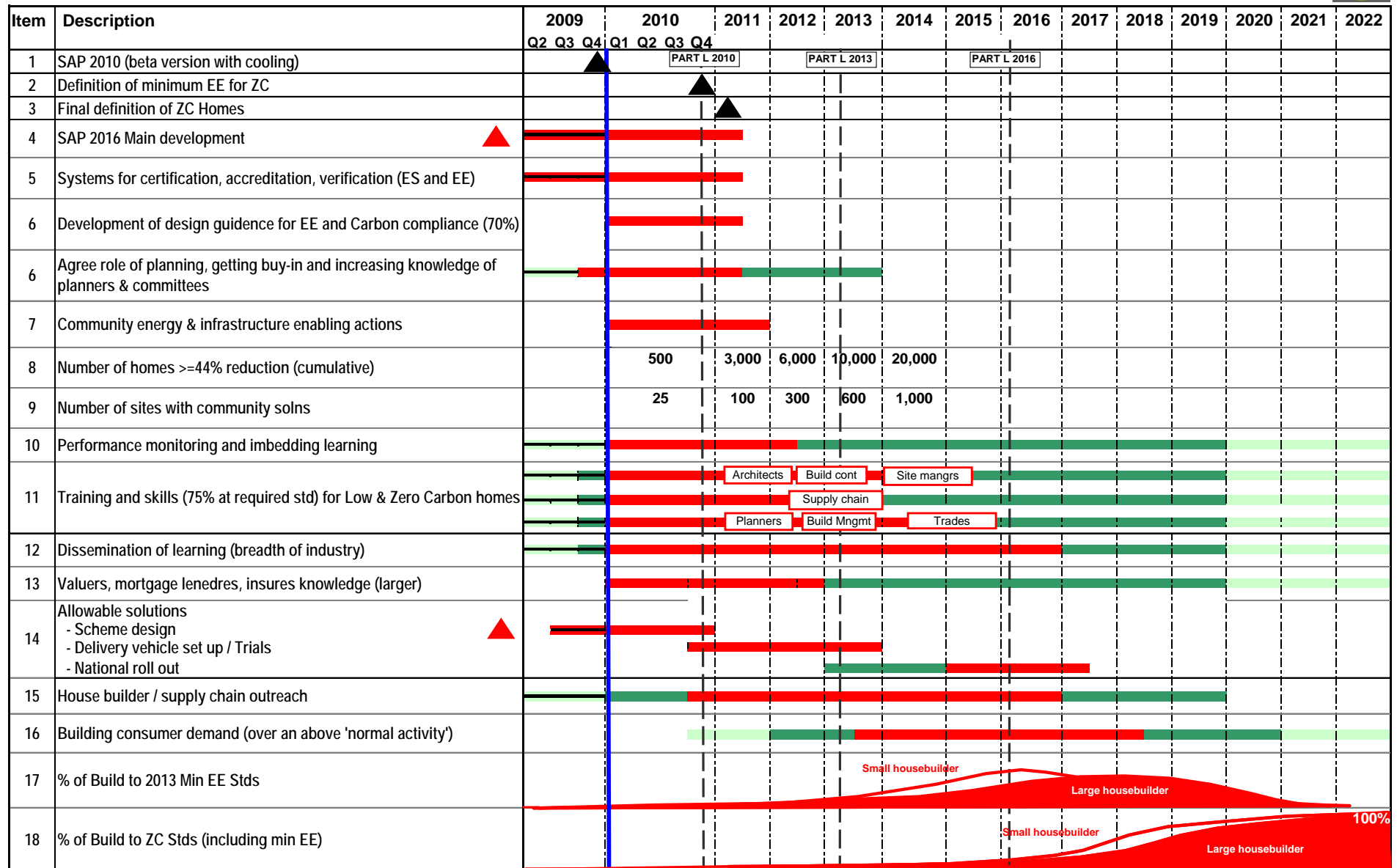
Negative change of status since previous report



Red	highly problematic	requires urgent and decisive action
Red/Amber	problematic	requires substantial attention
Amber	issues	some aspects require substantial attention some good
Amber/Green	mixed	some aspects require substantial attention, others good
Green	good	requires refinement and systematic implementation

Zero Carbon Homes Delivery Time Line Summary - Initial View

Jan-10



▲ Urgent, important and slipping

Critical Activities

Significant activity

Moderate activity

Small housebuilder

Large housebuilder

Small housebuilder

Large housebuilder

100%