



ZERO CARBON HOMES PROGRAMME DELIVERY TIMELINE

2016 Taskforce Meeting to be held on
Wednesday 21 October 2009

Introduction

Previous meetings have referenced an updated “Callcutt Review” timeline which was in need of substantial update to reflect the increasing programme understanding and the short to medium term industry outlook. This update process is still in progress so this report should still be considered an initial view for further discussion.

As everyone is well aware, 2008 saw a significant fall in the levels of house-building although since January this situation has begun to recover somewhat, albeit 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. 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 Ministerial policy statement in June announcing the carbon compliance level, with allowable solutions mitigating the residual carbon, was helpful direction. This, coupled with the provisional minimum energy efficiency standard recommendation from the Expert Task Group was significant in the decision to maintain the current delivery status despite general progress being slower than that otherwise required.

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 in Building Directive (EPBD) (amber)

- The recast of the EPBD is proposing minimum standards for buildings across the EU. Whilst the timelines and scope being suggested may ultimately be consistent with the UK's ambitions, it is important that this doesn't introduce uncertainties which serve to slow progress. Indications suggest this is less likely to be an impediment to progress it will be kept under review over the coming months.

Definition of zero carbon (amber/green)



- 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
 - 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 designs. Without clarity on carbon intensity assumptions, fuel factors etc then firming up cost and designs will be problematic.
- Minimum Energy Efficiency Standard
 - The June Policy statement also announced the formation of a Zero Carbon Hub Task Group to recommend a national minimum energy efficiency standard.
 - Following this a decision on the Minimum Energy Efficiency Standard is expected from the Minister by the end of the year although this would be subject to a future consultation.
 - As identified by the Zero Carbon definition 'Have your say' events earlier in the year and reported in the previous delivery review, industry needs to have confidence in the minimum energy efficiency standard to robustly scale the activities necessary to ensure mass take up within the timescale required. To this end, if a formal consultation is required, then this should take place when a robust version of SAP 2010 (with adequate overheating modelling capability) is available and be no later than Autumn 2010. Whilst this is later than desired, we feel that the Ministers announcement on the minimum energy efficiency standard this Autumn will improve industries confidence before the decision is finalised in 2010.

- Allowable Solutions
 - The June announcement also committed to providing means where by the costs of Allowable Solutions would be limited. This is welcomed although a decision on this level is still required as land deals will be increasingly impacted due to uncertainty surrounding the extent of the financial exposure.
 - The timeline for Allowable solutions is being developed as more is known about the potential approaches being considered. It is likely that the timing will be particularly sensitive to changes within the CfSH before impacting mainstream Zero Carbon house building.
- The timeline below 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 (amber/red)



- 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 modelling and Minimum 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 09 which has been used extensively in the modelling for minimum energy efficiency standards work although further work is clearly required prior to full release.
- 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 Spring 2010.
- It is noted that DECC are increasingly engaged in addressing this issue although the scale of the work required over the next 18months is considerable and will require sufficient 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.
- 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 (amber/red)



- 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 will 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. As such, the Zero Carbon Hub is consulting with the industry as to whether 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.

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.

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
20 October 2009

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

Oct-09

