

## **Recommendations (draft) for the Skills Strategy 2012-2017**

### **Introduction:**

This document contains (draft) recommendations that will be part of the new Construction Skills Skills Strategy.

The Skills Strategy is intended to replace the current Construction Qualification Strategy in 2012.

Fuller details of the Strategy and how it will be implemented will be contained in Action Plans that will follow once the Strategy and the recommendations are finalised.

### **The Development Approach**

The work has been based on a twofold approach: a review of recent literature from Construction Skills reports and Government policy reports; and secondly the analysis of a consultation with industry representatives and stakeholders (on six themes at over 20 separate meetings - including Wales, Northern Ireland and Scotland) and a UK wide consultation via a survey.

The next steps following this second/final consultation are:

1. Analyse the feedback, prepare final recommendations
2. Finalise the Skills Strategy and develop subsequent detailed nation-specific action plans.

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### **Note:**

**Sensitive to the difficult economic times facing the industry, the recommendations that follow have attempted, wherever possible, to avoid extra burden on the industry through the imposition of additional requirements or costs.**

The CITB Construction Skills and the SSC, Construction Skills, wishes to hear from all areas of the industry, including employers, SMEs, the federations, trade unions, higher and further education institutions, private training providers, professional institutions and awarding organisations.

### **Purpose:**

The purpose of this work is for CITB Construction Skills and the SSC, Construction Skills, to be clear as to strategic aims and objectives for the skills development of the workforce, to develop sensible, cost-effective proposals, and to set in train ways of effectively



measuring success.

Once you have read this document and completed your responses please save the document and return it by email to: [construction@pyetait.com](mailto:construction@pyetait.com) before 10th 5pm Monday 20<sup>th</sup> February 2012. Thank you.

If you do <b>NOT</b> wish your name or your organisation's name to be passed on to CITB Construction Skills please insert a cross here.	
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Please complete these details below so we have an understanding of your role/work or relationship to the industry, and send you information about final Skills Strategy if you wish it.

1. **Your name:**

John Preston
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2. **Your contact details (by providing these we assume you are happy to be contacted either about the next steps or if there is a problem with receiving your form).**

<b>Email (please print):</b> education@ihbc.org.uk
<b>Phone:</b> 01223 562534

3. **The name of the organisation you work for, *if applicable*:**

Institute of Historic Building Conservation
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4. **Please clarify the main activity of the organisation** (eg University, building firm specialising in heritage work) this is important as it will help us with seeing where the responses have come from.

The professional body for Building Conservation
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5. **Could you confirm if you are answering as an individual, or on behalf of the organisation mentioned above, or perhaps an entirely different organisation by inserting an 'x'.**

I am representing my own views in completing this document	
I am representing the organisation mentioned above	X
I am representing another organisation in the capacity of: Name of organisation:	

## QUESTIONS

We have three main questions that we suggest you complete when you have read all or as much of the document as you choose.

Again, thank you for your time. Please note the boxes below can be expanded upon.

**1. What do you think of the recommendations for the strategy (bearing in mind actions will follow once we have agreed these strategic recommendations)?**

- a. Do you agree with them?
- b. Are there any you disagree with, and if so which ones (please use the number)?
- c. What change would you make to the recommendation(s), or do instead?

*Write your answer here:*

We welcome Recommendations 1-4, but with an underlying concern that these recommendations do not actively address the mismatch between current training in modern construction, and the need for training in works to traditional buildings.

We strongly welcome Recommendations 5, 6 and 7 – in particular with respect to the ‘journey to competence’ and ‘life-long learning’. These map well with the IHBC’s approach to supporting, self-assessing and objectively testing competence. This approach allows for – and encourages – movement between trade and professional ‘behaviours’. Such an approach to the development of competence also is especially well suited to career progress in conservation, where skills in current practice typically are the foundation for developing skills appropriate to building practices in traditional materials and methods.

Clearly these matters connect also to the issues explored in Recommendations 12, 13, 14 and related matters of progress around craft qualifications and supervisor routes. Again the IHBC’s open approach to skills development and assessment at professional levels– where there is no necessary presumption in favour of academic over vocational routes to membership – confirms that such an open approach to skills development between trade and professional areas can operate effectively.

We warmly welcome Recommendation 8, and note particularly the importance of a capacity to identify appropriate levels of skills in traditional construction, which might well be appropriate to a ‘smart card’ approach to the scheme.

We welcome Recommendation 11, but feel that this does not state sufficiently strongly how vital site supervision and site management are to delivering quality outcomes, for both new build and refurbishment. Too often, high quality designs and aspirational

aims (e.g. to take 2 very differing examples, the performance aims of Part L of the Building Regulations, and the quality aims of the Cambridgeshire Quality Charter for growth) have been undermined by failure to deliver design and/or performance quality on site. In repairs and maintenance, decisions in relation to unexpected problems have to be made on a daily basis, by supervisors on site. IHBC runs training events which could contribute to professional development schemes as per Recommendation 15.

We strongly welcome Recommendations 16-19 (subject to our comment on 18 below) and the focus on skills appropriate to Green Deal competences, noting in particular the need for upskilling in the context of renewables, sustainability and energy efficiencies, specifically to include upskilling in the area of traditional buildings. This is a vital opportunity for ConstructionSkills to give greater emphasis to traditional construction.

Recommendation 18 makes this point, but not forcefully enough to reflect the extent of the change in approach which is needed. We would note that the language used there should move away from an equation that old means 'hard to treat', in favour of recognising that traditional buildings perform as vapour-permeable or breathable buildings (not water-tight), and insulation measures need to take account of that. The 1919 date comes from house condition survey data, and is not a precise cut-off. But it is better flagged up in this way than not at all.

We strongly support Recommendations 21-23, especially where they relate to the 'need to ensure a balance between these traditional skills and the needs of newer materials and techniques'. In particular we welcome the statement that 'Training provision for repair and maintenance applicable to existing housing stock is as equally valid and important as helping providers consider more modern methods of construction. In the light of the needs of heritage stock there may well be a strong argument for augmenting traditional skills.' However this understates the argument: the need relates not just to "heritage stock" but to all buildings of traditional construction.

We also warmly welcome 24, 25, and 26, not least the 'social networking' strategies specified in 24, though there might also be reference to the need to encourage a more diverse (and inclusive) workforce... where neither gender nor age are a barrier to entry. The better gender balance and older age profiles in conservation and parts of traditional or heritage skills areas in particular, may well be features that could be replicated across wider parts of the industry. Certainly there is substantial research that indicates that the lack of diversity in the construction sector at large is a barrier to entry to conservation, traditional build and heritage sectors.

**2. Of all these recommendations you have read or commented upon do you feel some have a greater priority over others?**

*Write your answer here:*

**3. Do you feel that there are any recommendations that are missing – please expand?**

*Write your answer here:*

The principal omission is any recommendation to prioritise training in training in traditional buildings “across the board” (rather than just for the Green Deal as per current Recommendation 18). This is vital and ever more urgent given that a) repairs maintenance and improvement form up to 50% of building work overall, and b) the refurbishment of traditional buildings requires different skills sets to those needed for work on modern buildings.

IHBC is also concerned that neither the original draft strategy nor these recommendations adequately reflect the needs of the small building firms who do much of the work on traditional stock. These firms need to be enabled, individually and/or collectively, to provide the training needed for their workforces.

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## 1. Qualifications and Apprenticeships

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Following various reviews of education in specific nations of the UK, there may well be different treatment of vocational education in the 14-19, or 16+ and 19+ phases in the years to come in different nations.

### Feedback from the consultation on qualifications indicated:

Dissatisfaction, (but important to note this is not global dissatisfaction), with the concept of S/NVQs (particularly the perceived lack of knowledge content/assessment) and a clear message that they should not predominate across the board at all levels. Feedback from employer respondents suggests they attach more value to vocational training than they believe is generally commonly perceived.

1) The main points put forward were that:

- for adults - many see S/NVQs as a tick-box burden without commensurate benefit, and at higher levels they are neither aspirational nor developmental. They are generally adopted because of their accepted role to-date in evidencing competence despite the fact that a worker's experience and their evidence of this are not easily built into achievement of the award;
- the NVQ/SVQ is classified as a competence-based qualification, which may serve to only confuse and counter the important notion of a 'journey to competence' (see next section). Many employers distrust it as a means of developing their employees because of its perceived lack of knowledge input and by some it is regarded as inappropriate for young people starting out on their learning and development. This has the effect that, within Apprenticeships, they can tend to overplay the notion that, on completion, an apprentice will be work-ready and fully industrially competent;
- as a qualification it is also difficult to capture the critical role 'product familiarisation' plays with key sectors within the industry, notably in Plant. This possible issue may have been recently exacerbated whereby qualifications are available as knowledge-based qualifications or competence-based qualifications but are often indistinguishable: similar titles and content suggests a potential lack of clarity for users and employers. Not only that, but there is possibly an underpinning issue that NOS, upon which such qualifications are built, may be too narrow and not specific enough to form the basis of detailed 'training qualifications';
- a number of major concerns around S/NVQ assessment, including the suggestion

that, for some occupations (possibly in the niche/specialist areas for example), occupationally competent assessors and IVs still seem to be in short supply;

- that it would be of benefit to the industry if a wider range of qualifications were available on the various qualifications frameworks, including those offered by professional bodies.
- the NVQ brand (*feedback on this was largely from England*) and the standards appear to be well-recognised and widely accepted as the basic system of qualifications for the industry but there is evidence that employers are sceptical as to the depth of skill, knowledge and understanding such qualifications inculcate. There were many contributions to the consultation indicating a belief that the NVQs, as an initial qualification, fall short of providing a sufficiently wide range of 'work ready' skills or the knowledge that should underpin them.
- the focus on qualifications and training must be balanced with the current profile of housing stock/buildings – it is said that there is too much of a focus on 'new methods of construction'. It was noted that, for example, that a recent consultation by the Westminster Government around competence and Green Deal) makes no explicit mention of condensation risks or breathability.

### **Recommendation 1:**

**A long term programme needs to be designed and instituted to develop and implement more flexible forms of qualifications** that provide for a broader base, employer-led and locally-responsive provision of skills that encompass the recommendations on the new definition of competence (see next section).

This is an opportunity to reconsider the use and level of detail for NOS and what qualifications and assessment requirements should be developed for new entrants and, separately, for experienced/existing workers. It is also an opportunity to reflect both on 'employer training' and, separately, opportunities for less formalised but appropriate and proportional assessment within companies. The programme could include consideration and development of different qualifications for different stages of competence, such as:

- Initial training qualification for use within an Apprenticeship;
- Occupationally competent qualification (wider and deeper) for existing workers;
- Clearer branding and development of Units and taught/knowledge qualifications (VQs)– not linked to the S/NVQs so knowledge can be much broader and possibly lead to professional exemption and include specific aspects of required knowledge;



- HNDs/HNCs – increase focus on these and other qualifications that take on board the need for aspirational, developmental qualifications at level 4 and above.

A greater acceptance of the role and position should be made for vocational qualifications to input knowledge (whether short, bite-sized or longer foundation courses for the industry) including product familiarisation, niche or specialist skills and health and safety knowledge amongst others. The benefits and limitations of different qualification- types should be transparent within such tools such as the competency framework recommended above.

#### Feedback from the consultation on apprenticeships:

- 2) There were many interlinking concerns on Apprenticeships: demand for Apprenticeships seems to be outstripping supply for places with employers. This may be partly due to the current recession and concern over business survival: but there was also an indication that greater engagement by employers is needed. Whilst the recession is still being felt, the take-up of apprentices by employers is understandably constrained, so boosting expectations to young people about Apprenticeship places needs to be managed carefully. Lack of demand by employers may be compounded by a lack of comprehension across the board by employers (including SMEs) of what a Construction Apprenticeship constitutes, how it has been devised and what commitment is required.
- 3) Knowledgeable employers expressed concerns around 1) the length of the Apprenticeship – some say it is too short and others say it is too long, 2) the appropriateness of the level of Apprenticeship for the occupation. The 'journey to competence' (see later) ties in with a frequent argument that an apprentice develops 'in stages' and should be regarded appropriately as a newly qualified apprentice first off and not immediately industrially competent.
- 4) Funding is still tending to drive time and output, a pressure not conducive to quality.
- 5) The Skills Test for use at the end of an Apprenticeship (currently there are only Skills Tests used in this way in Scotland) is cautiously supported as reassurance for employers – a further indication of uncertainty around the robustness of S/NVQs. However, there are concerns about investment needed and the general costs implied by Skills Tests.

- 6) There is also a perceived inconsistency in the quality of provision. Employer suggest that some providers are much better than others. Feedback indicates considerable inconsistency between providers with suggestions that the industry tighten up on this area to ensure greater fit with the industry. There is also an implication that there need to be greater links with industry to gain a better appreciation of the requirements at all levels: *'variable (FE provision) – I would suggest we need to consider getting them out into the real world for real experience and forging links with design teams/contractors etc'*.

### Recommendation 2.

Feedback from employers indicates demand for a **root and branch review of Construction Apprenticeships** to look at the appropriateness of their length, detail and content to include the impact of recent changes in Apprenticeships (for example funding infrastructure, and the SASE for England and SASW for Wales), the quality of provision and assessment and preparedness of the apprentice for work. Ad-hoc and focussed research has taken place recently, but it may be timely to look at the whole end to end chain for ConstructionSkills and the UK industry to consider/implement post recession.

### Recommendation 3

**A greater understanding of the issues on the delivery of S/NVQs in Apprenticeships is required.** Providers should be fully delivering both the knowledge and training programmes to ensure apprentices develop their knowledge and learn more than they are assessed upon as part of the S/NVQ. Claims surrounding inconsistency of provision and assessment may relate to confusion or differences between Awarding Organisation requirements, quality of tuition, inadequate knowledge of the industry or varying organisational objectives surrounding quality of provision.

### Recommendation 4.

**There is an arguable need for a formal ConstructionSkills paper to the UK Government, to report on the inconsistencies provoked by the funding system and the lack of sufficient funding for 19+ on that journey to competence.** The consultation prompted many to conclude that more from grant aid should be

distributed towards Apprenticeships to pick up the shortfall where funding has been reduced. In consideration of small business engagement with Apprenticeships, **the work undertaken to-date on 'shared apprenticeship schemes', such as for example in Wales, should be monitored and rolled out UK wide if this approach appears to work for the smaller business** in helping overcome a number of barriers in delivery of Apprenticeships.

## 2. Understanding Competence

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The findings from the consultation, along with a variety of recent studies and activity within several of the industry's larger companies, have clearly illustrated that competence, as defined by "standards" and units expressing learning outcomes and assessment, can be an incomplete measure of a person's ability to do their job effectively. Competence is not simply a matter of skill in any given job role but of the knowledge which underpins that skill and, just as importantly, of the behaviours and attitudes (i.e. behaviour, attitude and situational awareness), which support and protect an individual in their work.

The HSE Report *Routes to Competence* and the recent review of health and safety legislation commissioned by the Government (undertaken by Professor Ragnar Löfstedt) have also considered issues of competence its meaning and the way it is evidenced. The latter report cites the 'proliferation of accreditation schemes and competency qualifications that are costly for industry, particularly small firms, and which have questionable benefits'. It also notes that, while some recent initiatives to tackle this situation have been beneficial, 'more needs to be done to tackle this and the wider issue of competency', but without a 'diminution of current standards'.

### **Brief summary of consultation feedback around competence:**

There is broad support for the notion of a broader definition of competence as defined in *Routes to Competence* to include not just job competence' and (above-basic) health & safety awareness, but a third strand of "behavioural competence" (including self-awareness, risk awareness and situational awareness). This expanded definition of competence is tripartite: occupational skills, deep and relevant knowledge and understanding, and ongoing evidence of appropriate behaviours and attitudes, to be embedded at all levels.

Some employers also pointed to the need for the broader definition of competence to incorporate "softer skills" such as an appropriate workplace attitude, communication skills and customer service. *"A broader definition of competence which includes practical ability but also encompasses the abilities and attributes that employers want (attitude, loyalty, customer service, reliability, perseverance etc.) would be more in tune with the "real" world of work."*

### **Recommendation 5**

There should be a sea-change in thinking around competence, to embed the understanding that competence is not absolute; not something that can be simply acquired and applied as a one-off to all situations, contexts, tasks and levels within a job role. The recommendation is that **the construction industry should adopt and embrace a much wider and deeper definition of competence** – encompassing skill, knowledge and behavioural awareness\* at all levels. The concept of absolute competence is erroneous and damaging to the sector - competence is relative not only to an individual's demonstrated skills, knowledge and understanding, but also to their attitudes and behaviours, and, equally importantly, to the demands of particular tasks and situations (ie level of job, context and stage of career). Moreover, someone who might, in principle, be fully competent to undertake a particular task, might be subject to transient incompetence due to ill-health or other causes.

**\* A definition of behavioural competence**

Behavioural awareness comprises those individual behaviours, attitudes, self-awareness and limitations which impact upon performance and safety at work. It covers the interaction between people and the environment in which they work, the equipment they use, and the procedures and techniques they use. The objectives of behavioural competence are enhanced effectiveness and safety

### **Recommendation 6**

It is recommended that **the sector adopts a strategy of training supervisors/managers (and requiring update training on a regular basis)** giving them the tools and approaches to coach and mentor behavioural abilities in a “bottom-up” manner. At the same time Construction Skills should begin to encourage and assist in building-in behavioural competence (in the awareness sense) into key qualifications. This could require the passing of a distinct behavioural competence course by all site supervisors and managers (forming a prerequisite for gaining and holding a site supervisor/ management card which would have to be renewed on a regular basis). Focussing on behavioural competence for the individual operative would be less feasible in the immediate/short to medium term. The required training and assessment (and continuing assessment) would be expensive and extremely difficult to arrange and deliver.

Feedback also requested re-assessment on a regular basis as being necessary to ensure that competence is maintained and developed. This does not always require ‘formal’ approaches. On-going continuous improvement might - for efficiency and transparency – be linked more closely into card schemes. There needs to be much greater emphasis on continuous improvement. *“In the longer term, operatives must be reassessed on a regular basis to ensure continued competence and assessed to any newly identified skills that a job role may now encompass.”*

Where appropriate, vocational training should count towards an individual's achievement,

in say qualifications such as Diplomas/Degrees, etc, and could be used to lead to professional recognition e.g. membership of an appropriate body. Feedback was clear that some measure of practical competence is demonstrated in the workplace and that experience is needed as vocational training alone is not a sufficient measure of competence.

### **Recommendation 7**

**It is recommended that the concept of the “journey to competence” is gradually embedded into the industry** – key components forming the journey, such as initial training, gaining experience, learning under supervision and so on - should help to dispel misunderstandings and support the drive to continuing improvement and development at all levels in the industry. For any given job role there is a journey to competence during which competence is incrementally developed throughout one’s career. Competence is about lifelong learning, it needs continually updating and continual awareness that it can be affected by a change of job role/context or level as well as negatively affected by daily personal fitness and behavioural issues.

**It is also recommended that this understanding includes a fundamental awareness that Health & Safety competence, too, is not an absolute.** Initial robust but basic H&S awareness and knowledge must be complemented by situational awareness, enhanced risk awareness, and, for all, competence in key areas such as working at height, asbestos, plant and moving vehicles.

**There is also a need to enhance employees’ understanding of ill-health and the self-awareness and ongoing risk-assessment required to combat it.**

**In the medium to longer term the concepts of behavioural competence should be embedded in all Technical Certificates, and behavioural competence awareness and approaches be embedded in higher level qualifications, FE, HE qualifications and training, in Apprenticeships.**

**Continuous improvement should be made central to the whole understanding of competence, defined in such a way to be recognised as being about lifelong learning.**

## **3. Cards**

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The consultation revealed a great deal of dissatisfaction and feedback with the “card system” mirroring the findings of the recent HSE/CSkills report on *Routes to Competence* in the sector.

These findings are that, broadly, the system of cards is over-complex, there are too many cards (which causes confusion among both employers and employees), the content and requirements of cards are inconsistent, and there is a general misapprehension that ALL



cards are evidence of full job-role competence. There are also hidden costs of the plethora of cards/certification schemes in the industry.

#### [Brief summary of feedback/ consultation responses around cards:](#)

Feedback indicates that most believe that a single card scheme (or 'brand') would be simpler and easier for employers, but whether a single scheme is imposed or not, there needs to be much greater clarity and ease of understanding for employers (than there has been historically) and this should include clear marketing strategies so the scheme(s) is/are well understood. The balancing need is that, if a single scheme or brand is introduced, it does not create additional bureaucracy or is cost-prohibitive.

Concern was expressed that a single card could become a 'logistical nightmare' and hugely challenging to encompass all the existing range of requirements for different sub-sectors. A way forward, suggested a number of times in the consultation, would be a form of 'smartcard' or smart-phones (already in use within the industry) as one means of on-site card checking as technology develops. Whatever technology is used in the immediate or medium term future, the key pressure that was frequently mentioned was the need for one central data hub where all of the relevant information could be held in one place.

Highly regulated sectors, notably nuclear/power operating in certain parts of the UK, require cards for workforce operation and it is clear that any future change in the system for the construction industry would need to factor in their stipulations.

Taking the concept of accreditation a step further, the consultation pointed to the view that a licence to practise would work only if 'rigorously enforced and policed' from the start, with a time limit on a licence before re-assessment. The difficulty for employers here is that the card scheme/industry regulation generally has not been subject to this culture or enforcement to-date. Costs were noted as the main barrier – particularly if seen to be higher than the current card system. There was a mixed reaction and appetite for a licence to practice with training organisations more supportive of the concept than employers or professional bodies/associations. It was generally felt that agreement on competence and cards should be reached before further debate on a licence to practice.

#### [Recommendation 8](#)

[While many cards do not provide clear evidence of even basic 'competence', they may nevertheless document valuable and relevant training for which there is a clear industry demand.](#)

[We considered the option of simply abolishing cards but, in the light of high turnover rates and mobility within the sector, the modern industry needs a way for employers to be assured of the occupational qualifications and experience of those they employ. \*\*We recommend putting in place a well-run and rigorous certification/card system\*\*, to ensure that all schemes operate to the same set of industry-agreed criteria and that](#)

information is both accurate and easily available to employers.

**As a first step, it is highly recommended there is a formal 'round table' discussion that takes forward initial progress with card/certification scheme organisations/bodies, ideally with HSE,** to review the details of the way forward including the establishing of criteria, the best ways of including all current types of record - qualifications, health & safety training, other training, experience, etc.

### **Recommendation 9**

**It is also recommended that there is an investigation to decide upon the most cost-effective administrative method of issuing and checking cards.** Cards should move rapidly towards being able to evidence, in a cost-effective way, not only the health and safety training and competence of the holder and the ongoing enhancement of such training, but also qualifications and other courses and training undertaken by the holder. A central database of every employee together with evidenced statements as to qualifications, external and in-house training, health and safety and work experience should gradually be developed for the industry.

Care will have to be taken to ensure that the development of a more unified system does not, unnecessarily, reduce the provision of this kind of effective, focused training for specific skills, functions or issues. Training cards and safety passports have a potentially important place in industry skills development: the crucial point is that they must not be confused with more wide-ranging cards that provide more comprehensive assurance that the holder has completed stages of their journey to 'competence'. It is recommended that any kind of criteria for a system of cards focuses on providing transparency for all users, rather than developing a single standard against which cards 'pass' or 'fail'.

### **Recommendation 10**

**The existence of many cards with a lack of consistency in requirements seems to suggest it is essential for the sector that an independent single card registration authority be established to set and monitor the criteria by which cards are awarded.** Such a body would not need to be statutory and might not even need to replace existing card-awarding bodies, but it would certainly need to establish common criteria for all card schemes and monitor their purpose, awards and standards (probably funded by a fee for each card issued), alongside links to other schemes required by legislation in the construction or related sectors. The new body would consult with current card/certification scheme organisers to finalise and issue standard criteria with robust measures in place. This would be dependent to some extent on decisions regarding the 'new competence' and how components such as experience, in house training and evidence of continuous improvement will ultimately be captured. Standard criteria could include an agreed combination of (with requirements on achievements required by):

- Qualifications, including accepted equivalents
- Units of knowledge and skills;



- Units of behaviours;
- Relevance and weight (ie length and quality) of experience;
- Renewal and validity requirements (and proof of continual improvement)
- Requires –in-house/company training and experience to be recorded and evidenced
- Behavioural and work readiness skills are built into existing courses at a very early stage in order to effect a change in culture
- Measures for barring the card holder where validation proves fraudulent activity.

#### 4. Supervisors and Managers

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An established body of research and reviews – beginning notably with the Latham and Egan reports – has emphasised the increasingly important role of management and supervision for the development of an efficient, safe and effective construction industry.

Recent research for ConstructionSkills has indicated that, while many employers state that their managerial staff are 'fully skilled', and that additional training is therefore unnecessary, when those same employers are asked questions about their managers' skills in specific areas, they often report significant deficiencies. These deficiencies are particularly concentrated in the areas of maximising staff productivity, time management, mentoring, coaching and communication skills. Finally, the recent HSE/ConstructionSkills report also suggested that site supervision and management are critical in requiring further development and support if the industry is to work towards the components recommended as part of the 'new competence'.

It is acknowledged that supervisory and management skills have been a major focus of investment for CITB-ConstructionSkills in recent years, with the development of targeted training such as the Site Management Safety Training Scheme (SMSTS) and Site Supervisors Safety Training Scheme (SSSTS), focused specifically on safety issues, and a more wide-ranging Management and Supervisory Development Plan (MSDP) for which a number of projects exist to help the industry develop their supervisors and managers.

##### **Brief summary of feedback/consultation regarding site-based supervisors and managers:**

It was suggested that Leadership and mentoring/training skills are absolutely essential but only for those at the right level and that Apprenticeships should have no need to focus on management/supervisory skills.

The message that this is a critical area for the industry for the future was supported by many in the consultation, not least because site supervisors and managers are on the



front line and as such hold significant responsibility for ensuring competence, although clearly it is a shared or a collective responsibility of operatives to ensure their health & safety compliance. Many suggested that CPD is vital for supervisors/managers and should include core skills in leadership and communication, not just technical aspects. Some commented upon the skills gaps their site based supervisors and managers experience in their company: examples being testing/inspecting the quality of work.

A number of respondents, including professional bodies and training organisations, perceive skill gaps at middle management level, typically where individuals are promoted but not supported with the relevant training to teach them how to manage/supervise effectively alongside their technical capability. A number of employers agree there can be a huge gap between supervisor level and managerial level and that it *“lacks fluency and continuity from craft to supervisor to manager”*

### Recommendation 11

Building on existing Construction Skills initiatives **site supervision and site management need to be a major focal point for activity and for the future**. Help may be needed to ensure clear progression pathways with appropriate oversight and monitoring of the take-up of training/courses, qualifications and opportunities for continuous improvement. This focus should also extend to owner-managers of small business. Links with the small business sector skills body SFEDI could assist here. An evaluation of the variety of projects and activities for these roles would provide useful benchmarking data.

Clearly, SMSTS/SSSTS courses are recognised for evidencing health and safety competence but some suggest they do not deliver the necessary package of management/supervisory skills such as performance management or carrying out training needs analysis. It was emphasised in the consultation that training/qualifications do not necessarily need to be complex or involved – short courses can make a significant difference. Some were anxious to point out these courses can focus too heavily on H&S at the expense of other general management skills. Feedback suggested these courses should be a part of an overall training plan where experience from the workplace is implemented, but not relied on in isolation. It has been suggested these courses are ‘demonstrations of appropriate CPD’. Skills taught through these courses should also be embedded into HE/FE where possible.

It was pointed out that there will be a continuing need to recruit from the trades, because professional managers (whose typical route might be as a graduate from a University course) generally aren't able to deal authoritatively with operatives. Again reference was made to the unsuitability of NVQs (*views largely from England*) as a qualification for supervisory and managerial roles. Many employers have developed and rely on their own in-house training.

*“All craft training must contain a proportion of repair and maintenance which should also include the differences between traditional buildings and others. This also highlights that*

*site supervisors need to be up-skilled in these same areas”*

The consultation showed a clear call for a “technical-craft” route to be established for all elements of the industry allowing employees to proceed to high level of craft skills and craft-related qualifications without necessarily opting for supervision and management at level 3.

### Recommendation 12

There needs to be clear understanding of the **differences in, and provision for, Level 3 Craft qualifications and Supervisor and Site Manager routes to Level 3 and 4**. New qualifications, perhaps built on detailed NOS, for senior crafts-people should be developed and implemented in order to create a technical, non-managerial route into higher levels. Progression via suitable qualifications for those wishing to gain a higher qualification in their craft is required for almost all crafts - ie independently of the routes to supervisory and managerial qualifications. This could include provision for a Technical Excellence route.

There were some concerns from HE that there is too great a gap between Levels 3 and 4 to support effective progression for those coming from trades/crafts backgrounds and going to HE, leading to high dropout rates. They suggest there is a need to develop the ‘educational’ aspect (i.e. acquisition of theoretical knowledge and understanding) in vocational education, so that those moving into higher level education can then adjust to the theoretical emphasis.

### Recommendation 13

**Detailed consideration should be given to the need to accommodate craft promotion to supervisor or site management grades** and the effects of such promotion on the content and demands of higher level courses and qualifications. To counter concerns from HE that there is too great a gap between Levels 3 and 4 to support effective progression for those coming from trades/crafts backgrounds leading to high dropout rates – there is a need to develop the ‘educational’ aspect (i.e. acquisition of theoretical knowledge and understanding) in vocational education, so that those moving into higher level education can manage the theoretical emphasis.

### Recommendation 14

**Supervisory and management qualifications should be enhanced to include mentoring and coaching skills in behavioural competence**, to align to the new definitions of competence and the essential nature of key behaviours and attitudes; it is recommended that there is a greater focus on taught qualifications whereby the basis of the input of knowledge is on risk, causation, man-management skills, situational awareness, etc. CPD or Continuous improvement is a necessary aspect of supervisory and management and must be regarded as a fundamental component of the role. At the same time, there is also an opportunity to consider the benefit of training people in such roles to be effective assessors of staff (eg simple check-lists based on competence

assessment tools)

### Recommendation 15

**It may be worthwhile to consider the professionalization of this route and such roles via more professional development schemes.** Bespoke qualifications from professional bodies such as ILM or others could be developed for the industry that over time become recognised in the industry as an important and aspirational qualification for supervisory and site management roles;

## 5. Low Carbon and Green Deal

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The UK government now has a series of current and proposed initiatives in place including in the Green Deal which will fund a number of ways in which buildings can be made more energy efficient, and in the various iterations of the Feed-In Tariff for home produced energy (via wind and solar systems).

The implications of many of these initiatives surrounding low carbon and renewables for the construction sector include new skills for advanced buildings and materials, enhanced skills for the improvements required for the existing building stock, and the need to develop new techniques for installing energy efficiency systems (including ground source heating). The focus in some parts of the UK on Nuclear New Build (NNB) has an implication for certain construction skills (for example Welders, Steel Erectors, Fabricators, carpenters, electrical) which may result in an impact on domestic/industrial markets in terms of availability of the workforce with the necessary skills.

Looking to the future, it seems very likely that Building Information Modelling (BIM) will become a driving force and could possibly shape the way much of industry will work. BIM is more than sophisticated software (with far greater reach than 3D CAM modelling) it is also about the creation of rich data and information which is shared and used by architects and engineers and others who, it is anticipated, will work together far more closely than ever before through the building life cycle. It could have a major influence and impact on the skills required throughout the industry and those that supply it.

### **Brief summary of responses from the consultation on Low Carbon:**

- Broad agreement that basic skills for sustainable construction will be the same as current skills, but may need to be applied to new materials (for example, the use of steel rather than wood-framing) and new ways of working. There will therefore be a need for new knowledge and understanding to ensure that the industry knows how to apply their existing skills in these new contexts.
- Management skills and training will need to include knowledge of the low carbon agenda so site managers can understand the impact of each of the different trades on others, as well as poor practice that may impair the energy efficiency of the building. Also it is vital to understand the energy efficiency implications of the products and how

different products will affect each other.

- Retrofitting will become a major part of the industry, but there is a concern that most current construction courses are primarily aimed at the new build sector and are training new entrants in those skills rather than repair, maintenance and upgrading for the existing housing stock.
- Employers consider that lower level skills for Green Deal will be broadly similar to what is already being used by the workforce. Bolt-on up-skilling is likely to be needed rather than brand new skills, this will include transferable skills, new technologies and a future drive in the direction of multi-skilled workers. There is a pressing need for some form of CPD.
- Skills development is required more at the consultation/design stage and including customer service skills, also BIM; whole life cycle costing, whole life cycle carbon analysis; air tightness; cold bridging; breathability, insulation. Heritage/traditional skills in repair and maintenance vital for improving energy efficiency of existing building stock
- A major heritage stakeholder was concerned that existing competent-person schemes typically focus on modern methods of construction at the expense of pre 1919 stock; an issue also highlighted by some employers and training organisations that retrofit could be counter-productive if approached without the right knowledge (*“frequent incorrect use of preparation methods and materials and the resulting problems that are created and consequent deterioration of building stock”*)
- Installers/managers of renewables are likely to be in greater demand and therefore there will be a greater need for education/training in renewable technologies.

### Recommendation 16

**Use the detailed research that will be forthcoming on the precise needs of the sector where Green Deal competences are concerned to identify, delineate and relate to existing sub-sectors, qualifications and units all skills and knowledge required to meet the low carbon needs of the sector.** It should also focus on not just technical skills but ensure that non-technical skills and knowledge in customer service and sales are embedded in provision for the workforce delivering the Green Deal and for energy assessors in particular.

### **Recommendation 17**

For all nations a major requirement will be on upskilling in consideration of renewables. **It is strongly recommended that the opportunity to bring in a measure of monitoring continuing improvement will be relevant here.** Allied to this, **there needs to be joined up activity that promotes and embeds within training, qualifications, marketing and the new competence the concept of sustainability and importance of energy efficiencies.** There needs to be targeted development for management and supervisory skills and knowledge requirements and the implications for qualifications, courses and units including CPD.

### **Recommendation 18**

**In particular provision should cater for skills and knowledge needs relevant to different types of building fabric/age, including pre-1919 stock and 'hard-to-treat' buildings.** It is likely that such units will need to be incorporated within qualifications and training provision across a broader range of sector footprints to ensure that the skills and knowledge needs pertinent to the low carbon agenda are addressed holistically.

### **Recommendation 19**

**Work closely with CIC and other professional bodies to monitor developments and the likely impact on skills and need for training emerging from BIM and related technological activity.** This equally requires close working with awarding organisations involved with the construction industry to ensure that qualifications and units, and, therefore, training are sufficiently elastic to allow for on-going and rapid updates in line with emerging technologies and other developments relating to the low carbon agenda as well as BIM to meet the changing needs of employers.

## **6. Provision via independent providers, FE and HE**

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Following on from research conducted in 2011 by ConstructionSkills to examine the subject of provision and consider the implications of reviews and possible change in each nation, consultation questions were asked if courses are meeting the needs of the industry, about tutor's/lecturers' currency of knowledge, whether courses and apprenticeships are available in the right skill areas and how to encourage greater engagement with employers, particularly for matters of work experience.

### **Feedback from the consultation and from the recent 14-19 and HE research reports indicated:**

- A need for more standardisation and better definition of content in college-based training programmes;
- A need to review consistency and quality of delivery of course material and the embedding of knowledge and skills;

- The need for better links between employers and FE, to increase engagement with learners, provide more placements, and improve understanding of industry requirements;
- A requirement for a careful review of FE funding processes to identify a) how proposed changes are likely to impact the system; and b) how to minimise perverse incentives that may have distorted the quality, consistency and scope of available provision;
- A need to provide clear guidance to industry, HE and potential students/recruits as to which HE courses meet industry needs;
- A need for CITB-ConstructionSkills to monitor the impact of funding changes on HE provision, and perhaps consider lobbying appropriate funding agencies and devolved governments to ensure that remaining block funding allocations reflect the high resource costs of delivering construction-related HE;
- Urgent moves are required to identify construction courses that, due to small-scale recruitment or high fixed costs, are vulnerable to closure in the new funding environment;
- It is important to manage expectations of young people and remember that provision is not always about providing as many apprentices or people on courses as possible; the industry is not homogenous and during recessions and in different localities the demand will vary quite considerably.

Feedback from the consultation leads to the following broad recommendations that chime with, or follow on from, the many recommendations set out in the recent 14-19 Research Report and the HE report for Construction Skills (2011):

### **Recommendation 20**

**Greater collaboration is needed between industry, FE and HE to encourage greater harmonisation of the industry's needs and provision.** This needs to be based on a focussed and proactive strategic approach that builds on long term partnerships – it is fundamental that it takes in both mixed economy institutions and HE provision to avoid ad hoc, reactive/short term activities: the focus for the strategy to include for example:

- 1.1 Setting up and implementing a strategy for consistent, high quality work experience opportunities in the construction sector for learners (FE and HE). There seems to be a strong call for CITB –Construction Skills to provide greater leadership to HE in a number of areas.
- 1.2 Ensuring that courses include more practical, hands-on skills and thus embed employability characteristics and that these are promulgated for these specific reasons – this could for example include 16 + and < 19 learners on courses in FE that are not Apprenticeship based;
- 1.3 Developing sustainable models for employer engagement with providers, including



exploration of the ways that dialogue between industry and providers can be promoted, both to encourage a better appreciation among tutors/lecturers of the needs of industry, and better understanding in the industry of best practice as identified by research;

1.4 Attracting interest in, and raising awareness of, careers and progression pathways (see also final section);

1.5 The future development and implementation of an applied and vocational curriculum and qualifications plan to build on the momentum established by the vocational GSCE and the Diploma in England and the 14-19 Pathways initiative in Wales – utilising facilities for post 16 provision at schools thus also providing an opportunity to link with their 14-16 cohorts. It is clear that UTCs in England for example will be a further opportunity to add such necessary resources;

1.6 Clear leadership is required on Construction Skills' expectations for 'continuing development' for lecturers/tutors - ie construction specific CPD' on up-to-date working practices and technological development. This must be addressed urgently for FE to meet needs underpinning new developments, such as renewable energies and initiatives such as Green Deal. It has been suggested that: *"Each tutor should have one week's practical experience on the tools every two years to maintain currency of knowledge and experience"*. There may also be a need for ConstructionSkills to institute a more formal mechanism through which tutors, teachers and careers advisers can receive general updating on knowledge, techniques and equipment. *'Continuing development' could be achieved through site visits/work shadowing to address the need to get 'real' content not just theory into courses and via guest lectures. An opportunity to involve professional institutions even more involved at FE level'.*

1.7 Continuing research and development work on the means of measuring and monitoring the quality and consistency of delivery: this requires greater use of data identified within ConstructionSkills research, particularly in the post-16 vocational education sector, to inform development and delivery of training interventions. This would then help to ensure that career pathways are closely linked to an evidenced industry need.

Concern has been expressed by employers around perceived variances in content and teaching styles across the country. The general feeling is that this leads to inconsistent quality in the output and works to the detriment of the industry. (see section under *Training, Apprenticeships and Qualifications and the resulting recommendations for more on this issue*).

There will always be a need for bricklayers and carpenters/joiners, as well as other traditional skills, and some employers and professional bodies are keen to stress the importance of maintaining some/most of what we have now. The need is to ensure a balance between these traditional skills and the needs of newer materials and techniques. Training provision for repair and maintenance applicable to existing housing stock is as equally valid and important as helping providers consider more modern methods of construction. In the light of the needs of heritage stock there may well be a strong argument for augmenting traditional skills.

### Recommendation 21

**We recommend some form of provision mapping to be one means of monitoring this particular issue.**

If the student-demand-driven system prevails from Autumn 2012, it is the prospective student that is the key target for information on what courses, or kinds of course, are likely to enhance their employment chances. There appears to be little information to clarify which HE courses contain key 'characteristics' that may lead to or support employment in construction occupations.

### Recommendation 22

**We recommend that more work is undertaken to identify HE provision that meets specific industry needs (see 1.2 above) and that this information is promulgated more widely (see other sections that recommend an attractive and detailed competency framework).**

The impact of Higher Apprenticeships (HA) is still an unknown quantity but there has been recent work by CIC and others investigating industry preferences regarding HA and Foundation Degrees for example. HA would appear to support the idea of routes supporting a Technical Excellence strategy, but clear messages must be provided to the industry on how these fit in alongside other qualifications, how they are funded and their role in career pathways.

### Recommendation 23

**A 'menu' of support could be delivered through a single organisation which would be funded by membership subscriptions.** The organisation would offer CPD tools for tutors/teachers, a central database of placements and regular employer-education forums which might feed into qualification and unit development.

## **7. Careers in the Construction Industry**

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The supply of adequate numbers of high quality young people to the industry depends, to a large extent, on their awareness and understanding of it and of the opportunities within the industry and the prospects of its emerging shape given the drivers of renewable and energy efficiencies.

Based on both the Review Report on 14 -19 Education and Training produced for Construction Skills in 2011 and the key issues arising in the previous Construction Qualifications Strategy, consultation, questions were posed on what needs to be done to help in this regard. For example, is there more to be done to help teachers, lecturers and influencers (such as careers advisers and parents) understand the industry better? What more needs to be done to ensure that, given the HE fees situation and Government



encouragement on Apprenticeships, the Construction Industry is at the forefront of young people's minds in the next few years?

The ConstructionSkills Recruitment, Careers and Lifelong Learning Working Group have an extensive series of actions planned for the next two years and beyond, and these will be appropriately referenced in the final Skills Strategy.

Feedback from the consultation can be summarised into total agreement that more needs to be done – ideally coordinated or led by CITB-ConstructionSkills. In quite a few cases, some of these activities are underway already through the auspices of the aforementioned ConstructionSkills Working Group and need time to filter through and others may be constrained by recent policy changes for example. There was some perception gathered during the consultation that, in recent years, activity previously carried out has diminished.

Owing to the longstanding issue of the poor image of the industry, (the same points raised in the previous CQS from five years ago came up time and again in the recent consultation meetings), it may be opportune to plan for a more appropriate and targeted way of promoting it to young people. It is unlikely that major marketing campaigns in the traditional mould would be effective. These have been attempted before.

#### Recommendation 24

**A long term process should be implemented to enhance the image of individuals working in the sector at all levels; demonstrating through a variety of media direct to young people (YouTube, FaceBook, etc) that people in this industry are highly skilled and have excellent career prospects.** A long-term and carefully planned programme of industry promotion through such social media might have more effect than more expensive traditional marketing and careers routes. So, for example, YouTube videos that emphasise the job-interest and remuneration of key craft occupations, the job satisfaction and high level skills involved in the design and management fields are just some examples.

To supplement this, the industry needs clearer, and easy-to-reference, pathways and understanding of the "journey to competence". **We recommend that a detailed and effective competency framework tool is developed (similar to those in existence for CIPD and other professional bodies) that brings together and links a number of key elements of competence such as job roles, skills, knowledge, behaviours –by level and occupation through a very detailed database and online graphical interface.** It is a fundamental opportunity to showcase the relevance of different types of qualifications to new entrants, career changers, those existing workers progressing or up-skilling as well as to providers; these then can be directly linked to industry job profiles and their competency requirements. It would need to provide detailed information for each industry job profile. This can also help standardise, as appropriate, the messages about the industry and its workforce for wider dissemination and promotion across the board. This recommendation will be in part met by the progression mapping tool currently in development be available via the CSkills website.

It is important to feed into and keep a watching brief on material used in national websites (for example Careers Wales, or My World of Work in Scotland or the Careers Service

Northern Ireland) to be sure the messages and image being portrayed are up-to-date and appropriate and for example avoiding the use of static job titles taken from standard occupational classifications (SOC) to showcase careers.

In terms of curriculum support, teachers always welcome material that is easily available, perhaps downloadable and usable for classroom activities at all stages of the curriculum. This should remain a top priority for ConstructionSkills and where possible include a coordinated strategy of material from the industry.

Employers and providers alike mentioned that it is time to *'dispel the myth that construction is a dirty job for low achievers'*.

### **Recommendation 25**

**Consider a long term strategy that investigates the outcomes of companies in the industry that have raised the bar in terms of 'entry requirements' for key occupations and for young people into certain occupations.** A balance needs to be struck between being seen as the industry for young people with few or no other choices and encouraging those with higher level achievements, to achieve a diverse workforce.

Work experience as an issue that was raised quite frequently in the recent Consultation in the context that an effective, coordinated approach is necessary. Work related learning (WRL) is equally important too as different approaches to WRL engage different learners. ConstructionSkills with industry involvement engage in a vast range of activities such as site visits, industry taster days, industry simulation activities, web cam access to live construction sites, work experience, mock interviews, mentoring, project support, speed networking, curriculum support, carousel activity events and Health and Safety workshops among others.

### **Recommendation 26**

**Many of these initiatives and activities may not be obvious to companies not directly involved, so we would recommend ensuring that the activities are more widely and regularly promoted and that case studies be developed to illustrate successful models and approaches.**

## Appendix - list of participants in the first round consultation

**First round consultation participants: Please note this consists of those who responded individually via the online survey and/or attended a meeting where the Skills Strategy was a main agenda item. The written responses list contains only those who were content to have the name of their organisation passed on to CITB ConstructionSkills.**

### Responding to the UK/England consultation document

1. Accrington and Rossendale college
2. Ann Cook Associates Ltd.
3. Bagnalls
4. Balfour Beatty Construction Services UK
5. BAM Nuttall
6. Beamish Museum
7. Britcon Ltd
8. British Association of Construction Heads
9. British Woodworking Federation
10. Carrock Design Build Ltd
11. CASL Management Development Ltd.
12. Civil Engineering Contractors Association – Yorkshire & Humberside & Civils Training Group
13. Clugston Construction Limited – North East Region
14. College of Estate Management
15. Construction Plant-hire Association
16. Construction Skills Certification Scheme (CSCS) Ltd
17. Construction Youth Trust
18. Costain and the Deputy Chairperson of the South East Skills for Growth Forum
19. Costain Limited
20. Cskills Awards – Development Team
21. CTC Training & Assessment Ltd
22. Emerald Construction (IW) Ltd
23. English Heritage
24. Federation of Master Builders
25. Freelance – The University of Greenwich, Edexcel, Brighton & Hove City College.
26. GQA Qualifications Limited
27. Heritage Skills Network (South East)
28. Independent Consultants
29. Independent Heritage Consultant & Building Surveyor
30. Institute of Historic Building Conservation
31. Institution of Civil Engineers
32. John Doyle Construction
33. Keith Cook Training Ltd
34. Kier Group
35. Leslie Peers Associates
36. Morrison Facilities Services
37. Moulton College
38. National Access and Scaffolding Confederation (NASC) and Construction Industry Scaffolder Record Scheme (CISRS)
39. National Association of Shopfitters

40. National Society of Master Thatchers (NSMT)
41. National Specialist Contractors Council (NSCC)
42. North West Kent College
43. Northumbria University
44. Orsi-Contini
45. Owen Pugh & Co Ltd (The Owen Pugh Group of companies)
46. Painting & Decorating Association
47. Provia Construction Ltd
48. Retired from Leeds Metropolitan University, now associate
49. Sel Clarke Ltd
50. Society For The Protection Of Ancient Buildings
51. South Wales & South West Roofing Training Group
52. The Chartered Institute of Building (CIOB)
53. The College of North West London
54. The Joint Industry Board for the Electrical Contracting Industry
55. Transport for London
56. UCATT
57. UK Contractors Group
58. Witherslack Hall School

#### **Responding to the Scotland consultation document**

59. Historic Scotland
60. IHBC Scotland
61. North Glasgow College
62. SELECT

#### **Responding to the Wales consultation document**

63. Institute of Historic Building Conservation: Wales
64. Institution of Civil Engineers Wales Cymru
65. Interserve construction Ltd
66. Magnox
67. Northern Gas Networks
68. NSA-Nuclear - Wales

#### **Responding to the N.Ireland consultation document**

69. Northern Ireland Demolition Association
70. Henry Brothers (Magherafelt) Ltd
71. Morrow Group
72. Modev Ltd
73. Springvale Learning
74. Training & Assessment Consultants Ltd & Drilling & Sawing Association
75. The Federation of Master Builders

#### **Meeting Attendees (\*)**

1. ABC Awards
2. Aberdeen College
3. Accrington & Rossendale College
4. Adam Smith College

5. AELP
6. AELP - CTC Training & Assessment Ltd
7. Alfred Bagnall & Sons
8. Alun Griffiths Contractors
9. Angus College
10. APS/CIC
11. APS/IOSH BPS Solutions
12. Asset Skills the Sector Skills Council for facilities management, housing, property, planning, cleaning and parking
13. Association for Project Safety
14. Association of Interior Specialists
15. Ayr College
16. BACH
17. Baggaley Construction Ltd
18. Balfour Beatty/UKCG
19. BAM Nuttall - CECA
20. Birmingham City University
21. Borders College
22. Bridgend College
23. Britannia Construction
24. Britcon Ltd
25. British Tunnelling
26. Business Link
27. BWF
28. Cardiff Metropolitan University
29. Carillion Construction
30. Carillion Training Services
31. Cavity Insulation Guarantees Agency
32. CCTG
33. Cell Awards
34. CEM
35. Chartered Institute of Building
36. CIAT
37. CIBDG/Training Group
38. CIBSE
39. CIC/Construction Skills
40. CIOB
41. CITB Northern Ireland
42. City Building Training Provider & Construction Firm
43. City College of Plymouth
44. Civil Engineering Contractors Association (Yorkshire & Humberside)
45. Clydebank College
46. Cogent the Sector Skills Council for science-based industries
47. Coleg Gwent
48. Coleg Llandrillo
49. Coleg Menai
50. Coleg Powys
51. Coleg Sir Gar
52. Conspec Contracts Ltd(NWG - interior systems)
53. Construction Plant Hire Association
54. Construction Skills
55. Construction Skills Awards
56. Construction Skills/CITB
57. Construction Skills-Wales
58. Construction Skills-Scotland
59. Costain Group
60. Cowlin Construction
61. CPA

62. CSCS Cards Scheme
63. Danaher & Walsh Group
64. Devon Construction Training Limited
65. DfES (Quals) Welsh Government
66. Dumbreck Decorators + S.D.F.
67. Eco-Training
68. EdExcel
69. Engineering Construction Industry Training Board
70. Energy & Utility Skills, the Sector Skills Council for the gas, power, waste management and water industries.
71. FMB
72. FMB Scotland
73. Farnham Bros (Youlden & Barrett Ltd)
74. FPDC
75. GFE
76. Gilbert-Ash Building & Civil Engineering Contractors
77. GQA
78. GTG Services Ltd
79. Hartlepool College of FE
80. HBF
81. Henry Brothers
82. Heritage Sector
83. Higher Education Academy
84. Hire Association Europe
85. Historic Scotland
86. Homes for Scotland
87. HSE
88. Humber Training Group/Promanex
89. IHBC
90. Imperial College London
91. Institute of Highway Engineers
92. Institution of Civil Engineers
93. Institution of Occupational Safety & Health
94. Invicta Construction Training Group
95. Jehu Group Building Contractor
96. Job Centre Plus
97. Jones Bros Civil Engineering
98. Joyner PA Cymru
99. Kaefer C&D Ltd
100. Keith Cook Training Ltd
101. Kier Construction
102. Kitchen, Bedroom, Bathroom National Training Group (KBBNTG)
103. Lantra the Sector Skills Council for the land based and environmental industries
104. Leeds College of Building
105. Leeds Met
106. Leslie Peers Associates
107. Lovell Partnering Construction
108. Lucas Carpenters Ltd
109. Manchester University
110. Marshall Construction +Scottish Building
111. Mears Group
112. Millbank Roofs Ltd
113. Mineral Products Qualifications Council
114. Modev Ltd
115. Morgan Sindall
116. Morrow Group
117. NAS
118. Nation Skills Academy Nuclear

119. National Construction Academy
120. National Construction College – Construction Skills
121. National Heritage Training Academy South West
122. National Specialist Contractors' Council (NSCC)
123. NCC Construction Skills
124. NCC Scotland
125. NEBOSH
126. New College, Nottingham / CGFE
127. NFRC
128. NFRC Scotland
129. NHBC
130. North West Kent College
131. Northern Gas Networks
132. Northern Regional College (FE/HE)
133. Northumbria University
134. NSCC
135. NWG
136. OCN – Northern Ireland
137. Oxford Brookes University
138. Parity Talent Management
139. Proskills the Sector Skills Council for the Process and Manufacturing Sector
140. Provian Construction Ltd
141. QTC/PGS Focus
142. Rack Training Group
143. RAEng
144. RIBA
145. RICS
146. Ridgeway Plant Co Ltd
147. Road Safety Markings Association
148. Roof Training Group
149. RSME
150. RTPi
151. Safeway Hire Ltd-Scaffolding contractors
152. Scott Brownrigg Architects of SIOHAS
153. Scottish Building Federation
154. Scottish Decorators Federation
155. Scottish Plantowners Association
156. SCTL
157. Seddon Construction
158. Sheffield Hallam University
159. Somerset College
160. South Central CITB Construction Skills
161. South East Walls Construction Forum
162. South West College Education
163. Southdale Ltd
164. Springvale Training
165. SPS UK Ltd
166. SQA Accreditation
167. SQA Awarding Body
168. SSAT
169. Stavley Ltd
170. Stockport College
171. Stow College
172. SummitSkills the Sector Skills Council for Building Services Engineering
173. Sunderland FE College
174. Suscon
175. T.A.D Builders Ltd
176. Teach Weld Training

177. The Glass and Glazing Federation
178. TICA
179. Training Company Ltd
180. TunnelSkills - NWG Rep
181. TVCTA
182. UCATT
183. UKCG
184. Union of Construction Allied Trades & Technicians/STUC General Council
185. Unite the Union
186. University of Leeds
187. University of Manchester
188. University of Nottingham
189. University of Salford
190. University of Strathclyde
191. University of the West of England, Bristol
192. University of Ulster
193. University of Westminster
194. Wakefield College
195. Welsh Employers
196. Wm Evans & Sons Ltd
197. Yorkshire Independent Roof Training Group

*(\* there were also meetings organised by ConstructionSkills where the Skills Strategy formed an item on the agenda but there was no time for full dialogue; participants' names from those meetings are not listed here.*

Please forgive any omissions or errors with regard to this list - we will update the final document, if you could please inform us of those.