



Skills Provision for the Construction Sector in Wales – Research to inform Transformational Change

Summary

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Research Objectives and Methodology

This project was supported by the Welsh Government's Sector Priorities Fund Pilot (SPFP) programme which is in receipt of support from the European Social Fund (ESF).

The Welsh Government is seeking to secure greater choice and less duplication of courses, more collaborative and higher-quality providers, and better-targeted, demand led learning. The objectives of this research were to:

- explore current and anticipated future training needs among construction employers in Wales;
- assess the suitability of existing construction training provision at meeting demand;
- determine and recommend possible models for transforming construction training provision.

The project brief provided four possible options for future construction skills provision, thereby forming the context for the research:

Option 1	<i>The case for a new build National Construction College (NCC); based on the model of the rest of the UK's NCCs to satisfy the demand for courses not currently available in Wales</i>
Option 2	<i>Partnering an existing proposal for a 'construction centre' in Wales, with a view to ConstructionSkills becoming a partner in that proposal and working under the brand of NCC</i>
Option 3	<i>Retraining of staff in existing institutions to deliver training required to meet the future skills demands of the sector</i>
Option 4	<i>No change - ConstructionSkills continues to deliver qualifications as a Managing Agency</i>

The study involved the following strands of research:

- Literature review and analysis of existing Further Education, work based learning and Higher Education construction training provision in Wales, including the identification of gaps in provision¹;
- Telephone survey of 400 Wales-based construction sector employers (targeted by sub-sector according to Standard Industrial Classification codes);
- Telephone survey of 100 construction sector employees (targeted by Region of Wales – North/Mid/South East and South West);
- Focus groups principally involving training providers and professional bodies;
- Telephone interviews with National Construction College representatives.

¹ Both the literature review report (Word format) and matrix of construction provision in Wales (Excel format) have been delivered to ConstructionSkills as separate annexes to this main report.

It is recognised that, in conducting this research, the options explored will have varying impacts on the different types of training providers operating in Wales

Demand-side evidence

As a result of the recession, a key challenge for employers is winning new work, and there is evidence that a minority of employers are seeking out new market opportunities. Where training is concerned post-recession, attentions have turned more towards in-house provision, including more 'immediate' and short-course training.

At present, just over half of employers are training in low carbon skills which are likely to underpin the future development of the workforce. This is echoed by the fact just under half of employers believe low carbon skills to be important.

The majority of construction employers in Wales have provided learning and training for the workforce within the last two years, and have used a variety of on-the-job and off-the-job approaches.

Despite overall levels of satisfaction with existing provision being high – a third of employers (particularly those within the 'other professional, scientific and technical activities'²) report a range of barriers to training, most notably cost and time to train.

Looking to the future, employers want more convenient forms of training, i.e. short courses appropriate to their business and accessible geographically.

Just over half of employers support the development of some form of new or additional education and training facility along the lines of the existing National Construction College (NCC) either as a new physical site (28.5%) or through a partnership approach (24.7%). These represent options 1 and 2 respectively and in practice may mean different applications depending on the perspective of respondents.

Around 21% would prefer to see staff retrained in existing institutions and a further fifth would prefer no change to construction provision. These represent options 3 and 4 respectively.

Supply-side evidence

While 'traditional' construction training is considered by providers to be adequate, participants in the focus groups highlighted skills for eight specialist areas that they regard to be most critically required in Wales:

- Earth Moving Equipment;
- Heavy plant materials (because of the size of the equipment and the space required);
- Heritage (including specialist skills needed to retrofit historic/listed buildings);
- Interior wall insulation (the ARBED programme for regeneration in Wales has led to increased demand for these skills);
- Prefabrication, timber framing and pods;
- Scaffolding;
- Steeplejacking;
- Street Works.

² Other professional, scientific and technical activities include roles such as environmental consulting and quantity surveying.

Generic (i.e. not specific to Wales) priority areas for skills development also extend to management and supervisory skills. Research carried out by IFF for ConstructionSkills in 2011 highlighted a number of gaps across the sector, most significantly: understanding the importance and implications of 'green' issues; managing sustainable practices; keeping up to date with legislation; IT skills; identifying and winning new business opportunities; as well as risk management³.

With respect to the options for change the providers and employer representatives prefer a partnership approach to transformational change in provision for the sector. This represents option 2 within the original specification.

Conclusions

The construction industry in Wales is apparently making a slow recovery following a hard recession. However, employment forecasts to 2015 are tentatively positive, showing total construction employment in Wales rising by a conservative 5% over the five years to 2015. The total employment figures this would generate would still be 20% down on 2007 levels⁴.

It is impossible to predict precisely what the industry will look like when it eventually begins to grow strongly once more. Neither is it entirely possible to identify the sub-sectors which will be able to grow fastest even within a very slowly expanding industry over the next five years.

Growth will be driven by a number of factors and over 70% of employers need more help in adapting to future change. The most influential drivers for change affecting employers are legislation and the need to maximise commercial opportunities in the interests of survival. Welsh Government targets with relation to low carbon and renewable energy present new market opportunities that have the *potential* to stimulate demand for new types of training.

Knowledgeable industry stakeholders, including the providers, are of the opinion that, while current education and training provision is adequate, there will - at some point in the recovery - be a need for different, specialised skills to support UK and Wales priorities. This is especially relevant if Wales is to be seen to export skills to other parts of the UK (and beyond) and in maximising the overall productivity of the Welsh workforce.

Focus group attendees pointed out that training and development in these skill areas requires facilities, equipment and space not available to many of the individual colleges or other providers. They also stressed the need to address future needs of the industry in high technology areas such as carbon reduction materials and techniques. There is also the issue of the adaptation of traditional trades – such as carpentry – and how these roles will need to be supported as new technologies and building practices emerge.

Approximately four fifths of employers are in favour of change to construction skills provision in Wales (aggregating responses to Options 1, 2 and 3), with only one fifth preferring the no change scenario (option 4). This is substantiated by focus group participants who were strongly of the opinion that, for Wales to remain competitive in terms of its construction skills base, training provision would need to be better equipped not only in terms of both physical space and plant but in terms of the knowledge and skills of the teaching resources.

³ IFF research for ConstructionSkills (2011) *Management and Supervisory Skills Research*.

⁴ Experian - Construction Skills Network 2011-2015: Wales LMI.

Enhanced teaching skills and resources would be required for advanced knowledge and skills in such areas as:

- Advanced construction materials,
- New building systems,
- The use of insulation materials,
- The installation of energy recycling systems,
- Building and installation of waste heat recovery,
- Advanced glazing systems (integration into existing building)
- Techniques for upgrading the energy efficiency of existing buildings,
- Building and maintenance of deep bore and ground heating systems
- The building of green roofs,
- The integration of solar and wind power systems into and alongside new and existing buildings,
- and many more.

Option 1: The new build option has significant advantages in terms of resources, purchasing and teaching economies of scale, and space for modern heavy plant and street works, etc. However, it would take considerable time to build and commission, would entail fairly high costs and require careful integration with existing provision in order to avoid duplication and to make best use of staff skills and knowledge.

Option 2: The partnership option would appear to have many of the strengths of the new build one while potentially costing significantly less, being easier and quicker to establish (subject to further development), and optimising the strengths of the existing provision. A number of Welsh providers have already expressed interest in such an arrangement. It would also be able, like the first option, to take advantage of the branding of, and links with, the wider NCC network at the same time as maintaining a separate Welsh identity.

Option 3: Retraining existing staff - while superficially attractive - is not considered by providers or industry representatives to be a viable option. While costs would be relatively low, the providers are already finding it difficult to up-skill their staff (even in traditional and current skills) and they feel that they would find it extremely difficult to meet the need for new, high-tech skills particularly in view of the competition between colleges for a limited number of skilled tutors.

The evidence of this study supports the case for change in construction skills provision in Wales; whilst there were benefits to all Options, the evidence from employers, providers and representative bodies pointed towards a more collaborative "partnership" arrangement more in line with Option 2.

The precise structure and nature of such an arrangement would require some further research and development, particularly in terms of the ways in which ConstructionSkills could utilise the most appropriate elements of its existing NCC model to enhance and support education and training provision in Wales. This would also require further dialogue with the relevant stakeholders needed to move proposals forward.

Recommendations

A number of project proposals have already been put forward by existing providers to develop some form of 'centre of excellence' for construction. Further consideration of the relative merits of one or more of these proposals and the way in which they could be linked to the existing NCC network (or other similar models) would potentially result in a solution which has the potential to enhance

existing provision, be more sustainable in terms of effectively utilising existing infrastructure, whilst also creating a new and exciting opportunity for specialist skills provision in Wales.

General recommendations:

- It is recommended that Option 2 be taken forward as the basis for continued dialogue with the construction sector and relevant stakeholders. This will require more detailed research and development work to be carried out in the short term to identify more precisely the ways in which it would operate and the costs involved.
- It may be possible that one or more of the existing proposals mentioned above could enable this research activity to be achieved in a shorter timescale given the relative merits of these proposals and the development work they have already undertaken.
- It is further recommended that the delivery model for the partnership arrangement should be of the 'hub and spoke' variety as this offers greater potential for links to be made more widely across Wales, more efficient use of all facilities - whether physical or human – and less danger of duplication or competition in provision.

Specific Recommendations:

In consulting with the sector and key stakeholders it is apparent that there will be some underlying requirements which must be met in order for their expectations of a more forward thinking and responsive training infrastructure to be achieved. It is recommended that these are taken forward as the blueprint for any further analysis work and in reviewing proposals already having been developed. These have been grouped as follows and are in no particular order:

- Cost (e.g. setup, running, financial reserves and access to finance);
- Provision of Services (e.g. types of services to offer);
- Accessibility (e.g. geography, access for those with additional learning needs);
- Duplication (e.g. relationship to existing providers and their services);
- Evidence Base (e.g. planning of future provision and predicting long term training needs);
- Governance (e.g. transparency, industry led);
- Timescales (e.g. setup timescales).