BUILDING THE FUTURE:
Sector Review of Qualifications and the Qualification System in Construction and the Built Environment

FEBRUARY 2018
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Forewords

The construction and built environment sector is key to the economic development of Wales. It is a large dynamic sector in Wales with 130,000 employees in 13,000 companies of varying sizes, fulfilling a diverse range of occupations and, importantly from our perspective, with a high number of Welsh learners taking qualifications (more than 8,000 certifications in 2015). Its size, complexity and importance led us to conclude that it should be the focus of this our second sector review.

The review was extensive, inclusive in its approach, involved inputs from a wide range of perspectives and provides many conclusive findings. There are many positive findings about the delivery of current qualifications, particularly the commitment shown by learners and tutors. However, there are areas where improvements are required in the short and long term. We set out the actions that we intend to take immediately and our options for longer-term reform, which we will consult on. Following up on our findings will be a focus for us as the independent regulator: we are committed to improving the offer available to learners and addressing the real practical issues that we have found.

Whilst it is too early to draw broad conclusions there are findings from this review that reflect our findings with our rearlier eview of Health and Social Care, including Childcare, and the findings of reviews undertaken by others. These include stakeholders’ view that the range of qualifications available is complex, confusing and lacks coherence; progression routes that are not always clear; learners experiencing repetition as they progress through qualifications; and concerns about assessment arrangements. These will be issues that we consider as we progress through our continuing programme of sector reviews.

Finally, I would like to thank everyone who has been a part of this review for their participation. Sector reviews represent a huge commitment of time and expertise, and this is reflected in the depth of thinking expressed in this report.

Philip Blaker
Chief Executive – Qualifications Wales

The Qualifications Wales CBE sector review team
I am delighted to be publishing our report on this second sector review, which has been nearly eighteen months in the making. Our journey to understand the construction and built environment sector and the role that qualifications play in recognising learners’ achievements and addressing employers’ needs, has been both fascinating and challenging. We have heard, or read, the views of about a thousand people across Wales and in this report we set out what they told us. As we began to reflect on our findings, we realised that there was a real opportunity in Wales to develop solutions to the concerns of employers, learners and learning providers. In considering solutions we are mindful that construction workers from Wales tend to be highly mobile and need their qualifications to open doors to work not only in Wales but also across the border with England and elsewhere. We believe that our proposals could make a real and positive difference to the construction and built environment sector in Wales.

This sector review has involved a significant number of staff from across Qualifications Wales. The core team members are listed at the back of this document: without them there would have been no review.

We were extremely fortunate to secure the specialist advice of Gareth Williams of Construction Industry Training Board (CITB) who joined us on secondment for the period of the review. I would like to thank him for sharing his knowledge, experience, patience, good humour and for contributing in so many ways to this review.

Our external stakeholder reference panel provided invaluable advice and the contributing organisations are listed at the end of the report. A big thank you to all the individuals who provided challenge, advice and suggestions throughout the review – both in and out of the meetings.

Numerous sector and professional bodies have engaged keenly and constructively with the review and I thank them for their generous time and contributions. Particular mention should go to Dawn Hillier and Steve Hearty (CITB), Ed Evans (CECA), Michelle Davies (ECA) and Graeme Dryden (APHC).

The BACH network of further education construction heads in Wales, ably chaired by Andrew Brett, has worked closely with us to ensure that we understand the issues from the point of view of learning providers – but they have also responded positively to the desire for change that has been expressed by employers and have been invaluable in helping us to shape our proposals.

Welsh Government have shown a keen interest and have provided sound advice and suggestions. Particular thanks to Sam Huckle, Claire Maxwell and Geoff Hicks on the Skills side and to Jill Fairweather from CADW.

And, of course, thanks also to every single learner, employer, teacher, tutor, assessor, trainer, advisor and specialist who took part in interviews, discussion groups and workshops or who completed our online survey. I hope you find your views reflected in this report.

And to all readers of this report, I hope that you find it interesting, informative and that you take the opportunity to respond to our consultation and to tell us what you think of our proposals for action. We would very much welcome your views.
Chapter 1: Introduction and Executive Summary

In this chapter we introduce the sector review and summarise its findings.

1. This is the second of a series of sector reviews carried out by Qualifications Wales, the regulator of non-degree qualifications in Wales. In sector reviews we take a cross-cutting look at the vocational qualifications in a particular employment sector, to see if the needs of employers and learners in that sector are being met. We also look at the underpinning qualification system, including the way that different organisations work together to deliver those qualifications. We focus primarily on publicly funded qualifications – those taken in schools and colleges, and as part of apprenticeship programmes. However, if we discover issues with other relevant qualifications we take those into account too.

2. The remainder of the report is structured as follows:

- **Methodology** – we outline the methodology of the Review.
- **Sector context** – we outline features of the sector that are particularly relevant to the Review.
- **Findings** – we outline the findings of the Review in relation to:
  - the overall qualifications system;
  - the content and currency of qualifications;
  - assessment;
  - qualifications taken primarily in schools;
  - further education;
  - apprenticeships;
  - continuing professional development;
  - portability; and
  - international comparison study.

- **Phase one actions** – we outline the actions that we will be taking in the short term to address some of the issues identified in the Review.

- **Phase two options for reform** – we outline the options for longer term reform that we are considering taking. We are consulting on these options – see our website for further information and for your opportunity to respond.

3. In sector reviews we consider whether:

- the **range and nature** of qualifications available in the sector is sufficient;
- the requirements of **employers, higher education and the professions** are being met and are likely to be met in the foreseeable future;
- the **knowledge, skills and understanding** requirements reflect current knowledge and best practice;
- the **assessment** arrangements are effective;
- the provision of **Welsh medium** assessment is sufficient;
- the qualifications are **comparable** with similar qualifications in Europe and elsewhere;
- the qualifications in the sector are provided **efficiently** and represent **value for money**; and
- the roles and responsibilities of **other organisations** and the impact that they are having on the effectiveness of the qualifications.
4. In conducting the review it was clear to us that the sector places a high emphasis on learning and qualifications. The quality of engagement with the Review was excellent and all stakeholders had the interests of learners and employers at heart.

5. However, the Review identified that, in relation to the overall qualification system for the Construction and Built Environment (CBE) sector:

- the qualification offer is not strategically designed – it is complex, confusing and sometimes repetitious. Even with over 400 qualifications in the sector there are sometimes gaps;
- progression routes from further education to apprenticeships, employment and higher education are neither clear nor sufficient;
- the levels attributed to CBE qualifications can lead to excessive repetition and do not provide a clear indication of progression;
- smaller employers feel that the current qualifications are designed on a 'one size fits all' basis, to meet the needs of larger employers who can afford to engage in qualification design – and that the needs of smaller employers are not met;
- smaller, and some larger, employers believe that learners often specialise too early and don’t have an overview of other trades;
- the majority of employers we interviewed placed greatest value on core, interpersonal, problem-solving skills and the ability to take on a wider range of tasks than those prescribed in qualifications;
- qualifications sometimes require learners to perform tasks that are no longer required;
- qualifications do not sufficiently cover working with new technologies;
- some of the skills which are still required when working with traditionally constructed buildings and materials are not included in qualifications;
- teachers and assessors rarely update their knowledge and skills in a construction setting and are therefore under-equipped to teach modern techniques;
- information about the qualification system – for parents, learners and employers is confusing and sometimes lacking; and
- there are challenges in attracting enough learners, at the right ability level, into the industry. Employers believe that making attractive opportunities available for young people from age 14 upwards is important.

School-based CBE qualifications

6. Evidence from stakeholders suggested that, in relation to school-based qualifications:

- some relatively new qualifications, designed in conjunction with Construction Industry Training Board (CITB) for learners aged 14-16, had been well-received in schools;
- there were a range of views about whether the balance of theory and practice was quite right within these new qualifications;
- there were some challenges in terms of delivering these qualifications, with non-subject-specialists sometimes being given responsibility for teaching and assessing; and
- more-able learners tended not to be recruited into taking construction-related qualifications.
Full-time further education

7. The Review identified that, in relation to the qualifications taken in **full-time further education**:

- where learners took trade-specific courses at levels 1, 2 and 3 there was significant repetition of content at each level;
- learners leaving further education were often not ready for the workplace. They often had no on-site experience, rarely understood the working environment and often had not developed the ‘softer’ skills needed to work well with others;
- on entering employment, to gain the relevant ‘trade cards’ (in effect a license to practice) learners have to achieve an NVQ qualification. These repeat many of the assessments they have taken in further education, only in a work-setting;
- these difficulties were exacerbated for learners taking electrical qualifications where there was poor alignment between the FE qualifications and NVQs – although we understand that awarding bodies have recently been reviewing this issue;
- for several courses and qualifications learners did not use current equipment and techniques – and FE colleges sometimes did not have appropriate modern equipment for learners to use, or sufficient building materials to provide realistic learning and assessment environments;
- there were several key aspects of trades, required by many employers but which were omitted from qualifications, such as stonework, working with renewables, spraying, steel fixing, leadwork, formwork, shuttering and mineral-insulated (MI) cabling;
- assessments for the qualifications were often burdensome, repetitive and used inaccessible terminology and question forms;
- there was inconsistency in the assessment and quality assurance requirements for the same qualification both across, and within, awarding bodies;
- while Welsh-medium teaching and assessment was usually offered to learners, Welsh-speaking learners did not usually take up this offer. There are a range of reasons, but it is often because they believed that English terminology is most often used in the workplace (even where Welsh is spoken);
- the requirements to take Essential Skills and the Welsh Baccalaureate are a source of discontent for learners;
- learners in further education colleges spoke very positively about the support of their tutors and felt that they had their best interests at heart; and
- the British Association of Construction Heads (BACH) (Wales) network is a valuable and committed forum in the further education sector that engages actively with the challenges of the sector to identify solutions.
CBE Qualifications taken in Apprenticeship programmes

8. Many of the findings of the Review, about qualifications taken in further education, also apply to qualifications taken on apprenticeship programmes. For these qualifications the Review also found that:

- NVQs were unreliably and inconsistently assessed. Very few apprentices interviewed had been observed performing tasks on-the-job, despite this being the premise for the qualifications;
- the amount of observation required to assess every element of an NVQ was beyond the resourcing capability of most learning providers;
- some qualifications require learners to demonstrate skills that very few employers use (or need). It therefore was hard for apprentices to get the opportunity to practice, or be assessed in, these skills to complete their qualifications;
- the requirement, as interpreted by learning providers, for learners to demonstrate supervisory skills in level 3 qualifications, was not appropriate for learners in apprenticeships as it was difficult for young and/or less experienced learners to use and evidence these skills;
- there was little evidence of the effective use of technologies to provide more innovative approaches to recording performance or for supporting the interaction between apprentices and assessors;
- employers believed that apprenticeships were too short – and they were generally shorter than in the comparator nations we looked at;
- employers did not, generally, feel that further education providers involve them sufficiently in the delivery of qualifications in apprenticeships;
- there were some gaps in progression routes, for example for plant operators;
- progression, generally, beyond level 3 was challenging, although some bridging courses provide routes into higher education;
- apprentices were unhappy with the way in which Essential Skills qualifications were taught – often in a way which learners find ‘patronising’ and like ‘going back to school’. This detracted, they said, from their learning programme. Learning was not contextualised to their work;
- positive findings included that apprentices on CBE programmes did attend, and benefit from, off-site learning programmes unlike in some other sectors; and
- models of Shared Apprenticeships were also a positive initiative, enabling apprentices to work across several organisations, broadening their experience and enabling them to produce evidence of skills more effectively.

Our response to the findings of the Review

9. In Chapter 13 of this report we set out the actions we will be taking in the short-term to address the issues raised by the Review. These include suggesting that awarding bodies consider the findings of the Review and take action accordingly to address concerns about assessment. Amongst other actions, we suggest that the sector bodies review the national occupational standards to ensure that they reflect current practice.
10. Having set out a programme of short-term actions, we then explain that we believe that they are likely to be insufficient in the medium-term. This is largely because the range of qualifications is likely to change significantly in the light of qualifications reform elsewhere – but also because we are concerned that the current form of assessment for NVQs is not fit for purpose.

11. We go on to identify the options for reform across the range of qualifications for school-based learning, further education and apprenticeships. In each case there is an option to adopt changes from England compared with an option to instigate more fundamental reforms in Wales. We express the view that the best options are those which result in a clear and cohesive progression route for learners in Wales. To achieve this, we suggest that we should commission new, broad-based qualifications for learners on full-time programmes of learning in further education and on apprenticeships. At the heart of our proposals is the suggestion that further education and apprenticeships should form a clear and coherent end-to-end progression route which starts with broad-based learning and ends with the employer sign-off and final assessments. To that end we propose new Foundation, Progression and Apprenticeship qualifications that take a project-based approach to assessment combined professional discussions and specialist tests.

12. We point readers to our online consultation on these proposals and invite responses.
Chapter 2: Review Methodology

In this chapter we outline how we conducted the CBE Sector Review.

Scope and organisation

13. For the purpose of the Review, we defined the CBE sector in accordance to the UK Standard Industrial Classification of Economic Activities 2007 (see chapter 3). The report presents the findings as they relate to the whole construction industry. It does not segregate across subsectors within the industry, for example, civil, residential and commercial construction.

14. Given the scale and complexity of the work, we addressed the aims of the Review through a series of workstreams either commissioned or conducted internally. The findings of each workstream were then drawn together and reflected in the current report. Where the report refers to verbatim statements, the participant’s account is included in italics.

15. The Review workstreams were:

- stakeholder engagement;
- learner engagement;
- technical review;
- international review; and
- an online questionnaire.

Stakeholder engagement

16. We engaged with employers, learning providers (further education colleges, schools, and training organisations) and university representatives through semi-structured interviews and, in some cases, through discussion groups. The interviews were undertaken by 19 staff from Qualifications Wales between November 2016 and March 2017.

17. The stakeholders interviewed were:

- employers (usually senior managers/owners, training or human resources managers);
- representatives from further education colleges (tutors and heads of the relevant departments);
- teachers of construction-related qualifications in schools;
- provision managers, delivery managers and assessors from work-based learning providers; and
- representatives from universities.

In total, we talked with just under 200 stakeholders, including over 110 employers.
18. To recruit participants, we used a combination of purposive and convenience sampling strategies. Although we were open to speak to whoever wanted to express their opinions, we also strived to ensure that participants had characteristics which would enable detailed exploration of the research objectives. For example, while recruiting employers, we aimed to have a good representation of sub-sectors and employment sizes, and further stratified the participants by regional spread (companies active in parts of Wales, whole of Wales or whole of UK) and the use of sub-contracted work.

19. Most participants were recruited via an email invitation. The email contained detailed information about the research and the participant’s role. Following agreement by participants, confirmation letters were sent via email. As a rule, the interviews were conducted face-to-face. In a few cases, when it was more convenient for the respondent, we carried out telephone interviews. The participants gave informed consent verbally. Each interview, where the participant agreed, was recorded to aid note-taking.

20. As well as conducting interviews and discussion groups, we also convened stakeholder reference panels – one in north Wales and one in south Wales - with representatives from employers, learning providers and other interested bodies. These panels met 3 times between October 2016 and May 2017 and provided a steer for the lines of inquiry. We tested our initial understanding of the findings with them as well as choices to address the findings.

Learner engagement

21. This component was commissioned to a research company – Cognition Associates. They held focused discussion workshops with learners studying in eight areas: plumbing, plastering, carpentry, bricklaying, construction, electrical, multi-skills, and painting and decorating. More than 900 learners from twelve further education colleges and two schools participated in the workshops between February-March 2017.
Technical review

22. External experts – some from a subject/industry background and some from an assessment background – conducted a technical review of a sample of 23 qualifications in seven CBE-related subject areas. They assessed the validity of the content and assessment of qualifications at levels one, two and three. The qualifications reviewed were all regulated by Qualifications Wales and mostly taken by learners in colleges.

23. The experts examined specifications and sample assessment materials and looked at learner portfolios that were provided by the selected awarding bodies via their centres.

International review

24. A small-scale in-house international review aimed to give a description of CBE vocational qualifications in selected countries and to identify practices that could be considered for Wales.

25. The countries included in the review were Australia, Canada (Province Alberta), Germany, and New Zealand. These were selected either because they have a relatively similar qualification system to the UK in terms of qualification level approach and/or a good reputation of the vocational education system. In addition, the selection was based on availability of information in online sources.

26. The review focused on qualifications that are available at the level that allows a learner to enter the workforce. To make the study more manageable, we limited the review to two skills areas that have a high uptake in Wales:

• carpentry and joinery; and
• plumbing and domestic heating.

27. The review included online research of publicly-available material on the qualifications and the education systems as well as email exchanges with experts from qualification regulators and similar bodies in the four countries. The findings of this study are published, alongside this report, on our website.

Online questionnaire

28. A questionnaire was made available via the Survey Monkey platform to anyone who had not been otherwise contributed to the Review. We asked several closed questions along the lines of inquiry allowing participants the additional option of free-text comments. Despite extensive promotion of the survey we had 37 responses of which only 21 of them were complete. While we cannot be sure of the reason for this relatively low rate of response, we suspect it may be because such a high number of potential participants had already been interviewed and had the opportunity to express their views orally rather than online.
Data quality

29. We undertook different measures to ensure the quality of our data for each workstream. We paid special attention to stakeholder engagement as it was, along with externally commissioned pieces of research, our main vehicle to answer the research questions.

30. Those members of staff who did not have a research background or experience attended an internal one-day training session on interviewing techniques. We designed interview guides for each group of stakeholders to help interviewers address the research questions. The topic guide was reviewed and refined after the initial stage of interviewing and we held regular meetings to discuss interviewers’ experiences.

31. Interviewers took detailed notes of each interview and about 20% of randomly selected interviews were fully transcribed. The notes and transcripts were coded and analysed (using thematic analysis) in ‘NVivo 11’ software for Windows. Initially one researcher coded data systematically across the entire data set. The codes were then collated into potential themes. The core project team met afterwards to check the themes against the coded extracts and to refine them. Each theme was reviewed by at least two team members. Emerging themes were discussed with the core team in an open process where assumptions could be challenged.

32. Although it was not possible to engage with everyone, we believe that we have captured the views of the industry. It has been encouraging that there has been a high level of consistency between the findings emerging from the different workstreams. In particular, learner engagement, carried out by an independent external company, was consistent with the findings of work that had been carried out internally.

33. On the other hand, we are aware that we could have introduced some personal or organisational bias into the process of interpreting the data. To counter this we held three stakeholder panel meetings in north and in south Wales as well as three meetings with the BACH Wales network, to test lines of inquiry, emerging findings and potential solutions. We also engaged regularly with the Welsh Government, CITB and other sector bodies and employer groups on emerging findings and potential solutions.
Chapter 3: The Construction and built environment sector in context

In this chapter we describe, briefly, the construction and built environment sector and the challenges it presents to the qualification system.

34. The CBE sector includes a wide range of occupations. The Welsh Government defines the sector as the ‘range of craft, technical and professional businesses whose work focuses on the creation, maintenance and protection of the built environment and associated infrastructure’. According to the UK Standard Industrial Classification of Economic Activities 2007, the construction industry, including building services occupations, involves general and allied construction activities for buildings and civil engineering works. In addition to the erection of building and structures, these works also include repairing and renovating.

35. CBE contributes approximately 6.5% of Wales’ Gross Value Added (GVA) and is one of the Welsh Government’s priority sectors in Wales. In the UK the sector has experienced an upward trend over the last five years. For 2017-21 it is forecast that this upward trend will continue, with Wales being well ahead of other parts of the UK with an average projected growth of 6.2% over the period. The industry rise in output in Wales is mainly due to infrastructure works, which are expected to grow over this period by almost 16% a year on average. The annual recruitment requirement for Wales is also due to increase over this period by 3.4%, which is higher than the UK’s ratio of 1.4% – and this increase is mainly caused by workers moving from Wales to other UK regions and devolved nations.

36. The Welsh Government estimates that there are approximately 13,000 CBE companies in Wales employing more than 130,000 people in roles ranging from traditional ‘on-site’ construction roles to ‘professional service’ roles, such as planners, architects and surveyors.

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4 The priority sector being defined as sectors which are, or have the potential to be, key to the economy of Wales.
6 Idem p.4
7 Idem. p.16
37. The variety and, to a degree, the complexity of the works involved in CBE inevitably have a bearing on the variety and complexity of qualifications in the sector. In 2015, just over 8,000 certificates were awarded to learners in Wales, who chose qualifications from more than 400 available in the sector across schools, further education colleges and work-based learning (Table 1).

Table 1: The number of designated/approved qualifications and of certifications across provider types in 2015.

<table>
<thead>
<tr>
<th>Entry Level</th>
<th>Number of designated qualifications</th>
<th>Certifications in Further Education</th>
<th>Certifications in Work-based Learning</th>
<th>Certifications in Schools</th>
<th>Total combined certifications</th>
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<td>2175</td>
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<td>8020</td>
</tr>
</tbody>
</table>

Source: QiW (for numbers of designated qualifications as of 12 June 2017) and Welsh Government PLASC and LLWR data for 2015 certifications (certification numbers have been rounded to the nearest 5 and any figures less than 5 but greater than 0 have been suppressed with a “*”)

38. The high number of qualifications available does not guarantee that those qualifications address the needs of the sector effectively. In fact, the sector has several features that have an impact on the education and training system’s capacity to equip learners with the skills and knowledge that employers require. We describe some of these features, which were especially mentioned by participants in the Review, below to put the findings of the Review into context.
The issue of size

39. The Welsh CBE sector, similarly to other parts of Great Britain\(^9\), has a sizable percentage of micro enterprises and self-employed individuals. Approximately 90% of all the construction companies in Wales have seven or fewer employees\(^{10}\). In 2016, this economic sector had the third greatest proportion of self-employment in Wales at 36% (following Food and Farming at 46% and Creative Industries at 38%)\(^{11}\). At the same time, more than 60% of the employees in the sector worked in companies that employed 10 or more people\(^{12}\). Larger companies also, perhaps unsurprisingly, have the biggest economic impact – and very few of these are based in Wales. In Great Britain, construction companies employing eight or more people produced more than 77% of all the output\(^{13}\).

![Percentage of construction firms by number of employees](chart.png)

\(^9\) By Great Britain we mean England, Scotland and Wales.


\(^{12}\) Ibidem

40. A particular challenge for the qualification system in the CBE sector is that there are significant differences between larger companies and smaller/micro companies. Larger companies, typically, have a narrower definition of job roles and functions, with well-defined work requirements in which each employee has a specific operational role – as one respondent described it, the employee needs to ‘follow that foolproof plan’. In smaller companies, each employee is more likely to take on a wider range of tasks than someone with the same job title in a larger company. Taking the example of bricklaying, large companies, for example, employ engineers rather than bricklayers to do the setting out – a task that is part of the bricklaying qualification. Similarly, in large companies, bricklayers are likely to use more modern construction techniques and materials than those in small companies. In large companies, bricklayers are less likely, than those in small companies, to be involved in building stone walls, using straw bales, doing conservation, or environmental works.

41. As a result, the awarding bodies, learning providers and owners of the national occupational standards face the challenge of finding the right balance of skills that might be needed within a defined trade, with the skills that are used in the workplace where the learners will be working. The predominant feeling among our participants was that currently qualifications are geared more towards the needs of large companies. This is not surprising given that, in the view of some participants, large companies are more able to influence standards-setting bodies and awarding bodies to make qualifications fit their business needs. Larger companies are also more likely to have the resources and the time to make themselves available to the awarding bodies, industry bodies and (in England) Trailblazer groups, when skills and assessments are discussed.

42. This situation could mean that small companies may be less able to recruit people with the skills they need if qualifications don’t address their requirements in the first place. Small companies are also less likely to provide subsequent training to top-up initial qualifications. While there may never be a perfect balance between the needs of large and small employers, there appears to be a need for greater flexibility within the system.

Changing technologies

43. Participants in the Review stressed that CBE is a sector that ‘has changed phenomenally over the last twenty years’ due to the technological advances and changing building methods. The use of digital technologies, new materials, improved or new machinery and tools, and the emergent growth of off-site construction have all, among other things, changed what is happening on construction sites. Technological advancement is likely to continue at a high pace at least for the foreseeable future. For example, CITB predicts that in 10-15 years, in off-site construction, there may be further expansion of automation and use of new materials such as glass reinforced concrete, bespoke mouldings, 3D print glass moulds, and ‘smart walls’. These are internal modular walls, developed and painted off-site with sockets, electrics etc. all fitted.

44. Constant technological advancements are an ongoing challenge for the qualification system. The immediate effect of the new technologies and work methods is that they require new or changed training programmes and qualifications. It is a challenge for the standards-setting bodies to keep the national occupational standards - upon which many qualifications are based – up-to-date. As a result, the related qualifications risk becoming out of date to the point that companies ‘don’t do those things anymore’ when learners achieve their qualifications.

45. Not having staff with new skills readily-available slows down the industry and undermines productivity. To redress this, the companies often provide for upskilling through manufacturers’ training. However, some participants suggested that this upskilling is inconsistently available and generally more accessible to larger companies. Although participants thought that colleges might never be in step with the changes occurring in the sector, several suggested that greater effort is needed to be made to adapt the qualification content at the same speed as industry changes. We can infer that future qualifications should have the capacity to anticipate and adapt to future trends so that the gap between the teaching and practice is as narrow as possible.

46. The challenge of responding quickly enough to the introduction of new technology is significant. It is not simply a case of replacing old skills with new skills - the industry often needs workers to still be able to apply the old practices or to work with the types of materials that were used in more traditional construction processes. Some of the examples given to us during the interviews were of customers still asking for traditional soldering skills or the need to know how to work on obsolescent electrical cables, miles of which still exists in buildings and needs repair or replacement.

15 Idem p.16
47. Another challenge is that colleges might struggle to finance the expensive equipment needed to be able to teach new skills. The lack of such equipment and other industry-specific requirements, including health and safety, have been reported as barriers in expanding the course offer to include new skills.

**Poor image**

48. All categories of participants expressed the view that the sector suffered from being perceived as unattractive for new entrants. On the one hand, the reduced interest could be explained by the highly cyclical nature of the sector, which leads to skilled workers facing high levels of unemployment during a recession\(^{17}\). However, many participants pointed out that the sector has an unwarranted poor image among young people. One reason given by school teachers was that, traditionally, GCE A levels were considered, especially by parents of learners, to be superior to vocational qualifications. But it was also an issue relevant to the construction sector itself. Employers felt that the industry is being ‘stereotyped as boring’ and for ‘low achievers’. It was suggested that quite often young people come to study construction ‘because they don’t know what else to do’ or because they think it could be an easier course to complete. These students tend to take traditional hands-on qualifications and there appears to be limited recognition of the wide range of skills that are needed in the sector, such as digital skills and the ability to solve problems creatively.

49. Another challenge to the image of the sector is the comparatively low appeal to female candidates\(^{18}\). This not only creates a gender imbalance, but also keeps the full range of talent from coming into the sector.

50. Given the disparate and complex nature of the sector, setting up a qualifications scheme that would efficiently address all the needs is extremely challenging. However, we are committed to work with all stakeholders to refine a qualification system that supports the considerable sector growth potential and to ensure that qualifications support the diversity that exists. This review is a first step to fulfil this ambition and we invite everyone who is interested, and has an opinion, to comment on our findings and inform our thinking on the actions we can take.


\(^{18}\) Idem p.58
The findings

In chapters 4 to 12 we provide information on the findings of the Review relating to:

- **Chapter 4**: The overall qualification offer
  - the range of qualifications
  - progression routes
  - issues with qualification levels
- **Chapter 5**: The content and currency of the qualifications
- **Chapter 6**: Assessment
- **Chapter 7**: Provision of qualifications in schools
- **Chapter 8**: Provision of qualifications in further education
- **Chapter 9**: Provision of qualifications in apprenticeships
- **Chapter 10**: Continuing professional development
- **Chapter 11**: Portability
- **Chapter 12**: International comparison study

Chapter 4: The overall qualification offer

In this chapter we report on those findings which relate to the qualification offer as a whole, including the range of qualifications, and the progression routes available to learners.

The range of qualifications

51. Overall, participants identified that the range of CBE qualifications was complicated and confusing and that it lacked a coherent structure. With over 400 qualifications available there were many overlaps – but there were also gaps. Many qualifications had very similar titles – such as Diplomas and NVQ Diplomas. Our technical reviewers noticed that some folders of learners’ work for a Diploma was labelled as ‘NVQ work’ when it was clearly not. Employers commented that, particularly for some subjects, there were too many qualifications available, that they did not know what the qualifications covered, or how they were assessed.

52. Learning providers agreed that there are too many complicated qualification options which are confusing for parents and students and were also concerned about frequent changes in qualifications.

53. Some employers suggested that the wide range of qualifications has led to inconsistency and variability in the training and assessment taken by learners following different routes.

(Provider A) did sheet lead work but (Provider B) did not, so we had trainees getting different experience. The course in (Provider A) was Plumbing and Heating but (Provider B) was Heating and Ventilation. There is a difference but no one explained what the differences were to us.

*Employer*
Progression routes

54. Across the range of qualifications, the Review found that the progression routes for learners are neither clear nor sufficient – particularly the routes from the qualifications taken in further education – whether learners are wishing to progress to apprenticeships, employment or higher education. There are dead ends, gaps and there is much repetition.

55. Several employers and learners told us that they did not understand the different qualifications, their value, or the progression routes between or beyond them.

*Now it’s really baffling where things sit in terms of their NVQ levels and how that then fits with the professional bodies. For people who do not deal with qualifications on a daily basis it is difficult to understand what the pathways are.*

56. Concerns were widely expressed that careers in the sector tend to be promoted, in schools, only to lower-ability learners. Employers were keen to stress that there are a wide range of careers in construction which need higher-ability learners. Despite a range of initiatives in recent years, such as Go Construct, relatively few higher-ability learners are pursuing opportunities to enter the sector either through apprenticeships or via higher education.

57. Learners who take qualifications at level 2, in colleges or on apprenticeships, can sometimes find it difficult to progress to further learning due to a lack of learning provision. While many level 3 qualifications are available across a wide range of trades, colleges tend to focus on the most economically-viable mainstream provision at level 2. Providers described the challenge of sustaining provision for courses where learner numbers were low. In some cases they combined different year groups which they described as ‘messy’, while in some areas progression beyond level 2 in certain trades is offered either infrequently or not at all. The more specialised the trade the less likely that training is available, or that qualifications are offered. This can result in there being a ‘dead end’ for learners looking to progress to higher levels, or to develop their skills further. While this is a provision issue rather than a qualification issue, stakeholders sometimes confused this with qualifications ‘not being available’ - although in the case of civil engineering operations, for example, there did seem to be no suitable level 3 qualifications to provide progression.

58. Further education providers advised us that a significant proportion of learners taking construction-related qualifications at level 2 do not progress into the industry. The reasons for this are unclear, although many of the learners we heard from appeared disillusioned with the industry – and without opportunities to work on-site they were not well placed to progress. Other learners, having completed level 2 qualifications, do progress into the industry as lower-skilled operatives.
59. Those who do enter employment and follow their chosen trade, having taken level 2 or level 3 qualifications, usually find that they need to take further qualifications at the same level (and often covering the same skills) to achieve NVQ Diplomas to get their trade ‘card’ which signifies that they are a qualified tradesperson. Further education providers expressed frustration that the Diplomas taken by learners at level 3 did not count towards the knowledge components of some NVQs and that this increased the subsequent assessment burden on learners and slowed down progression to being card-holding fully qualified tradespeople.

Plumbing learners can do a diploma and NVQ combined or separately. Trades like joinery/brickwork/plastering do a diploma and NVQ separately. So, if we had a diploma learner, and half way through the course they gained employment, there is no clear indication of how we can convert the learner onto an NVQ programme.

Learning provider

60. Even where learners may have spent up to three years achieving their level 3 qualifications, employers may not be likely to make best use of those skills at the outset – some felt that learners who had attained these qualifications, without work experience, had unrealistic expectations and became frustrated when they then started work at a lower level of employment.

If they’ve gone straight into college then they come out with maybe level 3 and have never really had a job. They come out with very high expectations and sweeping the floor and making the tea do not meet these expectations.

Employer

61. Employers sometimes disagreed about the level of qualification that they wanted learners to attain before starting work. For example, some plumbing employers felt that there was no value to learners taking level 3 qualifications.

There is no need for a plumber to go on to NVQ Level 3. The minimum qualification of Level 2 is all they need – the most important thing is experience. Trainees just need to get the basic level of competence, then they can choose to specialise or move into different areas.

Employer

Conversely, smaller companies, who employ plumbers to work on their own, felt that they needed more advanced learners. This appears to illustrate that different skillsets are needed by different employers, even when employing people with the same trade.
Higher Education institutions and some professional bodies felt that progression into Higher Education for students from a vocational route, could be challenging and that the qualification pathways were not clear. They felt that more could be done to map the routes to higher education from vocational qualifications and to communicate these more clearly to employers and learners. Some told us that they would prefer a slimmed-down range of qualifications.

*A clearer set of initial, lower level qualifications would lead to a clearer career path.*  
*University*

Further education providers acknowledged that the gap between level 3 qualifications and level 4 qualifications was challenging for learners who wished to progress to higher education.

*There is a decline in progression from level 3 to HNC etc, as the gap has become bigger. It is a different way of learning, moving from practical at level 3 to technical. Learners with lower literacy and numeracy skills can’t cope, which is a shame as they understand the industry much better after 2 or 3 years and can be valuable to employers and sites. They can’t put that knowledge to better use and the step up is too great.*  
*Learning provider*

Some had found a solution to this by delivering subsidiary diplomas or other bridging qualifications, to develop more academic learning and writing skills, to successful level 3 apprentices. This seems an appropriate way of bridging the gap without distorting the skills-focus that is needed for vocational learning at level 3. However, some questions were raised as to whether it was economically viable to offer such provision to the small numbers of learners wanting to progress in this way.

Some employers also expressed concern about a lack of progression routes into site management and were worried that there would be insufficient managers ready to take up post once current managers retired. Several recalled some construction-specific management courses which had run as a pilot some years ago, but which had now ceased. These participants felt that generic management qualifications were too general for the sector – and that some of the higher-level qualifications were ‘too academic’ and/or not available locally. There was some optimism that the Trailblazer site-management apprenticeship being developed in England may be a route to addressing the growing shortage of site managers in Wales.

A key factor in the lack of clarity of progression pathways and of the proliferation of qualifications, appears to be the way in which different levels of qualifications have been developed and are taken within trade areas. The levels attributed to the qualifications often did not provide a clear indication of progression.
67. Our technical review identified that the qualifications for individual trades at levels 1, 2 and 3 often incorporate a significant amount of repetition. This may be partly because each qualification for each trade, at each level, has to stand on its own and include some coverage of the main skills each time. For example, many of the level 3 qualifications include a significant number of level 2 units. Learners don’t follow a single continuous pathway that allows them to increase the breadth and depth of their skills over their years of study and the difference between the performance required in one level and what is required at the next level, is not always clear - or significant.

68. The technical review and stakeholders, including learners, also identified that the level of complexity of skills in different trades is not equivalent across the ‘same’ level. For example, building services qualifications such as electrical installation at level 3 was felt by learning providers to be significantly more technically complex than construction trades at that level.

69. Learning providers expressed concern about the requirement, within funded provision, for learners to move on to a qualification at a higher level. While at face-value this seems logical, we observed that real progression within a skills area may sometimes be represented by broadening or deepening the learner’s skills and knowledge within a level, and this is not currently counted as being progression.

70. Learning providers also reported that equating level 2 vocational qualifications with GCSEs is not particularly meaningful and can be demotivating for those learners with GCSEs at level 2 who – appropriately – begin their vocational learning at level 2. These learners – and their parents – can feel that they have not progressed. It can be even less motivating for learners who begin their post-16 learning at level 1. At age 16, developing vocational skills at level 2 (or even at level 1) can be a valid and worthwhile progression from general academic learning at school and yet this was sometimes not being communicated effectively to learners.

71. Learning providers and employers expressed substantial concerns that level 3 NVQs required learners to demonstrate supervisory skills. Given that this was not something which learners would have the opportunity to practice, progression to level 3 was therefore out-of-reach. One interpretation of previous regulatory requirements for there to be autonomy at Level 3 has contributed to an expectation that at level 3 learners (normally apprentices) should be performing a supervisory role. This interpretation of units within level 3 NVQs persists (several level 3 construction qualifications contain a level 5 management unit) and this is proving to be a blockage for progression for young apprentices in their first role in a trade.
72. Learning providers and some employers also expressed concern that some level 3 qualifications tested knowledge in an academic context, rather than in the context of skills. This may result in over-testing the skills of articulating knowledge and may derive from a desire to provide progression routes into higher education. It may be better for learners, wishing to progress into higher education, to undertake additional learning that focuses on acquiring higher learning and writing skills, and to focus in vocational qualifications on the application of knowledge in context. Prioritising the development of academic learning skills over practical trades skills, as a means of progression, may be doing learners a disservice.

_We are actually assessing vocational students, who have chosen a vocational route, academically. We are possibly stopping those who could be the best trades people from progression simply because we are judging them on academic values._

_Further education provider_
Chapter 5: The content and currency of qualifications

In this chapter we outline a number of concerns about the content of qualifications in the sector relating to:

• inflexibility;
• currency;
• softer skills;
• new technologies;
• traditional and ‘heritage’ skills; and
• cross-cutting skills.

Inflexibility of NVQ qualifications

73. NVQs are the main qualifications that are taken by learners on construction apprenticeships in Wales – usually alongside a ‘technical’ qualification. Amongst the employers that we interviewed, the feedback on NVQs was more negative than positive. One of the main concerns raised was that the content was inflexible. NVQ qualifications, which reflect the full national occupational standards (NOS) for an occupation, are large and unwieldy and this can result in a one-size-fits-all approach. However, the nature of the modern construction industry is that different organisations require different selections of skills. While some of the core trade skills are relevant to most companies, the extent to which larger employers use sub-contractors can mean that apprentices and workers perform a more limited range of tasks than is required by small businesses. In defining the skillset of a particular trade the NOS embody an assumption (or ‘consensus’) about the range of skills that a ‘typical’ tradesperson needs to undertake – while in reality that complete skillset is demonstrated by relatively few employees across the sector: either they need a wider or a narrower skillset, or a combination of several.

Currency of content

74. Employers and learning providers gave us specific examples of a range of concerns about the content of existing qualifications (both NVQs and technical diplomas). The concerns tended to reflect:

• requirements for learners to complete tasks that, in modern construction settings, could no longer be evidenced on-the-job; or
• requirements that weren’t included, but which are commonplace on-the-job.
A summary of the key concerns, by trade area, is given in the table below and covers concerns raised about qualifications taken by apprentices and by those on full-time learning programmes.

<table>
<thead>
<tr>
<th>Trade</th>
<th>Issue</th>
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| Bricklaying            | It was suggested that bricklaying qualifications did not sufficiently cover:  
  • some of the basic practical skills that bricklayers need, such as mixing cement, washing out a mixer, wearing Personal Protective Equipment (PPE);  
  • finishing work to a sufficient quality;  
  • working with stone; and  
  • working on temporary works, such as forming an opening in an existing work and the safe use of acro-props. |
| Carpentry and joinery  | It was suggested that carpentry qualifications did not sufficiently cover:  
  • hanging doors, especially fire doors;  
  • reading and drawing-up plans;  
  • setting out;  
  • formwork and shuttering;  
  • mobile access training; and  
  • erecting steel partitions. |
| Painting and decorating| It was suggested that painting and decorating qualifications did not provide a well-rounded knowledge of the trade.  
  It was also suggested that the titling of qualifications was confusing. At level 2, one qualification was titled ‘Decorative Finishing and Industrial Painting’, however learners did not cover both aspects, they chose a single pathway. |
| Plastering             | It was suggested that plastering qualifications did not sufficiently cover:  
  • dry lining;  
  • taping;  
  • jointing;  
  • carrying heavy plaster board safely;  
  • lime plastering for work on older buildings;  
  • Artexing, for insurance-based work;  
  • K-rends and the use of modern materials;  
  • rough-casting and pebble-dashing;  
  • corner-stones; and  
  • using different mixes.  
  An example of a skill that was included in qualifications, but which is uncommonly used, included fibrous plastering, a skill for specialist moulding. |
<p>| Civil Operations       | Employers felt that the level 2 qualifications did not provide sufficient development for those learners who could progress to work on more challenging excavations and, for example, working in confined spaces. This was problematic to employers because a large number of workers are retiring from the industry while opportunities to upskill existing operatives, or to provide career development pathways for new industry entrants are limited. |</p>
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<tr>
<th>Trade</th>
<th>Issue</th>
<th>Learning Provider</th>
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</thead>
<tbody>
<tr>
<td>Plant Operators</td>
<td>Within civil operations, employers felt that current qualifications for plant operatives are outdated. There was a sense that further development of skills, beyond the current level 2, would be desirable.</td>
<td>19 We have been advised that awarding bodies may already be considering how to address this issue.</td>
</tr>
<tr>
<td>Electrical</td>
<td>The main concerns identified in relation to electrical qualifications were that:</td>
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<td></td>
<td>• the level 2 qualifications for electrical installation were not recognised by the industry as qualifying a learner to practice. Learners therefore needed to be assessed again on the same skills and knowledge at level 3;</td>
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<td></td>
<td>• in some cases, the level 3 technical diploma in electrical installation units studied did not cover the theory element of the level 3 NVQ. Learners working on these units as part of a technical certificate who then commenced an apprenticeship, were not able to continue their technical certificate in the apprenticeship as the units were not specified within the framework;</td>
<td></td>
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<td></td>
<td>We need clear progression routes, but technical certificates are not recognised.</td>
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<td></td>
<td>• working with mineral insulated (MI) cables has been removed from the qualifications but many miles of MI cable, installed over the past 50 years exists within buildings and newly trained electricians need to know how to repair it when faults occur;</td>
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<td></td>
<td>• there are difficulties in domestic electricians gaining industrial experience and vice versa. The two contexts are very different. The need to gain a range of industrial experience, including working in a variety of domestic, industrial and commercial environments, is difficult for apprentices to achieve while working for a single employer. Employers were reluctant to let their apprentices work with other employers (and this is also logistically challenging);</td>
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<td></td>
<td>• learners are not developing an understanding of renewable energy and smart meters. A current challenge to electricians is that the installers of PV (photovoltaic) and solar thermal systems tend to cause problems through the ineffective routing of external to internal components; and</td>
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<td>• Building Regulations in Wales are different to those in other parts of the UK and these differences are not clearly reflected in the electrical qualifications.</td>
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<td>Trade</td>
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| Plumbing                         | The main concerns that were raised about plumbing qualifications related to the inclusion – or not – of working with traditional materials such as lead and copper. On the one hand, learning providers were concerned that ‘leadwork’ has been removed from qualifications, while it remains in much of the current building stock.  

*There are no plumbers who can do lead work anymore. Plumbers used to be trained to dress lead for flashings and so on.*  

*Learning Provider*  

On the other hand, the requirement for learners to work with copper in the qualifications was criticised by employers, given that many employers only use push-fit fittings.  

*The local housebuilders don’t have any copper in their houses, as of last year they are going copper free because of the cost. They now use plastic fittings which are relatively new to the industry. The qualification demands that apprentices do soldering and learn how to use copper. These students don’t do any copper, they have no chance of using copper.*  

*Learning provider*  

Learning providers also raised concerns that there is no solar thermal content within either level 2 Plumbing qualifications.                                                                                                                                                                                                 |
| Heating and ventilation          | Employers expressed concern that those with level 2 qualifications believed that they were competent to work on heating systems (other than gas) but demonstrated insufficient skills.  

*We would be looking for at least level 3 and for people who would want to develop beyond that. Someone finishing at level 2 wouldn’t be a great deal of use to the business.*  

*Employer*  

|
New techniques/technologies

76. Employers and learning providers told us that qualifications have not kept up-to-date with the use of new technologies, including the requirements for low-energy homes. This was particularly important for the building services sector where new developments include the fitting of smart meters and low-level lighting, induction power sockets that do not require wires between appliances and whole room heating systems.

*The smart low energy homes and buildings may not be high on the agenda of this current generation but the next generation are used to smart technology and will want the use of it.*

*Learning provider*

Other examples include the use of small wind turbines, ground source heat pumps and small-scale solar technology.

77. Higher Education providers agreed that qualifications have not kept up with new technologies and work practices such as Building Information Modelling (BIM), the use of power tools, surveying practices and site management techniques.

*The construction industry is an industry which has changed phenomenally over the last twenty years and the qualifications just haven’t kept up with it.*

*University*

78. Learning providers suggested that qualifications, especially in electrical, plumbing and heating and ventilation, should require learners to use the appropriate digital technologies for the job.

*The plumbing and heating industry is changing. It is a lot more...electronic. Now you put a control panel on the wall and you plug a laptop into it. So, they have got to have PC skills which they do not teach them in the college though it is part of the job.*

*Employer*

79. The introduction of new technologies and materials on qualifications and skills means that employees need to be adaptable to be able to use them on-site. IT skills including 3D modelling, Building Information Management and CAD are becoming increasingly important and demand for these skills seems likely to increase.

*We learn the traditional way to measure and work out things, but onsite everyone uses apps and more modern instruments.*

*Level 2 plumbing learner*

80. Employers identified that the use of off-site manufactured and pre-assembled components were becoming more common in the industry and that this trend would continue. Current qualifications don’t include a requirement to understand assembly processes.
These new technologies, techniques and materials also have an impact on the work that is undertaken with current and traditional housing stock. There is a difficult balance to be achieved between introducing new techniques and technologies and ensuring that learners understand how to work on existing buildings.

*If we’re constructing less than 200,000 new buildings a year and we have 2.6 million existing buildings that we’ve got to get close to zero carbon soon, then how you deal with those is a completely different problem. Where they’re constructed with the old techniques, we don’t have anyone left with the skills as tradesmen, to undertake the analysis or understand that what you’re going to do is going to make the building less energy efficient, and when it’s going to enhance it.*

**Learning Provider**

### Heritage/traditional skills

We heard from many stakeholders, including CADW (the national heritage body for Wales), that there was a shortage of skills for working with older and traditional buildings. This is a particular problem in Wales where nearly a third of the existing housing stock is pre-1919 and, according to CITB, ‘just under half of employers’ time’ is spent working on traditional buildings, including work on repair and maintenance, conservation and restoration, and energy-efficient retro-fit. While some specific qualifications had been developed for traditional and heritage skills, there was very limited (if any) learning provision for these qualifications. CADW and a significant number of employers suggested that those working in all trades should have a basic level of understanding of the differences of working with newer and with older buildings, and that this learning should be integrated into the mainstream qualifications.

Some stakeholders suggested that larger employers had a greater voice in the development of occupational standards and qualifications than smaller employers and that mainstream qualifications therefore focused too much on new-build work.

### National, regional and local needs

Our technical reviewers observed that nowhere, within the awarding bodies’ materials reviewed, had they been able to identify references to the differences in building regulations between England and Wales. All references to building regulations were to those which apply in England. This has the potential to lead to learners not understanding which regulations apply and not being aware of specific requirements in Wales – such as the regulations that relate to sprinklers, for example.

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21 A ‘Material’ Issue: Understanding and Responding to the Traditional Building Skills Challenge in Wales – CITB - 2015
85. Employers and learning providers raised concerns about the ability to meet regional and local training needs. They identified that the skills needed to retrofit buildings were not sufficiently covered within qualifications even though there is high demand for this in Wales.

In this region, most of the work is retro-fit (houses being repaired, modernised)
In Wales 80% of the construction industry is retro, 20% is new build. 100% of students in Wales are being trained in that 20% therefore none of them are being trained in the 80% of turnover of what the industry is doing in Wales.

Learning Provider

86. Mainstream qualifications also don’t cover some of the techniques and materials that are widely used in areas of Wales.

If you were going to do a brick laying apprenticeship with a view to working in Powys for example, you would have to do brickwork in the workshop but you wouldn’t do any stonework because there’s no stonework in the qualification. However, you would rarely lay a brick in Powys because it’s all done in stone. If you were working in Pembrokeshire, you’d do no face-work at all because everything is rendered, that’s the planning regulation so the qualifications just don’t match.

Learning Provider

Softer skills

87. We asked employers about the knowledge, skills and attributes that they most valued in new entrants to employment. These skills fell into three main categories:

• **Craft skills and knowledge**: practical skills needed to carry out a particular trade and knowledge of how to apply them.
• **Technical knowledge and skills**: knowledge and understanding of the requirements of the workplace and how to apply them, including health and safety, planning and organising, maintaining quality, environmental and sustainability standards, managing contracts, and the differences between modern and traditional buildings.
• **Softer skills**: communication skills, problem solving, decision-making, managing information, administration, tidiness, planning, team-working, interpersonal skills, innovating, digital skills, showing initiative and being adaptable to trying new ideas and ways of working.
88. Employers identified that, in general, further education courses focused mainly on craft skills, sometimes on technical skills, but rarely on the softer skills. However, importantly, several employers told us that – in new entrants - they valued softer skills more highly than craft and technical skills. Many suggested that these skills and behaviours should be embedded in qualifications.

*There is a gap there in learning – the curriculum should develop people skills rather than just the work skills.*

Employer

89. Several employers told us that the biggest challenge they faced when taking on young people direct from college was their reliability and ability to turn up regularly, and on time, and to concentrate on the job in hand.

*If you have somebody with a good attitude you can teach them the trade skills.*

Employer

90. Employers also stressed that increasingly, new employees had poor problem-solving skills. They felt that the best way of developing these skills was for learners to have the opportunity to identify solutions for a real-life task, and they suggested that these skills should be included in qualifications. Solving problems would also give learners the opportunity to apply numeracy skills, for example in quantifying the materials and equipment they need, how long they need them for and how to be able to measure areas.

91. It is interesting to note that, while learners – and several practitioners – expressed discontent with the inclusion of the Welsh Baccalaureate (Bacc) within programmes of learning, the purpose of that qualification is to develop these broader skills. The views expressed suggested that, because the Welsh Bacc is separate to the main programme of learning – and because the learning and assessment for the Skills Challenge Certificate is often conducted separately to the main programme of learning – it can be considered by learners to be an unwanted ‘compulsory extra’ qualification. Embedding these softer skills within the main programme of learning was felt by some to be a preferable approach.

92. Learning providers agreed with employers that there was a need to develop learners’ work readiness – but felt that the existing qualifications, with burdensome assessment and repetitious content (across levels), did not allow the space to develop these skills effectively. They wanted to have the opportunity to develop transferrable practical and customer service skills, so that learners could plan and organise tasks, and understand about basic finances, customer relationships and working to time constraints.
Most students with good teaching and learning will pass the qualifications, which is fine, but if they’re going to be sacked the first day in work because they can’t handle themselves properly or can’t communicate, then you’ve wasted two years of their lives.

Learning provider

The need for breadth

93. Employers across the sector expressed the view that multi-skilled operatives are desirable. For building services, there is an increasing cross-over as heating and ventilation becomes more electrical with the rise in the use of control systems. Employers felt that skills are currently being developed out of context from whole projects and that apprentices need to learn to work across trades in teams. They suggested that apprentices would benefit from learning, in the first instance, about a range of skills so to give them broader knowledge. For example, gas fitters could cover electricity and water regulations and develop other skills such as joinery and plastering. This would equip those trained in gas and electrical skills to fully complete boiler refits.

94. Employers also identified that multi-trade/multi-skills training was particularly suitable for refurbishment work, where a lot of the apprenticeship work is centred around maintenance. Multi-trade qualifications do exist and include units in groundworks, plumbing, carpentry, plastering – and these qualifications can be tailored to meet the needs of employers and learners – but there is not a high take-up. Learning providers suggested that this was because learners tend to see themselves following a particular trade.

The future need is for trades people to be more multi-skilled. Joiners can do plastering too. A plumber should also be able to do electrics and have one person do both skill sets rather than different people doing this.

Employer

Multiskilling is key, and there is a struggle to get courses to fulfil this need.

Employer

95. Employers also suggested that multi-trade qualifications would contribute to a reduction in ‘silo trade mentality’ amongst employees, and could reduce the time spent on repairs.

We’ve got a number of multi-skilled operatives that basically can turn their hand to anything. They’re not a joiner, they’re not a bricklayer, they’re not a plasterer but you know that they can virtually do all of that. Not as a dedicated trade and there’s certain elements that they can’t do – they’ve got significant skills and moving forward developing people with multi-skilled trades is something that is vital.

Employer
96. Many employers suggested that a common first year for construction learners would be useful, to learn about the industry in context and gain an awareness of related trades other than the one selected by the learners. Cross-cutting skills and knowledge about the industry as a whole – how the different trades inter-related as well as common skills such as working at heights, health and safety, team-working and skills for self-employment were suggested as possible examples of content.

As a company we do not take on students at 16, as we think that they should try the industry out before committing to a trade and 16 year olds are less mature than they were years ago. I fully support that there should be a common first year. More mature students are more successful.

Employer

97. Some employers suggested that additional skills should be learned after the main trade qualification. However, they did agree that ‘putting right’ after a job needed to be included in building services training and assessment.

98. While some learning providers were cautious about multi-trade qualifications per se, considering that ‘doing a bit of everything’ could be considered less valuable than having a specific trade, they welcomed the concept of having a broad based programme of study in which learners focused on a main trade but also gained an awareness and some hands-on experience of other trades. Several considered that the segregation of core trades is changing and that employers needed workers with a core trade combined with ancillary skills to address local and regional needs.

I think if you spoke to most employers here, they would say give us a suite of 20 qualifications at level 2 or level 3 and we’ll pick the appropriate ones that meet our needs, a kind of ‘shopping basket’ approach. They want multi-skilling and perhaps the old trades are a little bit too rigid in terms of what they want out of the market place.

Learning Provider

99. Many employers expressed concern regarding their perception of a lack of health and safety coverage within qualifications. Examples include the need for working at heights, asbestos and silica dust awareness and identifying the location of underground services and cables.

We send our engineers to IOSH (Institute of Occupational Safety and Health) courses for health and safety and how to do a risk assessment. I believe they should do this in college.

Employer
Chapter 6: Assessment

In this chapter we outline the issues that the Review identified in relation to assessment of qualifications in the sector.

100. As a qualifications regulator, one of our prime concerns is that the qualifications we regulate are effectively assessed. In awarding a qualification to a learner, an awarding body is indicating that the learner has been appropriately and sufficiently assessed and has been found to have the appropriate level of knowledge, skills and understanding. Across our stakeholder interviews, our learner engagement and our technical review, the topic about which we received the most consistent feedback – and about which most concerns were raised – was assessment.

101. Across the qualifications in the sector a range of assessment methods is used. Qualifications taught in schools are typically assessed by a combination of assignments and online end-of-course tests. Full time learners taking ‘Diplomas’ in further education colleges are typically assessed performing several tasks in a workshop environment throughout the course - but also through written assignments and, often, multiple-choice tests. Apprentices taking competence-based ‘NVQ’22 qualifications are, in theory, assessed while performing tasks in the workplace – evidence of which is recorded in a portfolio. This is often supplemented by some form of assessment of knowledge. Most apprentices take both Diplomas and NVQs, to meet the requirements of the Welsh apprenticeship frameworks.

102. Concerns were raised about assessment across the range – but were strongest in relation to the NVQ qualifications. The concerns related to:

- the burden of assessment;
- the validity of simulated assessment activities;
- the organisation and sufficiency of work-based assessment for NVQs;
- the lack of involvement of employers in the learning and assessment process;
- the availability and validity of naturally occurring evidence;
- the language, terminology and format of knowledge assessments;
- the lack of differentiation in pass/fail qualifications;
- the availability and expertise of assessors; and
- the inconsistency of assessment and quality assurance.

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22 While more generally the term NVQ (National Vocational Qualification) has ceased to be a formal category of qualification across the UK, in the Construction and the Built Environment sector competence-based qualifications are called NVQ Diplomas – partly to differentiate between these qualifications and the Diplomas that are taken in full-time education.
The burden of assessment

103. Several learning providers told us that in their view, and particularly for Diplomas and NVQs, there is simply too much assessment. This puts pressure on assessors and learners and results in a reduction of teaching time:

*If you look at all the hours of what is expected of end of unit tests, as in practical and theory. You put all of that together and a good third/quarter of your time is assessing. That is not the same as for driving is it? You could have 35 lessons to learn to drive and only one test for an hour…. I think we are overly assessing on every single element.*

*Learning provider*

104. Some learning providers expressed the view that awarding bodies’ requirements for evidence against every element of the qualification were excessive and over-prescriptive.

*In construction, there is too much emphasis on evidencing all work and this takes away from teaching and learning.*

*Work based learning provider*

105. Learners also commented on the effect of the burden of assessment on their motivation.

*Also, the assessments, we are become a little blasé – we are not taking them seriously because there are too many of them.*

*Level 3 carpentry learner*
106. We heard how the same skills or knowledge were assessed repeatedly, throughout the courses and across the qualifications as part of the summative assessment for the qualification (rather than for formative assessment as part of the learning programme).

*Questions in all units are very repetitive. Instead of having one question in a core unit asking about risk assessment and method statements, it is in every single unit, which it doesn’t need to be.*

*Learning provider*

107. Learning providers were particularly concerned about the volume of assessment in plumbing qualifications; learners on plumbing courses shared these concerns and seemed to be further behind in their progress than learners on other construction-related courses.

108. Learners taking apprenticeships - in which they are required to take both a technical ‘Diploma’ and an NVQ - experienced even more repetition. They were being assessed for work that they performed in the college setting and for performing similar tasks in the workplace.

*I think the main problem with the NVQ assignments is that we’ve already done them in college for the Diploma. It’s literally the repetition.*

*NVQ level 2 Carpentry learner*

109. Several learning providers spoke positively about changes to some new qualifications for college-based learners that are being introduced by awarding bodies to meet requirements in England for synoptic and end-of-course assessment. They felt that this would reduce the burden of assessment and free up time for learning. Many participants felt that online assessment would suit learners better than paper-based tests. But some learning providers expressed concerns that end-of-course tests may disadvantage some learners (compared with continuous assessment), particularly given that there was a limit (of one) on the number of resit opportunities available.

*When it comes to level 3 they don’t take into account people’s learning abilities. I have folders and folders of paper. I haven’t got a clue what half of them say. But take me into the workshop and ask me to do it and I can. And that’s not taken into account. Especially level 3 because it’s so paper-intense.*

*Level 3 plumbing learner*
Throughout the Review we saw very limited use being made of digital technologies to support assessment processes. Recording techniques were usually pen and paper and consequently time-consuming and potentially unconvincing. We did hear about, and occasionally see, attempts to enhance the assessment process through, for example, using visual recordings of performance – perhaps using head-cams, or assessor-candidate discussions taking place over Skype – but these examples were few and far between.

The validity of simulated assessment activities

Some employers expressed doubt about the value of qualifications taken by learners in further education colleges and about the quality of assessment decisions. Those employers commented that learners who had been assessed in college as being competent were not able to perform work on-site.

*They might have a certificate... but whether they are capable is a different matter.*

Employer

Where simulated activities – normally in a workshop in a college – are used to assess performance, there were concerns (from employers and learning providers) that this does not adequately reflect a real work environment. In assessing bricklaying, for example, bricks were reused from one assessment to another and were therefore often not in the condition used on real sites, making it harder to judge the quality of a wall. The environmental conditions in a workshop are also different to those in the workplace.

*They can lay bricks all day in a workshop, the temperature is regulated, the light is regulated, the floor is reasonably flat, the bricks are clean. You can lay bricks on site, it can be raining, it’s dark, it’s light, it’s too hot/cold, down a trench or you are up a scaffold. There is no comparison. You’re falling over the bricks if you’re in a trench, you don’t get this lovely flat platform.*

Learning provider

The organisation and sufficiency of work-based assessment

Where competence was assessed in the workplace, both employers and learners raised concerns about the low frequency of work-place observation in assessing competence. Some employers told us that assessors rarely (or never) observe the performance of learners in the workplace. This was confirmed by the majority of NVQ learners taking part in focused discussions, who reported that they had never been observed in the workplace.
The limited use of observations in the workplace was attributed, in part, to the challenges for further education of timetabling work-based observation within a teaching workload and of reaching learners in different locations. For example, an employer told us that they had notified their college when a learner was performing relevant tasks for assessment close to that college. The college had replied that they couldn’t provide an assessor to observe as they were busy with another group. When the college was ready to assess a learner on a specific task, the learner was working at a different site and the assessor was not able to travel. Employers suggested that there was a need for better planning and greater flexibility.

Learners also agreed that it is difficult to arrange assessment to suit learners, assessors and employers.

"It would be beneficial for the assessor to observe me doing a window, but I work in the door section at work, so it would be very rare that I would do a window in work. I do them, but it’s rare. So now I have to ring him when I’m doing a window next, but work doesn’t work like that. Often, I’m asked to help with a window on the day and we can’t wait for the assessor."

Level 3 carpentry learner

Some learning providers expressed the view that assessment was more manageable, and more successful, where there was a separation of roles between lecturers and assessors.

Most learning providers told us that the cost of registering and assessing qualifications, in relation to the public funding that they received, left comparatively little funding for training.

Engagement of learning providers with employers in the assessment process

Several employers felt that learning providers did not give them sufficient information and that it was difficult for them to find out what was required of apprentices, the supervisors of apprentices and from the company in general. Employers wanted to know more about the learning that apprentices would be following and about the milestones they needed to achieve. This would enable employers to plan the assessment opportunities for learners more effectively.

Some employers complained that learning providers relied on apprentices to tell the employers what they needed to do: employers felt that this was not an effective way of communicating expectations. Where action plans are provided by the college, they may not be clearly expressed. We also heard that colleges had sometimes made changes to the learning and assessment schedule without providing employers with sufficient notice – and, naturally, this had a negative impact on work planning. Employers also commented that they would like to receive more feedback on the progress that their apprentices are making with their learning and assessment.
The availability and validity of naturally occurring evidence

120. Where learners are required to demonstrate skills in the workplace it can be difficult for them to demonstrate all the tasks/skills required. For example, the gas element of plumbing is challenging to evidence:

*With the gas, you’re allowed to do two things in college. One of them’s got to be a back boiler and one has to be a cylinder that heats its own water. But then there’s other things that I’ve never come across as well. I’m only allowed to do two in college- but there’s three or four things that I may not ever see at work. And sometimes the answer is ‘your boss is going to have to sub-contract you’. Ok, but from my boss’s point of view, he’s paying me to go and work for someone else – it just doesn’t happen.*

*NVQ level 3 Plumbing learner*

121. In another example, carpentry and joinery learners are required to demonstrate that they can build a staircase. Many construction companies use staircases that are built off-site and then put in place - and many buy in pre-assembled roof trusses. Therefore, learners find it hard to get evidence of constructing staircases and roof-trusses.

122. Where assessors had visited learners in the workplace, assessment was often a tick-box exercise. We heard, for example, about an assessor driving to an apprentice’s workplace, winding down the window, asking the learner if everything was ok, ticking assessment boxes on a list and then driving off again.

123. A small number of work-based learning providers described how they encouraged and enabled learners to demonstrate their skills through a richer mix of evidence, including videos of performance, an assessment ‘app’ to collect their evidence, or of combining a series of photographs of a learner performing a task with a recorded professional discussion immediately afterwards in which the learner reflecting on the task they had just performed. Examples of this more thorough approach to assessment were limited – with more examples being provided, including through our technical review, of less reliable approaches to recording evidence.

124. Employers and learners expressed concerns about photographs of finished work being used as evidence of performance, when they provided no evidence that a candidate had performed that work themselves. Learners spoke about ‘other learners’ who had provided photographs of other peoples’ work in this way – and learning providers also recognised this as an issue.

*The learners reported there were times when people get mates doing other jobs to take the photo for them, and they pass it off as a job they themselves have done, because it’s been impossible to actually physically do the required job for the NVQ booklet.*

*WBL Provider*
125. Our technical reviewers expressed the view that some of the learner portfolios they reviewed contained generic and repeated evidence which had the appearance of having been given to the learners rather than produced by them. They went on to observe that, with some portfolios, there was very little observable evidence of candidates’ performance, with a high reliance on tick-lists.

126. Some learning providers acknowledged that NVQ assessment had become heavily reliant upon asking learners questions to test their knowledge of how they would undertake a task, rather than assessment being related to what learners had done, or experienced, in the workplace. And many learners complained about the amount of ‘writing-up’ that was required for NVQ assessments:

You have to do three-page write-ups and half the questions are asking the same thing.

NVQ Level 3 Plumbing learner

The language, terminology and format of knowledge assessments

127. Learners, as well as learning providers, expressed concern that the language and terminology used in written assessments, produced by awarding bodies, was not accessible to learners at all levels.

The language used in the booklets is very difficult and quite advanced. The way they are worded is so hard to understand.

Level 3 Diploma Bricklaying learner

It’s some of the terminology that is not the same as out in the real world

Level 1 Plumbing learner

I don’t think it should be there to trick us down to language, it should be on whether you know what you’re talking about in work.

Level 3 Electrical learner
128. Often the wording used in assessment material had been lifted directly from the wording used in the national occupational standards (NOS) which were not designed to be accessible to learners. One example of a question, provided to the Review team, was:

*State why and when, health and safety control equipment, identified by the principles of protection, should be used relating to types, purposes and limitations of each type of work situation, occupation use and the general work environment.*

This is a direct lift from the occupational standards, whereas, in the words of the interviewee this question should be “what health and safety equipment do you need to carry out this job?” Lifting the occupational standards into assessment materials in this way suggests that the awarding body has given little thought to the design of assessments to provide a valid and meaningful test for learners. Conversely, copying such text directly into an internet search engine, takes the learner directly to a wiki-book containing suggested responses to all knowledge elements of the NVQ Level 2 Brickwork standards – casting further doubt on the validity of this approach to assessment.

129. A number of learning providers commented on the appropriateness, or otherwise, of substantial written assessments for learners in these subjects. They commented that the learners engaged better with learning through quizzes, videos and discussions – and it seems likely that more engaging forms of assessment of knowledge would better enable learners to demonstrate their knowledge and understanding.

130. There is, however, a balance to be drawn between engaging and accessible assessment and testing at the right level. Our technical reviewers raised concerns that some multiple-choice questions were too simplistic. For example in a level 3 qualification the reviewers observed that some of the multiple-choice questions were insufficiently demanding as they had obvious correct answers. And across the qualifications reviewed there was very little, if any, examples of learners’ understanding being tested beyond straightforward recall.
Lack of differentiation in pass/fail qualifications

131. Several learning providers told us that they felt learners would benefit from more differentiation in the outcomes of qualifications other than simply pass/fail – and that end of course assessments could provide the opportunity to reward higher achieving candidates more than those who only met the minimum requirements. Some felt that it would be possible to apply such differentiation even when assessing competence, with a pass being awarded for meeting the basic requirements and higher grades awarded depending on the quality of the finished work. While this is unlikely to be feasible in the workplace (where all finished work needs to meet the employers’ standards) it may be an approach that could be considered in differentiating the acquisition of skills at a pre-employment stage within a simulated environment.

The availability and expertise of the assessor workforce

132. Employers and learning providers expressed concerns about the assessor workforce. Difficulties in recruiting suitably experienced assessors were cited – particularly when the construction industry is vibrant and skilled employees are at a premium. Learning providers cannot compete with the construction industry in terms of pay levels. One employer, for example, explained that his apprentices’ learning had been put on hold for a year due to staff shortages at the learning provider.

133. Employers – and some learning providers - also expressed concern about the level of expertise of assessors, particularly their knowledge about current practices, tools and materials. These concerns were expressed particularly strongly in relation to plumbing and heating. Across the wider sector it was suggested that lecturers and assessors would benefit from regular updating in the industry and some went on to suggest this ought to be a requirement set by the awarding body. Others questioned whether sufficient time and resources were available for the continuing professional development of lecturers and assessors – although one work based learning provider referred to an improvement in contracting which meant that tutors and assessors were able to undertake 30 hours per year.

Inconsistent and inaccurate assessment and quality assurance

134. Our technical reviewers identified several concerns about actual, and potential, inconsistencies in internal and external assessment design, delivery and quality assurance. These concerns included:

• lack of comparability and consistency between centre-devised and awarding-body-devised assessments, which means that they are unreliable;
• unclear and/or ambiguous controls on the taking of knowledge-based assessments;
• inconsistent approaches to the assessment and quality assurance of NVQs across centres;
• incomplete internal quality assurance records, where provided; and
• a significant amount of incorrect marking, some of which indicated that some assessors may not understand industry requirements. Examples included ‘correct’ answers which were in direct conflict with the procedures used in the industry and one test paper which had errors in several questions.
135. Learning providers expressed concern about inconsistencies in the approach to quality assurance of qualifications across awarding bodies and between different personnel from the same awarding body.

In the college we have an IQA (Internal Quality Assurer) policy. But every new EQA (External Quality Assurer) wants to see different stuff, different spreadsheets. There must be thousands of hours wasted throughout Wales on this work. Can we not have an all Wales system?

Work based learning provider

136. Learning providers were generally appreciative of those External Quality Assurers who provided support and guidance. Several commented however, that this aspect of the service received from awarding bodies had decreased over recent years and that the focus was more on prescriptive approaches to recording assessment and quality assurance and the currency of policy documents. Some schools, delivering recently introduced qualifications designed for learners aged 14-16, felt that there was a shortage of online guidance from the awarding body to support the teaching and assessment of the qualifications. While schools generally gave positive feedback on these qualifications, there was a suggestion that some tasks may not be appropriate for the age group.

137. Several learning providers felt that there was a need for more consistency across Wales and some suggested that a move to a single awarding body for construction related qualifications would be desirable. Some implied that ‘other’ learning providers switched awarding bodies to receive a more lenient approach to quality assurance.
Welsh-medium assessment

138. In our technical review we asked reviewers to identify whether awarding bodies offered assessment through the medium of Welsh. They found very few references to this across the range of materials reviewed and in only a few cases did the awarding body specifically mention that the qualification could be assessed in Welsh or English.

139. In our interviews with employers and learning providers and in our focus-group discussions with learners, we asked whether learners had been able to take their assessments through the medium of Welsh.

140. In general, employers welcomed and encouraged the use of Welsh in the workplace, and recognised the value of having customer-facing Welsh speakers. However, several expressed the view that, when speaking Welsh, there were many technical terms in the industry that are normally expressed in English even by Welsh-speakers – and that it could be artificial and potentially confusing to use the Welsh versions of those terms. There may, also, be difficulties because of the quality of translation by awarding bodies.

To be honest, what we do find is that students will say “I would like to do that in Welsh”, but when the Welsh version comes they find it difficult to understand it because all the terminology in Welsh is not the local Welsh that they speak. It is the ‘correct’ Welsh and they will struggle with this.

Learning provider

141. Some employers suggested that while their Welsh-speaking apprentices would be happy to take any oral assessments through the medium of Welsh, many could find it more challenging to take written assessments in Welsh than in English. And for written assessments, there is also the challenge that external quality assurers may not be able to read and quality assure Welsh-medium work. One work-based learning provider reported that they had had to wait six months to be allocated a Welsh-speaking external quality assurer.

142. In assessing NVQs, some assessors use Welsh in oral assessments but English in written assessments:

The NVQ job knowledge questions for carpentry and joinery, I had those translated. Ironically, the learners tend not to use them, but I do try to give them both copies if they want it. I tend to, if I am out on site assessing, to do most of my assessment orally through the medium of Welsh and written assessment in English for the sake of the EQA or employer. Most of the work I do talking to the learners is in Welsh.

Learning provider
143. Employers and learning providers expressed the view that learners ought to have the opportunity to take their qualifications through the medium of Welsh. Further education colleges across Wales have developed a central bank of online Welsh-medium resources for construction, which is an example of good practice – although some learning providers and employers mentioned that some textbooks or handbooks were not available through the medium of Welsh.

144. However, employers and learning providers acknowledged that, even where provision had been made available and where there were sufficient Welsh-speaking assessors, take-up of the Welsh-medium offer was typically very low – and sometimes there was no take-up at all. While most learners said that they had been offered the opportunity to take their course and assessment through the medium of Welsh, many of the Welsh-speaking participants said that they had preferred not to do so.

145. A number of reasons were suggested for this:

- some Welsh-speaking learners told us that they preferred to learn alongside their English-speaking peers rather than have a separate small Welsh-medium group;
- some Welsh-speaking learners reported feeling less confident reading and writing in the medium of Welsh;
- much of the technical terminology used across the different trades was in English, even between Welsh-speaking workers;
- some Welsh-speaking learners said that if they were to learn and be assessed in Welsh they would be at a disadvantage when working in English-speaking areas, given that many workers need to be mobile. Some employers shared this view and expressed concerns that a learner who had taken the qualification through the medium of Welsh would need to re-learn the English terminology to be safe in the workplace;
- some Welsh-speaking learners said that they didn’t ‘see the point’ of learning and being assessed in Welsh; and
- in a few cases learners said that Welsh-speaking tutors weren’t available.
Chapter 7: Qualifications taken primarily in schools

This chapter summarises the responses from interviewees in schools – mainly teachers.

Feedback on the delivery of current qualifications

146. Teachers of learners aged 14-16 were generally positive about qualifications – some of which had been developed with the support of CITB – that had recently been introduced for learners of this age group at levels 1 and 2. They also reported that learners’ parents had been supportive of the course, with some mentioning particular interest from those who worked in the industry themselves. Most of the schools interviewed were using qualification(s) for lower-ability learners, but teachers also felt that the qualifications catered for a range of abilities. Where learners were achieving level 2, schools were keen to have a level 3 qualification for them to progress to. We understand that such a qualification has recently been made available with a view to providing a progression route into construction-related degree programmes. It remains to be seen whether schools will be successful in recruiting higher-ability learners to these courses given the general emphasis on, and preference (implicit or explicit) for general qualifications within school – as well as the limited space for vocational learning within the curriculum at Key Stage 4 and 5.

147. According to the teachers, learners enjoyed their course. Some were not too keen on the amount of written work but they generally understood the need for it. While some teachers questioned the balance of theory and practice, and some felt that learners would benefit from a greater practical element, others felt that it was manageable for learners and teachers. Teachers felt that the courses provided an engaging, purposeful and achievable way for learners to gain qualifications that contributed to achievement of the level 2 threshold. Some schools felt that an introduction to the Construction industry as a whole was missing from the qualifications.

Staffing

148. However, there were some challenges in terms of staffing construction courses in schools. Teachers with no subject knowledge of construction were sometimes being given responsibility for programmes – and in these cases it is hard to see that learners will be receiving the best teaching possible. There are currently no particular requirements for teachers of construction – we met home economics teachers, for example, who had been given the subject to teach. Some further education providers expressed concerns about the experience and competence of those teaching vocational skills in schools, referring to the awarding bodies’ requirements for experienced tutors in colleges whereas there was no such requirement for the schools-based qualifications.
Resourcing

149. While the introduction of new construction qualifications for learners primarily aged 14-16 at levels 1 and 2 combined has generally been well-received – they have presented some schools with challenges in resourcing materials and equipment. In some cases, materials, or financial resources, have been donated to schools by local employers - one school described how it intended to utilise simple maintenance work around the school as an opportunity for practical activity for learners.

150. Schools expressed some confusion as to whether they could use scaled down versions of structures for the practical work in the qualifications. Some were using scaled down models while others understood it not to be allowable. This confusion was leading to some centres reconsidering whether to continue offering the qualifications.

151. In addition to the cost of materials, a lack of space for learners to undertake practical tasks within schools was also seen as an issue.

Construction is very expensive for schools to deliver. Setting up with equipment is costly and there is so much waste product at the end. The cost to set up one unit was in the region of £600, door jams, hinges locks etc. Also space is an issue, groups have to be small to enable practical elements. This results in learners waiting to complete these elements.

School teacher

Employer engagement

152. Some schools stressed the importance of CBE employers engaging with the courses, to ensure that they are relevant and the value of site visits for learners was emphasised. Several employers also stressed to us the importance of getting learners engaged with the concepts of careers in construction from age 14 upwards. These employers were keen to be more involved with schools: while some had worked well with schools others felt they were not particularly welcome, or that only lower-ability learners were steered in their direction. They felt that there was a low level of understanding of the wide range of often well-paid careers in the sector. ‘Go construct’, a CITB initiative was considered by employers to be a good example of such engagement.
153. We observed one particularly good example of employer engagement with construction learning in schools. An employer had invested in the development of online video resources outlining good construction practices for both teachers and pupils undertaking level 1/2 construction qualifications.

Links with further education

154. Some further education providers were familiar with the new level 1/2 qualifications that are taken by learners in school. They were generally keener on taking on learners with the qualification at level 1, as those learners who had taken it at level 2 tended to feel that they were repeating a level (or even going back a step) when commencing qualifications in colleges – even though these qualifications were entirely different.

155. We heard about some good practice where a further education college delivered a Junior Apprentice scheme for learners from schools in Years 10 and 11. We have recently learned that similar schemes may be rolled out across Wales.

Opportunities to develop hand craft skills at 14-16

156. Several employers and learning providers expressed regret that most learners are no longer able to experience the use of technical equipment in schools – for example in woodwork classes - to help them understand what’s involved in vocational career paths. They attribute this to concerns about health and safety which have led schools to limit the availability of machinery and other equipment. Developing an interest in, and basic skills in these hand crafts would stand learners in good stead in future careers in the sector.

Dexterous people will manage to transfer hand skills across a wide range of construction jobs. Most materials need to be cut and fitted.

Learning provider

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23 Cardiff and the Vale College developed a Junior Apprenticeship scheme and Welsh Government is now encouraging colleges across Wales to offer similar programmes.
Chapter 8: Further Education provision

In this chapter we outline issues relating to the delivery of qualifications in further education. While some of these issues don’t relate directly to qualifications we report them here as they do have an impact on the qualification system.

Currency of physical resources

157. Employers, learning providers and learners raised concerns about the currency of the tools and equipment that were available to learners in colleges. Often colleges cited tight budgets as the reason that they were not able to make up-to-date equipment available to learners – including power tools and other more specialised equipment.

*Colleges need to move at the same speed as industry. Power tools are taking over the use of hand tools, colleges may struggle to finance the equipment.*

Further education provider

158. Some learning providers were concerned that it was very difficult for them to provide access to complex and specialised equipment which is becoming increasingly important for site work. In plumbing, for example, the equipment used in industry is frequently changing. While manufacturers provide useful training to use specialist equipment, employers complained that learners, progressing into employment from college, lacked underpinning knowledge of modern materials and techniques and that they demonstrated inconsistent work practices, poor finishes and poor levels of craft skills.

159. Learners too expressed frustration that the equipment that they were required to use for their qualifications was out of date – and that important skills were not taught or assessed.

160. And even where the currency of equipment was not an issue, the cost of materials, particularly for assessment, was a concern for colleges and work-based learning providers. Whilst materials such as bricks could be reused for practical activities, centres – and learners – thought that learners undertaking assessment should be provided with new materials.

*You’re working bricks of different sizes which you shouldn’t be doing.*

*They always ask for quality when you’re doing your work- but if you haven’t got the quality of your materials then you can’t show quality for the work. You’re building a wall with knocked blocks and corners off- it doesn’t look tidy.*

Bricklaying learners
Lecturer and assessor expertise

161. Employers expressed concern that there is a shortage of qualified lecturers and assessors in further education and that this was limiting the capability to deliver high quality training – and training in particular skills. The causes of this shortage were identified as:

- difficulties in recruiting appropriately qualified new lecturers and assessors – particularly in times where the construction industry is in growth; and
- a lack of continuing professional development for those already teaching.

162. FE providers agreed with these observations and also mentioned shortages of teaching staff across a range of trades, with some particular difficulties for traditional and heritage skills. Employers recognised the difficulties that face the colleges.

> There are skills in older housing, such as plasterers repairing old decorative coving and carpenter’s working on decorative carpentry, which need to be taught. An issue is that colleges may not be able to find a lecturer to deliver these skills.

Employer

163. There was general agreement, amongst participants in the Review, that lecturers should update their skills through placement periods in industry and that college staff were not up to date with their training. Several employers suggested that there should be requirements for existing teachers/lecturers and assessors to have continuing professional development – including updating their skills and knowledge in the workplace. Employers and learning providers pointed out that there would be additional benefits in lecturers spending more time with industry, including improved relationships with employers.

> There are good working relationships but to go to the next level the teacher needs to work on a live site for 2 days a year, they’d love it. The site manager would be pleased – it would break down some barriers, bad feelings – create good relationships – pass on details. There’s a divide between learning providers and industry, why can’t we build something in for the teacher/lecturer to bridge that gap a bit. I think it should be mandatory. It’s good CPD for lecturers.

Employer
Developing practical skills

164. Employers expressed strong views that learners needed to develop their trade-skills on-the-job, and that skills learned in a simulated environment alone were insufficient to make a learner work-ready. While they recognised that initial skills with hand-tools could begin to be developed in colleges, they suggested that the simulated work environment did not equate to learning the skills of the job ‘on site’. They cited, for example, the different environmental conditions working outside to working in a workshop.

I think that it’s the nature of our industry unfortunately, that unless you are actually on projects it’s hard to learn that skill. It’s very difficult in a classroom, so maybe there probably needs to be more contact with practices and business during their courses.

Employer

165. Employers expressed a preference for classroom learning and site-work to complement each other so that learners learn a skill in a classroom and then go out on site and apply this skill. This is more likely to happen in apprenticeships than on full-time learning programmes.

We would like to see as part of modules an emphasis on practical working. Learners need to have evidence that they can do practical element at a high level. It would be useful for students/apprentices to be able to work alongside experienced gas fitters or electricians, learning how to diagnose correctly.

Employer

166. Further education providers and employers agreed that learning programmes – and the qualifications used to assess them, needed to have more hands-on skills and less academic content. Some learning providers attributed high drop-out rates in bricklaying and plastering courses to an imbalance between academic and practical learning.

There seems to be an emphasis now on learners having to demonstrate their written skills, the practical element has almost become secondary. They need communication and maths, but they also need to be able to do the practical stuff as well, it seems to have been forgotten sometimes.

Learning provider
High drop-out rates

167. Learning providers and employers both commented on the high drop-out rate of learners completing their further education course and qualification – particularly at level 2 – but not progressing into the industry. Stakeholders suggested that high numbers of learners are not progressing into employment. The reasons for this are not clear, but the implications are.

*Skills shortages are reported but if all learners in further education entered the industry there would be no shortage at all.*

Learning provider

168. Generally, employers expressed the view that learning in the workplace was more valuable than academic learning. Some suggested that public funding should be more focused on work-based-learning – including higher level learning - than on full-time courses.

Gaps in provision

169. Employers identified a range of skills needs that were not addressed by learning providers. In many cases, learners from Wales had to travel to provision in England. These included:

- dry lining;
- scaffolding;
- steel fixing;
- roof sheeting; and
- cladding.
Chapter 9: Apprenticeships

In this chapter we outline the findings of the Review that relate to apprenticeships, which are in addition to those issues relating to qualifications which are identified in earlier chapters. While some of these findings do not relate directly to qualifications we report on them as they have an impact on the wider context in which the qualifications are taken.

170. In interviewing employers about the qualifications used in apprenticeships, they were also keen to talk more broadly about apprenticeships as a whole. This is reflected in the evidence overall: it’s important to look at the assessment regime for apprenticeships in the context of the whole apprenticeship.

171. Several employers considered employing an apprentice to be one of the biggest business investments that they make. There was a consensus that cost, to the employer, of providing the first year of an apprenticeship was higher than the benefit returned but that, by the second year, construction apprentices tended to be providing a business benefit. Building services (plumbing, heating, and ventilation) employers said that they did not begin to see a positive return until the third year of the apprenticeship.

_The first two years cost the employer as we are not really getting any work from employee until after the second year. We also have to provide in-house training on things like scaffolding and abrasive wheel trimming for the apprentice._

_Employer_

172. Employers were keen to stress the benefits of providing apprentices with a work-based mentor – perhaps a recent apprentice who was now qualified - to support them in adjusting to the world of work and to providing them with advice and assistance in developing their skills. Not all apprentices are provided with a mentor but it was clear that where mentoring was used, it formed a valuable element of managing apprenticeships.

173. Employers also identified that, on an apprenticeship, apprentices benefited from learning about work in its wider context. Many employers expressed the view that learners should experience and understand the role of all the trades and their contribution to how buildings are constructed. The areas of purchasing, ordering, and estimating were also important. Employers commented that this knowledge is not developed by learning providers, where there is limited scope for learning other than in relation to the main trade being studied.

_They’ll go sit with the procurement department and understand why the procurement department has got lead-ins and types of materials. They become more commercially aware and see the reasons behind it because they see them working. When they’re out on site it’s just sticks in their mind much better than just being told the paperwork, and learning it. It’s more effective._

_Employer_
While many employers valued apprenticeships highly, it was difficult for some to support an apprentice for a whole apprenticeship programme. Construction work can be highly mobile – once work is finished at one site, the next job can be many miles away, and this is not ideal for very young apprentices. Some small employers, while able to support an apprentice for a short period of time, felt unable to invest in them for longer. The Review team learned about two very effective shared apprenticeship schemes which helped to overcome many of the challenges of traditional apprenticeship provision while providing a range of further benefits. Apprentices are employed by the scheme and local employers buy into this scheme, offering work to apprentices for varying periods of time. These schemes have a range of benefits including:

- apprentices can benefit from a range of different experiences, enabling them to develop a broader set of competences;
- apprentices are not as vulnerable to work projects ending before they have completed their apprenticeships;
- the Shared Apprenticeship scheme itself is able to provide a more holistic approach to managing and supporting apprentices’ development and well-being; and
- employers feel that there is reduced risk because they can, as one employer described it, ‘try before they buy’.

The learners we spoke to valued Shared Apprenticeship schemes highly and the schemes appeared to have a high success rate.

We learned about two shared apprenticeship schemes in Wales – Cyfle and Y Prentis.
We also heard positive reports of pre-apprenticeship programmes. For example, one of these programmes involved learners from challenging backgrounds and included:

- an interview;
- an initial induction week with a learning provider including initial health and safety training;
- a placement with an employer and work on-site;
- weekly monitoring and scoring by the learning provider;
- a second week with the learning provider;
- two weeks with a different construction company;
- one week on a community project; and
- assessment by the learning provider in a final assessment week.

The construction companies participating in the pre-apprenticeship programme guaranteed to offer at least one apprenticeship place to those who successfully complete the programme.

**Relationship between employers and learning providers**

Where the colleges were involved in apprenticeships, employers expressed mixed views regarding the quality of provision. Some reported very positive experiences with college staff who were responsive to employer needs and supportive to learners. Other employers were less positive and their concerns identified included:

- providers not involving employers sufficiently in planning the apprenticeship, to ensure that apprentices are well-supported in the workplace;
- the employers’ role in supporting assessment or assessment opportunities not being made clear;
- providers not notifying employers, or taking action, when there were issues with the performance, attendance and/or punctuality of apprentices;
- providers who combined first, second and third year learners together in the same teaching class limiting, in the view of employers, the effectiveness of learning; and
- learning providers not replicating work-place requirements such as Personal Protection Equipment requirements (hard hats, high-visibility vests or fitted face-masks).

*There needs to be more collaboration and meaningful partnerships between colleges and employers. Employers should have a greater say in what is being taught, assessed and methods of assessment.*

*Employer*
Learning providers considered that they did receive regular feedback about qualifications from the employers they meet and that existing qualifications were fit for purpose. However, they extended the caveat that with so many small employers involved in the sector they could not guarantee that this reflected the overall view of the industry. They suggested that, over the past five years, employers may have lost touch with the qualification system and don't understand what students are doing and why – and some blamed this on the process for developing qualifications:

*Employers do not feel confident to challenge a college over qualifications because they don’t understand them. It’s more than likely that over the last five years, the qualification structure has been made too difficult for employers to engage with. If they felt that they could engage with a qualification at the level that they were adding value, this would be sorted out.*

*Learning provider*

**Meeting employers’ needs**

179. In some cases the issues identified by employers linked to the lack of available learning provision rather than a gap in qualifications. This was particularly an issue for specialist occupations such as gas membrane installation which require training to meet British Safety Standards. There is a requirement for such installers to take an NVQ – the qualification exists, but at the time of drafting this report, no learning provider was offering this training in Wales.

180. Actual and potential skills shortages were sometimes regional. Several stakeholders referred to the potential skills requirements of large scale projects such as the Swansea Lagoon. Regional variation also related to the nature and size of the employers. Those in rural areas generally wanted more rounded skills as the companies were mostly smaller and less specialised.

181. Employers considered the demographic of an ageing workforce to be a concern. Within civil operations, employers were particularly concerned about this issue – and felt that there was no clear progression pathway available for those working in, or entering civil operations work.

182. Skills gaps also extended to higher level occupations such as quantity surveying and contract management. Employers told us that higher-skilled workers in these areas were at a premium. Some larger companies were addressing this need by introducing their own staff development programmes.

183. Employers often stressed that a key difficulty for them in planning for apprenticeships and staff development was in being able to predict the work and projects that they would have in future years due to the ‘boom or bust’ nature of the industry. Some employers suggested that funding for apprenticeships should be linked to the learner.
Employers should be paid to train learners in the same way that colleges receive funding, since employers play an equally important role in training. Funding of apprenticeships should reflect the costs to employers, perhaps tied to how long an apprentice has been working for; as they progress they become more useful to the employer and undertake more tasks so that they gradually become more cost-efficient to employ and the employer needs less financial support.

Employer

184. Many employers felt that assessment judgements alone were insufficient indicators of competence and felt that employers should be involved in signing-off the suitability and/or readiness of an apprentice prior to the award of a qualification.

Duration of apprenticeships

185. Most construction employers interviewed felt that apprenticeships in Wales are currently too short and that the standard of work achieved by those currently completing apprenticeship isn’t always of a good standard – particularly those completing a level 2 apprenticeship. We heard of some apprenticeships lasting only a number of months, whereas others lasted up to 2 years. Building services apprenticeships tended to be longer than construction apprenticeships. Some employers expressed the view that apprenticeships in main trades should be a minimum of 4 years but that additional related multi-trade skills should be incorporated into the training.
186. Some employers stressed that the short length of many apprenticeships had devalued the status of apprenticeships.

*I’ve taken great issue regarding the devaluing of the word apprenticeship. Apprenticeship to us, in our industry, used to mean something, whereas the government have taken that word and devalued it. Apprenticeship can be a two-week course, a month, six weeks. That isn’t what it means in our industry. So, we’re looking at perhaps renaming it or changing it to be something meaningful again.*

*Employer*

187. Although apprenticeships for electricians are longer than many others in the sector, specific concerns were raised about the length of these. Employers pointed to the wide range of electrical systems, such as ventilation systems, detectors and wifi systems (for example) that made wiring a house more complicated than it used to be. Concerns were also raised about the breadth of experience and that electrical qualifications did not differentiate between domestic and commercial wiring.

*Let’s pick an example of a housing association. You have 3 years as an apprentice and he becomes qualified as an electrician. But it is only in houses. So if anything goes wrong in your house he can fix it. But if he goes to work in a factory, where the voltages double, the risks are probably triple...There is a lot more to be aware of, but he has a card that says I am a qualified electrician. He is not, he is a qualified domestic electrician.*

*Employer*
Chapter 10: Continuing professional development

Although it was not the focus of the Review, in this chapter we report – for completeness - on some of the points made by employers about learning and qualifications linked to continuing professional development.

188. While we focused, in the Review, on the qualifications used on publicly-funded courses and apprenticeships, many employers were keen to express views on the training and qualifications that were available (or not available) for existing staff – including those who had previously qualified through an apprenticeship. Several, especially smaller employers, expressed concern about the cost of training which they perceived to be both high and inconsistent in quality – although others felt that it was generally good value for money.

189. Learning providers also expressed concerns regarding the future and viability of CPD training for the industry – particularly in relation to the very limited availability of public funding for adult education (other than in apprenticeships).

190. There were particular challenges for employers in the more rural areas of Wales, who found it difficult to access the range of provision which was offered in more urban areas – particularly for part-time higher-level learning, in areas such as surveying.

*I think that the problem with the entire system across the UK is the supply side. The colleges are delivering what they have always delivered. It is a massive undertaking to change from one particular programme to another.*

*Employer*

191. Where employers need experienced staff to develop more specialist skills there may – due to the specialised nature of the skill – be insufficient demand for training colleges to offer continuing professional development provision or for awarding bodies to offer qualifications. Employers expressed concerns about learning providers not being responsive – and learning providers expressed concerns about awarding bodies discontinuing qualifications where learner numbers are low.

*Skills provision currently offered by providers seems to be narrow and there is limited scope for training away from the main trades.*

*Employer*
192. Several employers identified that they, or their staff, had attended manufacturer training and that linking this training to vocational qualifications at a local level would be beneficial. Though having concerns regarding the high costs of regulated gas certification course, employers in plumbing and heating were broadly supportive of them as they helped ensure safety and quality in the sector.

193. However, some employers expressed concern that some commercial training companies were delivering what they described as ‘meaningless’ training courses and offering qualifications which did not relate to employment.

194. Some employers expressed concern regarding the age of its current workforce with many experienced site managers reaching retirement age and no direct path for experienced workers to attain suitable qualifications. It may be that, with the rolling-out of funding for all-age apprenticeships, employers look to invest in site-management apprenticeships for existing or new employees.
Chapter 11: Portability

In this chapter we reflect the views of stakeholders about the importance of portability of qualifications across borders.

195. Employers emphasised, strongly, the importance of qualifications within apprenticeships being portable across the home nations, but especially between Wales and England. This was particularly a concern for larger employers who have apprentices in both nations and some of these apprentices will undertake elements of their training in both countries. Concerns included that it may be impractical to operate two different assessment systems – and that learners may be disadvantaged if employers in one nation don’t recognise the qualifications taken in the other.

Qualifications need to be comparable across the UK and portable to encourage employability especially for the Welsh economy.

Employer

196. While some felt that portability would be best achieved through retaining the same qualifications, others identified the opportunity for Wales to have qualifications that were recognised to be ‘at least as good as’ those available in England. Typically, employers further west in Wales were keener on having specific solutions to meet the needs of Wales than were those closer to the border.

Welsh qualifications need to be as good as or better than the English qualifications.

Employer

We need to consider what improvements will be achieved through changing qualifications and that there is a balance that Welsh qualified learners are not seen as being less competent than others across the UK. This balance needs to ensure that the quality is high though is attainable and affordable. Do not implement change for change’s sake.

Employer

197. Those employers who were more familiar with qualifications than others generally expressed the view that it was important for qualifications to continue to relate to the national occupational standards in order to be portable. This view was also stressed by CITB and the other sector bodies – pan-UK bodies - and we have been careful in developing proposals to engage closely with those bodies and to ensure that the key point of reference on content and standards remains the National Occupational Standards.
If there are three assessment systems in place, the content of the Scottish, Welsh and English system should be comparable and the same skill and competency levels attained. The challenge will be in understanding how divergent qualification systems compare to one another with regard to quality of skills and competency and how a Welsh craftsperson compares to a Scottish and English trained and qualified craftsperson.

Employer

198. Employers and learning providers pointed to opportunities to take a more collaborative approach to the development of qualifications in Wales than is being taken in England. Several suggested that collaboration between awarding bodies, employers and colleges would support the development of qualifications that addressed learner and employer needs. Reflecting on the way in which end-point-assessments for apprenticeships are being developed in England, some employers expressed the view that qualification development should be informed by, but not developed by, employers, who do not have the expertise to develop qualifications. Both employers and learning providers stressed that it was important to ensure that the needs of smaller employers were sufficiently addressed.

It would be nice if awarding bodies talked to practitioners and discussed how qualifications should be amended in the future. One or two individuals write qualifications; more people should be invited to discuss amendments or new qualifications, too few people are involved.

Learning provider

199. In engaging with stakeholders to develop our proposals for action we have given extensive consideration to the importance of portability to ensure that learners and employers in Wales are not disadvantaged compared with those in England – and that employers based in England, are not disadvantaged when employing apprentices in Wales. We see a key tool to portability being the use of the National Occupational Standards as a basis on which to build the assessment routine and one which will guarantee portability for learners. In developing our proposals for action we have been mindful of the need for portability and comparability, for the benefit of learners and employers.
Chapter 12: International Comparison Study

In this chapter we summarise the findings of a small international comparison study that we conducted to supplement the Review. The report on this study is published on our website.

200. As part of the Review we conducted a small-scale international comparison. We used a case-study approach to review the routes offered in different countries to qualifications in carpentry and joinery and plumbing and domestic heating. The Review included online research of publicly-available material on the qualifications and the education systems as well as email exchanges with experts from qualification regulators and similar bodies in the four countries. The countries included in the review were Germany, Australia, Canada (Province Alberta) and New Zealand.

201. The countries were selected because, on the one hand, we anticipated similarities between the qualifications systems in Australia and New Zealand with that in the UK and on the other hand we had identified a general perception that the vocational education system in Germany was both high quality and significantly different to that in the UK. Canada was chosen to include an example from a different English-speaking country to add variety to the sample. Our choice was also shaped by the availability of information in online sources.

202. We chose the two trade-areas on the basis of a high uptake of qualifications in these trades by learners in Wales. The qualifications reviewed in each country were chosen to represent a level that allows a learner to enter the workforce upon completion of the qualification.

203. We found that the routes to achieving comparable qualifications to become a carpenter or plumber in Germany, Canada and New Zealand are similar and follow an apprenticeship model including technical or theoretical school based training. In Australia, these qualifications can be achieved through registered training organisations as well as work-based learning/apprenticeships.

204. The most striking difference between the systems we studied and the system in Wales was that apprenticeships elsewhere typically lasted longer than apprenticeships in Wales. In Australia, Canada, and New Zealand apprenticeships are designed to last four years, while in Germany they typically last three to three and a half years. While the length of apprenticeships are not fixed in Wales, the Review heard that some apprenticeships lasted only a number of months, with year-long apprenticeships not being uncommon.
205. In Canada and Germany, both employers and employees are involved in the development of qualifications and assessments, while recent reforms in Australia aim particularly at improving employer involvement in the development of qualifications. This correlates with the emphasis that we placed on involving employers in the Review, and with the approach in England in relation to apprenticeships and T levels.

206. While assessment in Australia and New Zealand is competence-based, assessed primarily in the work-place, there is greater emphasis in Germany and Canada on examinations. In Germany, in years 2 and 3, learners take two three-hour written examinations and one practical task. One of the written examinations covers social and economic matters. In Canada, each year, learners take two theory examinations and one practical test (in years one to three the practical test takes six hours, in year four it takes 26 hours).

207. Carpentry qualifications in the countries reviewed appear to cover very similar areas of competency. In plumbing and domestic heating, there is much similarity, but several countries offer specialisations in water, sanitary, gas, or, in the case of Germany, in renewable energy and environmental technology.
Chapter 13: Proposals for Action

In this chapter, we outline our proposals for addressing the issues identified by the Review. We set out actions we propose to take together with proposals on which we are consulting.

208. Working with stakeholders, CITB, other sector bodies and employer groups and Welsh Government, the Review team has developed proposals for action. These consist of:

• **Phase One Actions** that can be taken in the short term, to begin to address issues identified in relation to the existing qualifications and qualification system. The benefits and limitations of these actions are identified.

• **Phase Two Options for Action** that could be taken in the medium term to reform qualifications to better meet the needs of learners and employers. These options are set out below with the relative benefits and disadvantages/risks and an indication of our preferred options. We are consulting on these options and we invite stakeholders to respond to the consultation on our website – www.qualificationswales.org.

**Phase One Actions**

209. We will take the following actions in the short term with the aim of addressing, as far as possible, the issues identified by the Review within the constraints of the existing qualifications.

**Action 1**

We will write to the awarding bodies for 16-19 and NVQ qualifications in the sector, urging them to consider the findings of the report in chapter 6, relating to the assessment of their qualifications, to identify whether the findings apply to them and, if they do apply, to propose how they will respond to them.

We will draw attention, in particular, to:

• the burden of assessment and whether it is proportionate and reasonable;
• the inaccessible forms of questioning used within written assessments, including wholesale extracts from occupational standards;
• the reported low incidence of on-site observations of learners for NVQ qualifications;
• the use of photographs of completed work as evidence for NVQ qualifications where the contribution of the learner cannot be adequately confirmed;
• tick-box, non-verifiable, approaches to the recording of competence;
• the extent to which written assessment is used to demonstrate underpinning knowledge for NVQs;
• External Quality Assurers placing inconsistent requirements upon centres; and
• the extent to which assessors are sufficiently competent – and current – in their technical expertise to make sound assessment decisions.
**Action 2**

We will write to the sector bodies (including CITB), urging them to consider, in conjunction with awarding bodies, the concerns raised in chapters 4 and 5 of the Review about the content of the qualifications and the national occupational standards. The issues for consideration would include:

- whether the mandatory occupational standards required for each occupation could be streamlined, to ensure that they are essential and likely to be achievable by learners in a wide range of workplaces;
- how they might ensure that qualifications require the use of up-to-date technologies, tools, materials and processes;
- how they might ensure that learners understand the differences between the tools, materials, processes and skills/knowledge needed for traditional and modern buildings;
- how they might address the repetition of content between levels of the qualifications and the lack of sufficient differentiation between levels – including the high incidence of level 2 units in level 3 qualifications;
- whether it is appropriate, in some level 3 NVQs, to include a level 5 unit which is commonly interpreted as requiring supervisory skills;
- whether the current industry-specific assessment strategies (which provide guidance to awarding bodies on assessing NVQs in the sector) remain appropriate in the light of the findings of the Review; and
- how awarding bodies can address the lack of coherence of Electrical 16-19 Diplomas with the NVQ route.

**Action 3**

We will share the evidence of the Review with Welsh Government and NTfW for consideration of our findings with regard to apprenticeships that:

- the effective assessment of individuals in the workplace for the type of competence-based qualifications required in apprenticeship frameworks seems challenging within current models of contracted work-based-learning;
- the model of Shared Apprenticeships delivers significant benefits to construction training across Wales; and
- apprentices benefit from being supported by work-place mentors throughout their apprenticeship.

**Action 4**

Recommend to Careers Wales that they consider how the full range of careers in Construction and the Built Environment, especially those which require higher-ability learners, could be promoted more effectively to learners, schools and parents.
**Action 5**

In relation to some of the wider issues identified by the Review, Qualifications Wales:

- has taken the need for contextualised tasks for Essential Skills qualifications, into account in developing our response to the separate review of Essential Skills;
- has taken the perception of learners and centres on the Welsh Bacc into account in the separate review of the Welsh Bacc;
- is considering how best to identify and disseminate good practice in the use of technologies in assessment;
- will consider the implications of the Review’s findings for the levels ascribed to vocational qualifications; and
- will consider the wider implications of the findings of the Review in relation to the assessment and quality assurance of competence-based qualifications.

**Constraints of Phase One Actions**

210. While we are committed to taking these actions we are of the view that, alone, they will be insufficient to address the issues identified by the Review.

211. The vocational qualification system in Wales is currently highly dependent upon the qualification system in England. Most vocational qualifications, particularly those delivered in publicly-funded programmes of learning, were originally designed to meet the policy requirements of the UK government. This has the benefit of supporting the portability of qualifications for learners and employers across the Wales/England border, but has the disadvantage of being difficult to address issues identified in Wales. The UK qualifications regulators share the findings of their work on a regular basis and the findings of this Review will be no exception to this. However it is likely that stakeholders in Wales, including employers and learning providers, will have very limited influence on the developments of new qualifications and assessments in England.

212. Current and imminent changes to the qualification system in England are likely to have a significant impact on the range of qualifications that are available in Wales. For example:

- a number of 14-16 vocational qualifications that have been previously counted in performance measures in England are no longer counted. This is the case for at least one of the popular qualifications taken in Wales which is now unlikely to be delivered in England potentially making its future less secure in Wales;
- 16-19 Diplomas currently taught in further education will be replaced, in England, from 2020 to 2024 with new qualifications specially commissioned as part of ‘T-level’ programmes, so any changes would be relatively short-lived;
- apprenticeships in England will be assessed by end-point-assessments instead of (or in some cases, as well as) NVQs.
213. It is also a conclusion of the Review that the NVQ portfolio-based model of assessment, where competence needs to be demonstrated across all units and elements of selected occupational standards (and preferably in the workplace), is unlikely ever to be a fully affordable model of assessment within publicly-funded training programmes, such as apprenticeships, in the CBE sector. By design, the assessment – if conducted properly - is time-consuming, resource-intensive, difficult to evidence within a single employer, and likely to be inconsistent even where best efforts are made. Tweaks to the current system are only likely to have limited effect while the assessment model is so inefficient and difficult to implement.

214. Adjustments to the current suite of qualifications would not wholly address some of the other issues identified in the Review, such as the early specialisation of learners, the lack of work-readiness of learners completing full time FE programmes and the complexity of progression routes. In our view, it is likely that only broader, more systemic change can effectively address these issues.

215. To conclude, in the context of the significant change that is underway for vocational qualifications and pathways in England, relying on remedial actions alone and assuming the continuation of the current suite of qualifications is not going to be sustainable in the medium to long term. The reform of CBE qualifications, whether in Wales or in England, is inevitable.

Phase 2 - Options for reform

216. Having gathered the evidence for the Review, we have considered, over several months, the possible extent and nature of reform. We have discussed and developed options, with CITB and other sector bodies, with Welsh Government and with the BACH Wales network of construction heads in further education through a combination of in-depth discussions and full-day workshops. In each case we have weighed up the benefits of relying on developments in England, or of taking control of reform in Wales and the need for portability. We have considered aspects of manageability, validity and reliability as well as the importance of assessment being engaging for learners.

217. The options, for each main area of learning are set out below, together with the benefits and risks associated with each:

• 14-16 and 16-19 for (primarily) progression into higher education;
• 16-19 full-time further education for (primarily) progression into apprenticeships or employment; and
• Apprenticeships.
The options we have considered are set out in the table below. Each option, and its benefits and risks, are explained in the pages that follow.

<table>
<thead>
<tr>
<th>Area of learning</th>
<th>Option no.</th>
<th>Option high-level description</th>
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<tbody>
<tr>
<td><strong>A</strong></td>
<td></td>
<td></td>
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<tr>
<td>14-16 mainly in schools and 16-19 primarily for progression to higher education</td>
<td>A1</td>
<td>Continue to <strong>designate</strong>(^{25}) existing (and/or new) qualifications as eligible for use on publicly funded courses for learners under 19.</td>
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<td></td>
<td>A2</td>
<td>Develop approval criteria with a view to <strong>approving</strong>(^{26}) one or more versions of these qualifications for use in Wales.</td>
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<tr>
<td><strong>B</strong></td>
<td></td>
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<tr>
<td>16-19 full-time further education primarily for progression into apprenticeships or employment(^{27})</td>
<td>B1</td>
<td>Aim to designate the new qualifications -developed in England for use on T-level programmes – for use on publicly funded courses in Wales.</td>
</tr>
<tr>
<td></td>
<td>B2</td>
<td>Commission new broad Foundation and Progression qualifications, with trade-specific pathways, for use in Wales.</td>
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<td><strong>C</strong></td>
<td></td>
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<tr>
<td>Apprenticeships</td>
<td>C1</td>
<td>Designate, where possible, end-point assessments that are developed for use in England on Trailblazer programmes and continue to regulate NVQs where these are still offered.</td>
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<tr>
<td></td>
<td>C2</td>
<td>Commission a generic qualification, with trade-specific knowledge-tests, for use on apprenticeships in Wales, combined with an enhanced employer gateway. The qualification and the employer gateway combined would ensure coverage of the core National Occupational Standards.</td>
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</tbody>
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\(^{25}\) Qualifications used on publicly-funded programmes of learning for learners under the age of 19 must either be ‘designated’ or ‘approved’ by Qualifications Wales. Where we set no qualification-specific approval criteria, we follow a low-key process of ‘designation’ which includes some basic checks. Where we prioritise qualifications and develop more detailed requirements, we require them to undergo an ‘approval’ process.

\(^{26}\) See footnote 25 above.

\(^{27}\) We are not proposing any changes to the qualifications taken in further education by lower-ability learners at entry level or level 1, the purpose of which is often primarily to re-engage with learning. There are a range of generic qualifications which can be taken at this level in a construction context.
Learning area A: 14-16 courses (mainly in schools) and 16-19 courses intended, primarily, to provide progression to Higher Education

Option A1 Continue to designate existing (and/or new) qualifications

<table>
<thead>
<tr>
<th>Description of Option A1</th>
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<tbody>
<tr>
<td>We would continue to designate existing, or new, level 1/2 qualifications for 14-16 learners in schools, and existing (or new) level 3 qualifications for 16 to 19 learners in schools and FE colleges, where the purpose of the qualification was to provide progression to further or higher learning.</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Benefits of Option A1</th>
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<tbody>
<tr>
<td>Feedback on this sub-set of the current range of qualifications was generally more positive than for other qualifications and there would be no disruption to awarding bodies or learning providers. The existing market could continue.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Disadvantages and risks of Option A1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not all of the existing qualifications are available through the medium of Welsh.</td>
</tr>
<tr>
<td>The current suite of qualifications is vulnerable to policy changes in England. At the time of drafting we learned that one of the most popular qualifications for 14-16 learners had been dropped from the list of qualifications that can count in performance tables in England. This may affect the viability, for awarding bodies, of continuing to offer such qualifications in Wales.</td>
</tr>
<tr>
<td>Having a range of different qualifications, without specific approval criteria, makes learner/centre choice more complex and provision less consistent than a national suite.</td>
</tr>
</tbody>
</table>
Option A2 Develop approval criteria with a view to approving one or more versions of these qualifications for use in Wales.

Description of Option A2
Qualifications Wales would develop approval criteria for:

i) a national construction-based qualification (possibly with pathway options) for learners aged 14-16 to be taken alongside GCSEs at school (or through college links with schools); and

ii) a national construction-based qualification for learners aged 16-19, to be taken alongside other qualifications, with a view to progression to higher education.

We would either invite all awarding bodies to submit qualifications for approval against these criteria or select or commission\(^2\) a single version of each qualification for Wales.

We would advise Welsh Government to give these qualifications equal precedence to general qualifications in performance measures.

Benefits of Option A2
We are of the view that one or more awarding bodies would have qualifications which, possibly with some small adjustments, would meet our criteria without needing to develop new qualifications from scratch.

We would ensure that all approved qualifications were available through the medium of Welsh.

Disadvantages and risks of Option A2
There is a risk that awarding bodies would not be interested in making even minor amendments to existing qualifications to meet the approval criteria that we would develop. This is why we are considering whether restricting the qualifications to a single supplier would help to support the ongoing viability of these qualifications.

In our consultation we invite awarding bodies to advise us which option (including, if suggested, any further option) would be most likely to secure ongoing provision in Wales.

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\(^2\) With ‘selection’ we publish approval criteria and selection criteria and awarding bodies submit qualifications that meet this criteria – this may well include existing qualifications. We would then approve the one (or other specified number) version of the qualification that met the approval criteria and best met the selection criteria. Where we ‘commission’ awarding bodies bid to develop (or provide) a qualification and only the commissioned awarding body submits the qualification for approval.
Learning area B: 16-19 vocational courses in further education – for progression into apprenticeship or employment

Option B1: Aim to designate the new qualifications – developed in England for use on T-level programmes – for use on publicly funded courses in Wales.

<table>
<thead>
<tr>
<th>Description of Option B1</th>
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</thead>
<tbody>
<tr>
<td>Qualifications Wales would continue to liaise with the UK Government and the Institute for Apprenticeships with the aim of enabling learners in Wales to have access to the qualifications developed for, and used within T levels in England. The awarding body for each of these qualifications would be invited/encouraged to submit the qualification for designation for use on funded programmes of learning in Wales.</td>
</tr>
<tr>
<td>Existing Further Education Diplomas would continue to be designated in Wales, for as long as awarding bodies were willing to offer them.</td>
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<table>
<thead>
<tr>
<th>Benefits of Option B1</th>
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<tbody>
<tr>
<td>Qualifications would be highly portable across Wales and England providing a level playing-field for learners in both nations. Stakeholders have stressed the importance of portability for learners and employers.</td>
</tr>
<tr>
<td>The panels for designing T levels in Wales include key UK employers to ensure that the qualifications meet the needs of industry. This could potentially address some of the currency issues that are identified within the Review.</td>
</tr>
<tr>
<td>Where additional qualifications continued to be offer by awarding bodies, there would be no restriction on these being offered in Wales, providing additional choice to learners and centres.</td>
</tr>
</tbody>
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29 We are not proposing any changes to the qualifications taken in further education by lower-ability learners at entry level or level 1, the purpose of which is often primarily to re-engage with learning. There are a range of generic qualifications which can be taken at this level in a construction context.
Disadvantages and risks of Option B1

We would be unable to ensure that the issues identified by the Review would be addressed and there is a clear risk that many would not be addressed. Our discussions with stakeholders, in developing these proposals in response to the issues identified by the Review, have indicated very strong support for the introduction of a foundation year in further education, leading into apprenticeships.

Wales would be highly dependent upon qualifications developments and regulatory arrangements in England and there would be little or no opportunity for stakeholders in Wales to influence the design, development, content, assessment, quality assurance or overall regulation of the new qualifications.

It is not yet clear whether and/or how the qualifications within T level programmes could be used in Wales.

If it is possible to use these qualifications in Wales, some constraints and challenges would remain:

- the qualifications themselves will be only part of the T level programme of learning in England (including maths, English and work experience in a programme totalling 900 hours). The T level will be awarded for completion of all elements of this programme. Welsh Government may have different requirements for FE programmes – and the work experience element, in particular, is likely to be very challenging to implement across Wales. Full time FE programmes in Wales are currently costed on a basis of significantly fewer hours than 900. It may therefore be difficult to deliver the same qualification within a shorter learning programme; and

- the intellectual property rights for the new qualifications will rest with the Institute for Apprenticeships. This could make it impossible to adapt the qualifications for use in Wales, if we wish to.
**Option B2: Commission new broad Foundation and Progression qualifications, with trade-specific pathways, for use in Wales.**

**Description of Option B2**

Qualifications Wales would restrict and commission two (or four – see footnotes) new qualifications, each with trade-specific pathways, for learners aged 16-19 on full-time programmes of learning in further education:

i) one\(^{30}\) Construction and Building Services Foundation qualification with trade-specific pathways

ii) one\(^{31}\) Construction and Building Services Progression qualification with trade-specific pathways.

The **Foundation qualification** would be taken on the first year\(^{32}\) of all FE construction programmes and learners would develop:

i) broad-based, cross-cutting knowledge, understanding and skills about, and for, working in the CBE sector (to include an understanding of how the different trades relate to each other, health and safety, and employability skills such as problem solving, planning, organisation and personal effectiveness);

ii) technical skills in either a chosen trade or a range of trades (learners specialising in a chosen trade should have the opportunity to sample other trades);

iii) an awareness of current and emerging technologies; and

iv) an awareness of the requirements of traditional buildings and materials.

The **Foundation qualification**, a level 2 qualification, would probably be assessed through a mixture of a practical project-based assessment (where softer skills and trade skills are demonstrated) combined with online assessment of core knowledge. However, the commissioned awarding body would be able to suggest, to Qualifications Wales, alternative effective, efficient and engaging assessment methods.

As well as taking the **Foundation qualification**, learners would develop communication and numeracy skills in the context of the sector and would take Essential Skills qualifications.

At the end of the Foundation programme learners would progress either into an apprenticeship or would continue in FE for one further Progression year, developing their skills before subsequently entering an apprenticeship.

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\(^{30}\) or two separate, but similar, Foundation qualifications – one for Construction and one for Building Services

\(^{31}\) or two separate, but similar, Progression qualifications – one for Construction and one for Building Services

\(^{32}\) Learners in FE who are not yet ready to enter the foundation qualification would be able to follow, as they do at present, one-year level 1 (or Entry level) courses, the prime purpose of which is to re-engage them with learning. Learners would take existing vocational awards at level 1 (or Entry level) before, potentially, progressing to the foundation programme.
The **Progression qualification**\(^{33}\) would be taken by those learners remaining in FE. It would enable learners to focus on developing their trade and employability skills. The trade skills would be developed in line with the National Occupational Standards. We suggest that the following assessment methods would be developed although, as for the Foundation qualification, it would be open to the commissioned awarding body to suggest alternative methods to Qualifications Wales:

i) a substantial practical skills project with a generic structure prescribed by the awarding body and consistent across trades. The specific choice of project-task would be centre-devised dependent upon the trade studied and local opportunities for demonstrating skills (internally assessed, externally moderated). The project would normally be undertaken in a simulated setting;

ii) a recorded oral discussion. This is to test underpinning knowledge and understanding, in relation to the project completed and to the application of the skills demonstrated to a range of different contexts including traditional and modern buildings (internally assessed, externally moderated);

iii) an online test of essential knowledge (awarding body designed and externally assessed). This would be available for core trades, with the scope for a centre devised written assessment for more specialist trades. For some trades this may be substituted by existing industry-specific external tests.

**Benefits of Option B2**

Commissioning new qualifications would be a robust response to the findings of the Review, that would address many of the issues identified in the longer term. Option B reflects suggestions for addressing the issues that were proposed, and supported, by stakeholders. We have tested the concept with CITB, other sector bodies and employer groups, with Welsh Government, with further education providers and with employers - and it has been positively received.

CBE qualifications within further education would no longer be dependent upon the changes in England, creating a degree of stability and greater scope for Qualifications Wales to regulate the qualifications once introduced and to require improvements where necessary.

The availability of Welsh-medium assessment would be guaranteed.

We would continue our close engagement with employers and learning providers in the commissioning and development of these qualifications, building buy-in to, and ownership of, the new qualifications rather than the sector in Wales being the passive recipients of qualifications designed elsewhere.

\(^{33}\) probably also a level 2 qualification, although this needs further consideration.
The broad-based content of the Foundation qualification would address concerns expressed by employers about learners specialising on a single trade too soon. The qualification would offer a balance between focusing on a single trade – meeting the needs of those learners who have a clear sense of the trade they wish to follow - and acquiring broad-based skills. Learners would be better equipped to switch trades and start an apprenticeship in a different trade if they so wished (or if better employment opportunities presented themselves locally).

Learners would develop the ‘softer’ skills that employers value highly, making them more work-ready and better prepared to start an apprenticeship. The strongly expressed view of the sector was that these skills needed to be developed and assessed within the context of the industry. These would be delivered within both the Foundation and the Progression qualification.

Learners would develop an understanding of new technologies and of new ways of working, making them more flexible and able to adapt to the demands of future employment.

Learners would develop an understanding of the challenges of working with traditional buildings – a need which was strongly emphasised by several key stakeholders in Wales.

The Foundation programme (the combination of the Foundation qualification and the Essential Skills), with the aim of providing a direct entry platform for apprenticeships, would place a greater emphasis on, and improve the likelihood of, learners progressing more quickly into apprenticeships rather than undertaking repetitive programmes of learning in further education. Stakeholders expressed the strong view that the best place for learners to develop their skills is in the workplace. Achievement of the Foundation qualification would provide a sound basis for learners to progress after one year into apprenticeships – whether they chose to progress into their original preferred trade or into another.

In both the Foundation and Progression qualifications we could move away from the repetitious qualification structures of existing provision and ensure that assessments were valid, reliable, manageable, efficient and engaging.

Where learning providers are able to deliver skills development in niche skills areas, perhaps to meet local needs, the generic nature of the assessment model for the Foundation and Progression qualifications would allow for these skills to be included. Where demand for these niche skills is small, alternative locally devised knowledge tests, approved by the awarding body, could be substituted for the national ones. Or learners could take a mix of online core knowledge combined with locally devised ‘niche’ knowledge. with the current suite of qualifications.
Where work-placements are available then these can be strongly encouraged and accommodated – but would not form part of the qualification. The practical assessment would enable learners to demonstrate skills that relate to the national occupational standards and would also provide learners with good evidence of a substantial project that they have undertaken.

Should option C2 also be adopted for apprenticeships (see below) the Progression qualification would prepare learners well for the style and format of their subsequent Apprenticeship assessment. The knowledge assessment component from the Progression qualification would count as the knowledge element of the Apprenticeship qualification.

The generic nature of the practical and oral assessments within the qualifications increases the viability of the qualification for those awarding bodies who may be interested in bidding for the commission. It avoids the need for multiple different assessments for different trades with small numbers. Only the knowledge tests would require differentiated assessments – and producing these as online tests is an efficient and cost-effective way of developing such assessments and would be easier to update when required.
Disadvantages and risks of Option B2

There would be different qualification systems for further education learners in CBE in Wales and England. Unless the changes are communicated effectively, there is a risk that employers, learners and parents may find this confusing and learners in Wales may be concerned that their qualifications may not be recognised by employers in England. There may be a perception that the programme in Wales is less valuable than that in England (although the reverse may also apply). This risk may be particularly the case if learning programmes in Wales are significantly shorter than learning programmes in England. However, endorsement from construction and building services sector bodies and professional bodies and associations would significantly mitigate this risk.

There would, potentially, be more significant changes for learning providers than with B1 – although at this stage it is not possible to quantify the extent of change which would be brought about by the introduction of T level qualifications. Introducing the new Foundation and Progression qualifications would require strong and effective change management to support Further Education, involving Welsh Government, professional and sector bodies and associations, Qualifications Wales, Colegau Cymru, the BACH network, the commissioned awarding body and other partners. This would include the need for staff development in preparation for the introduction of the new qualifications. Learning providers would need to prepare new programmes of learning and to find ways of delivering the new components of the Foundation and Progression qualifications. There would also need to be extensive engagement with employers to facilitate progression into employment.
Learning area C: Publicly funded apprenticeships

Option C1 Designate, where possible, end-point-assessments that are developed in England

<table>
<thead>
<tr>
<th>Description of Option C1</th>
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<tr>
<td>Qualifications Wales would accept applications for the designation of end-point assessments, designed for use in England on Trailblazer apprenticeships, where submitted by a recognised awarding body. Providing that Welsh Government, and the Issuing Authorities for apprenticeships, accept these end-point-assessments into apprenticeship frameworks, apprentices on Wales would then take end-point-assessments where available. Where end-point-assessments are not available (and, potentially in any case, if still required by CSCS to become a cardholder), learners would need to continue to take NVQs.</td>
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<tr>
<th>Benefits of Option C1</th>
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<tr>
<td>Aligning the assessments taken in apprenticeships in Wales with those taken in England would ensure the portability of these qualifications across the permeable border of Wales and England. Such portability is likely to be attractive to employers – particularly those employing apprentices in Wales and England. It may also be attractive to those learning providers in Wales who provide services to employers in England.</td>
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<thead>
<tr>
<th>Disadvantages and risks of Option C1</th>
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<tbody>
<tr>
<td>Wales would retain a high dependency on policy decisions about qualifications and end-point-assessments that are made by the UK Government and the Institute of Apprenticeships. Qualifications Wales would have limited, if any, ability to influence the design, development, content or assessment of these qualifications and, therefore, would not have the power to ensure that the assessments addressed the relevant issues identified by the Review. There may be a high risk that these issues would not be addressed.</td>
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There is no guarantee that end-point-assessments developed in England will be awarded by recognised awarding bodies. Where they are not, Qualifications Wales would be unable to regulate these assessments unless the end-point-assessment organisation was willing to apply for recognition. A significant number of such organisations that exist across other sectors are not recognised. |
It has proved challenging for the construction sector to develop role-specific standards and end-point-assessments for apprenticeships and progress has been slow. It has proved difficult for employers to reach consensus about assessments, which are individually designed for each trade, and it seems unlikely that all employers will be satisfied with the outcomes. While stakeholders have urged us to consider portability, others have warned us to ‘avoid going down the Trailblazers route’. Because each individual role must have separate approval of an assessment plan, the process of implementing new apprenticeship standards is likely to be relatively slow and piecemeal. Recent developments seem likely to require the inclusion of current NVQs within Construction-related Trailblazers on top of what has already been approved. Continuing with the current assessment model for NVQs in Wales could perpetuate the significant challenges of assessing NVQs effectively within apprenticeships that were identified by the Review.

It is likely to prove very challenging to ensure that all end-point-assessments designed in England are available through the medium of Welsh.

Option C2 Commission a generic qualification for use on apprenticeships

Description of Option C2

Qualifications Wales would restrict and commission a new Apprenticeship Qualification for Construction and Building Services\(^34\) which would provide a generic framework for the assessment of apprentices at the end of their apprenticeship, to be combined with employer sign-off.

Pre-entry requirements for taking the qualification:

There would be a pre-requisite for the employer to sign-off that the apprentice had completed the apprenticeship satisfactorily and had performed against all core NOS for the chosen trade (or trades). This would not form part of the qualification but would be a pre-requisite for taking the assessment\(^35\). The employer would submit a record of sign-off together with photographic evidence (confirmed as authentic by the employer) to the learning provider/centre which would quality assure the photographic evidence to ensure the consistency of the standard of finished work presented. The centre would only then enter the candidate for the apprenticeship qualification. The awarding body would have a quality assurance role in overseeing the pre-entry processes of the centre.

The qualification would consist of:

i) A *work-based project*, identified together by the learning provider, employer and learner as a single substantial piece of work that would best demonstrate their skills and performance against occupational standards.

ii) A *professional discussion* during which the learner presents their evidence of their project (which may include, for example, an artefact and/or video recording of work). The discussion would also test the learner’s understanding of how their skills may have been applied and/or adapted in *other contexts*; in *traditional buildings* and using *new technologies*.

\(^34\) Or two qualifications – one construction and one building services.

\(^35\) This is similar to, but more specific than, the Employer Gateway in England. Consideration could be given to commissioning guidance on the standards, or formative assessment workbooks – which may work that the sector bodies could commission.
iii) Either an online knowledge test combining core knowledge, health and safety and knowledge specific to the trade. Learners who had passed this test within the Progression qualification would not need to resit it.

iv) Or (particularly for niche trades) a shorter online knowledge test combining core knowledge and health and safety plus either an oral test of niche/specialist trade knowledge or a presentation (with opportunities for questions) of niche/specialist trade knowledge.

The progression routes from B2 to C2 (that is, typically, from age 16) are exemplified in the diagram below:

<table>
<thead>
<tr>
<th>Learner</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Foundation qualification</td>
<td>Apprenticeship</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Foundation qualification</td>
<td>Progression qualification</td>
<td>Apprenticeship or other employment</td>
</tr>
<tr>
<td>C</td>
<td>Apprenticeship</td>
<td>Foundation qualification</td>
<td></td>
</tr>
</tbody>
</table>

**Learner A** follows the foundation programme at 16 (or older) for one year and then obtains an apprenticeship, which he/she follows for at least 18 months (likely to be longer for some trades, for example electricians), taking the apprenticeship qualification at the end of this. He/she attends college on a day or block-release basis to develop underpinning knowledge as well as skills that are not readily accessible in their workplace. They would not take this last qualification until their employer had signed them off as competent.

**Learner B** also follows the foundation programme at 16 for a year, but does not obtain an apprenticeship. He/she stays in FE for a further year, taking the progression qualification. He/she may have the benefit of a work placement, though this is not assessed. After 2 years, he/she gets accepted onto an apprenticeship. He/she already has passed the knowledge component of the apprenticeship qualification so, at the end of at least 12 months apprenticeship (or when signed off as competent by their employer – this may take longer for some trades such as electrical) takes the remaining components of the apprenticeship qualification. Conversely, learner B may decide to progress into other employment, having gained transferable skills on their further education programme.

**Learner C** is offered an apprenticeship straight from school. They learn on-the-job but attend college on a day or block release basis to support their learning. They take the foundation qualification having attended college part-time, at the end of year 2 (or, if ready, year 1) and their apprenticeship qualification after at least 30 months or when signed off as competent by their employer. Again, this may take longer for some trades than others.
**Benefits of Option C2**

Qualifications Wales would be able to ensure that the issues identified in the Review would be addressed more fully.

It would result in a clear and cohesive qualification pathway for all CBE learners in Wales, with all aspects of the qualification system for learners aged 14-19, whether in school, colleges or apprenticeships, designed together.

The new assessment regime would be able to cover all occupational routes within the sector from the same point in time, rather than requiring the development of separate assessment plans for each occupational route as in England.

The new qualification, combined with informed employer sign-off would reduce or remove the reliance on the current assessment methods for NVQs responding to the issues raised with these qualifications in the Review. The qualification is likely to have a significantly more reliable assessment regime than the present NVQ approach. While the current intention for NVQs is that they test all skills for a trade across the occupational standards, the Review identified that this is not currently achieved in practice and, in reality, is undeliverable on publicly funded programmes. In the new qualification, consistency and comparability would be through the single practical assessment and professional discussion (which would address identified national occupational standards) and through the standardised online tests of broader, essential and trade-specific knowledge.

The new apprenticeship qualifications, with the employer sign-off pre-entry requirements, would become the new NVQs, providing portability for learners and employers.

The commissioned qualification would be guaranteed to be available for learners to take through medium of Welsh or English.

The qualification, with its in-built flexibility to assess local, niche/specialist and employer needs – and through the essential involvement of employers in identifying the work-based project - could address concerns expressed during the Review that the needs of smaller employers were not being met by the qualifications that are designed on a UK national level. The proposals for a fixed format for the practical assessment, but for a personalised approach to the selection of tasks, allow for the needs of all employers to be met.

The generic nature of the practical and oral assessments within the qualification would increase the viability of the qualification for awarding bodies, reducing the need for multiple different assessments for different trades. This would, potentially, if offered to a single bidder, make the ‘lot’ of qualifications more substantial and therefore more attractive to awarding bodies.

The consistent approach to learning and assessment across all trades is likely to be less resource intensive/expensive for learning providers to deliver than the wide range of different courses and assessments likely to be required in England.
Disadvantages and risks of Option C2

There would be a different assessment regime for the CBE sector in Wales to that in England in apprenticeships. At face value, employers may find this inconvenient and confusing. In the Review, several employers told us that they could only tolerate a different system if it was at least as good as, and preferably better than, the offer in England. However, one of the main challenges of the Trailblazer apprenticeships appears to have been in achieving effective assessment for the individual occupational standards that are produced for each role by the Trailblazer groups. Taking a more consistent approach to apprenticeship assessment across the sector, using techniques which we know to be recognised as valid in England – may result in a clearer more coherent offer in Wales than in England.

Without effective communications about the changes, learners in Wales, taking different assessments and qualifications than learners in England may worry that their qualifications may not be recognised by employers in Wales. However, the option to title the new qualification as NVQs, would reduce some of these concerns.

In moving away from the concept of 100% competence across occupational standards in the final assessment (even though this has been seen not to be guaranteed) there may be the perception that the qualifications are less robust than NVQs and that apprentices would not be competent across the whole range of skills. However, in requiring employers to sign-off the learner as competent against all core units, combined with photographic evidence, and by aligning the different assessment elements with the occupational standards, we could demonstrate that the coverage was more reliable. Any existing industry-required trade-specific tests such the Gas Safe test could remain in the apprenticeship requirements. The advice to sector bodies (described in Phase 1 above) could also result in a more manageable set of core standards.
Conclusion

219. Having considered these options we are of the view that following all three Wales-led reform options (A2, B2 and C2) would provide the best chance of clearly articulated, coherent progression routes from 14 to 19 for learners in Wales. It would result in manageable, viable and engaging assessment methods which would strengthen significantly the effectiveness of CBE qualifications in Wales.

220. We would very much welcome your views on the options that we are proposing and we warmly invite you to respond to our consultation that you can find on our website. Having taken into account your views, should we decide to proceed with our preferred options, we would be looking to introduce new qualifications in Wales for first teaching from September 2020 or September 2021. We have the opportunity to ensure that the future skills of young people entering the construction and built environment industry in Wales are reliably and convincingly assessed and rewarded and that the needs of employers in Wales for competent, work-ready staff are fully met.
Acknowledgements

We would like to thank all those who gave their time willingly and generously to participate in the Review and to provide us with the extensive body of evidence on which this report is based. We could not have managed without you. We have thanked some of the individuals and organisations, who helped us, on page 4 of this report. Others who took part are too numerous to mention individually but we value every single contribution. Particular thanks, however, are due to our stakeholder reference panels who provided advice and guidance and constructively challenged our thinking.

• Allan Stuckey Architects
• Alun Griffiths Civil Engineering
• Anwyl Construction
• Building Engineering Services Association
• Bluestone builders
• Bouygues-UK
• Cardiff and the Vale College
• Cardiff Metropolitan University
• Careers Wales
• Carmarthenshire Council/Tywi Centre
• Cartrefi Conwy
• Cartrefi Cymunedol Gwynedd
• Chartered Institute of Building
• CITB
• Coleg Cambria
• Coleg Gwent
• Coleg Sir Gar
• Coleg y Cymoedd
• Costain
• County and Borough of Swansea
• Cyfle

• Dawnus
• Department of Work and Pensions
• Electrical Contractors Association
• Glyndwr University
• Group Llandrillo Menai
• ISG Plc
• Jones Brothers Civil Engineering
• K&C Group
• Neath Port Talbot Council
• NPTC Group of Colleges
• North Wales Economic Ambition Board
• Opus International
• Royal Society of Architects in Wales
• Seddon Construction Ltd
• TAD Builders Ltd
• Torfaen Training
• University of Wales – Trinity St David’s
• Welsh Government/CADW
• Willmott Dixon

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