

# Examiners' Report Summer 2007

GCSE

## Applied GCSE Construction and the Built Environment 2712/2713

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## CHIEF MODERATOR'S REPORT ON THE COURSEWORK UNITS

A number of common themes emerged from the moderation exercise. The approach taken here has been to provide a general commentary and to clarify this by attributing the comments to specific units, where appropriate, in brackets afterwards. Advice to centres, based upon the comments of the Principal Moderators, is provided in italics after each bullet point, as and when appropriate, and wherever the advice is not clearly implied by the commentary.

This year's cohort was, based on prior performance, more capable than the 2006 entries. In the 2006 cohort prior attainment at level 5 KS3 was 60.4% and this rose to 67.3% for the equivalent units. Unit 5716 (Building Services) did not have any entries in 2006 but the prior attainment of the 2007 cohort was 79.5%. The three technical units, available for the first time this year, attracted some very capable candidates with an average prior attainment of 94.6% this is reflected in the excellent results for 5717 (Construction Processes and Technology) and 5718 (Building Design). This trend towards more capable cohorts is encouraging and reflects upon the technical nature of some of the GCSE units.

The following codes apply throughout:

5711	Design for Sustainability and the Built Environment
5713	Carpentry and Joinery
5714	Painting and Decorating
5715	Brickwork
5716	Building Services
5717	Construction Processes and Technology
5718	Building Design
5719	Surveying

- Many centres have done very well. This should be made clear at the outset. However, some have done much less well. The specification and tutor support material are extremely detailed, as are the exemplar student assessments and the more recently completed coursework commentaries. This comprehensive advice and guidance seems to have been more or less ignored by some centres. (All)
- Centres using the templates provided by Edexcel provided evidence as required to allow the assessment criteria to be effectively applied. Many centres used alternative formats and often completely missed some of the assessment evidence requirements (All)

Centres should revisit the specification, the teacher's guide and the exemplar assessment material, and use these to inform their teaching, learning and assessment strategies. Centres are strongly advised to use the templates provided and to ensure that all sections and insertions are completed. At least one key member of the programme team should be encouraged to attend the nearest Edexcel feedback meeting or INSET event.

- Many centres have not followed the clear guidance provided in the specification regarding the assessment tasks and how the evidence should be presented. In a number of centres, practical tasks were reduced in size and in a limited number of cases altered completely. Some centres submitted marks for completion of the setting-out and task completion strands without submitting any written or photographic evidence to support those marks. Every unit specification requires a word-processed technical report to be part of the evidence for assessment but

this requirement was also often overlooked and either hand-written work, or word-processed templates, completed by hand, were submitted. (All)

*Centres should revisit the specification, the teachers' guide and the exemplar assessment material, and use these to inform their understanding of the very specific assessment requirements. Centres should also note that the latitude allowed in 2007, because it was the first year of the double award pilot, will not be allowed again in June 2008 or thereafter. Once again, at least one key member of the programme team should be encouraged to attend the nearest Edexcel feedback meeting or INSET event.*

- Whilst the submission of candidates work did improve this year there were still a number of areas of non-compliance with the administrative requirements of the qualification. These included poorly presented folders, a lack of page numbering, a lack of annotation, use of non-standard mark record sheets and over-stuffed, badly organised plastic wallets. In some cases centres had to be reminded that an EDI printout must accompany the candidates' work. (All)

*Centres must ensure that the candidate's name, number, centre number and page number appear on every sheet. The work should be securely bound together with staples or treasury tags. The use of plastic wallets and folders should be discouraged. It is particularly important that pages are annotated with the page number in order to facilitate confirmation of the marks awarded by the centre. Centres must use the standard mark record sheets provided and not in-house documentation.*

- Once again a number of assignments did not allow the candidates sufficient opportunity to access the higher grades available due to a lack of information or the use of restrictive testing methods. For example the use of questionnaires, 'gapped' handouts and 'cloze' techniques limited discussion, and hence the opportunity to access the higher mark bands. For example one centre provided their students with a grid for criteria (b) that already identified the hazards - as the identification of hazards is the essence of this criteria the centre had severely restricted the marks that could be awarded to the students (All)

If the advice given above is heeded, this will not recur, because centres will be using modified teaching, learning and assessment strategies. Questionnaires, gapped handouts and the like may be useful teaching techniques and appropriate for formative assessment in class, they do not meet the assessment requirements for this qualification.

- There were a number of examples of poor health, safety and welfare practices with some photographs evidencing students working without appropriate PPE, notably safety boots, when completing their practical assessment tasks.

Centres must examine their own practices very carefully. Health, safety and welfare is probably the most important issue in construction and the built environment. It is important that centres observe all the relevant health and safety legislation and it is particularly important that they instil good practice in young learners at the beginning of their studies.

- Whilst the general ability of the cohort has improved, in a few centres the level of candidate was often at the lower end of the academic spectrum. Centres must recognise that the qualification was designed to compare with other GCSEs and

cognate level 2 programmes and was never intended to be an easy option for underachievers. (All)

Centres need to be aware that the processes and procedures used to standardise, moderate and award the internally assessed component of the GCSE in C&BE are as rigorous as the procedures in any other GCSE and follow exactly the same Code of Practice.

- Once again a limited number of centres had assessed at the upper end of every mark band. The apparent logic appeared to be that once a learner entered a mark band they automatically went straight to the top of it! In every case the work was moderated downwards in accordance with the published mark bands for the assessment criteria for portfolio work and the extended assessment guidance provided for each internally assessed unit. There was rarely sufficient discussion to support the marks given and the evaluation section tended to be more an evaluation of the scenario and not of the learning process. (All)

*Centres must revisit this issue as it restricts achievement of higher grades.*

- Some centres included formative class work in the portfolios. Much of this did not relate to the scenario and some of it was wholly irrelevant and served only as padding. The candidates had obviously spent a lot of time and effort on this work but, unfortunately, it did nothing to improve their grades. (5711, 5713, 5714, 5715, 5716, 5719)

Centres must note that submission of work done by the candidate, but not required by the assessment brief within the unit specification, is pointless, and will attract no marks.

- In general photographic evidence was often of an inappropriate size and/or of insufficient resolution to enable accurate assessment decisions and, in several cases, non-photographic paper had been used. In addition a number of centres did not provide photographic evidence of candidates work - centres should note that the word processed technical report is the vehicle of assessment and if photographic evidence of the practical outcome is not contained within the report then the candidate should be awarded zero marks for criteria (c) and (d) (5713, 5714, 5715, 5716)

Photographic evidence needs to be larger, of higher resolution and printed on appropriate paper. Centres must note that a single photograph of a finished job of work is unlikely to provide the level of detailed evidence necessary to confirm the mark awarded by the centre. The centre name and number and candidate name and number should be clearly displayed on the work within the folder.

- Often there was a general lack of quality control measurements and/or tolerance checks which would support the marks awarded for both criteria (c) and (d). (5713, 5714, 5715, 5716)

Centres should revisit the exemplar assessments available, and use these to improve the quality control records that should be included within the technical report. The use of the templates provided leads to candidate to make the appropriate quality control records - all sections of the table should be completed.

- Although tools, materials, PPE and processes were generally listed, or their names linked with pictures in some way, there was often a lack of evidence to suggest selection or de-selection of such items for the task in hand. This created yet another barrier preventing candidates from accessing the higher mark bands available. (5713, 5714, 5715, 5716, 5718,5719)
- Some centres used a proforma for health, safety and welfare that only allowed candidate to identify control measures and candidates at risk. Risk assessments were often far too generic and non-task specific. Once again, this limited the candidates' opportunities to access the higher mark bands available. (5713, 5715)

Candidates need to identify hazards themselves.

- In some centres, the use of the past tense throughout suggested that planning had been done retrospectively, rather than prior to the practical task. (5713, 5714, 5715, 5716)

Centres should note that processes need to be identified via a method statement, flow diagram or written narrative and that the planning must be done before the task is attempted.

- Once again a number of centres adopted standard templates, worksheets and schemes of work from other qualifications. These did not meet the assessment criteria for this qualification and, once again, their use has effectively denied learners the opportunity to access the higher mark bands. (5713, 5714, 5715, 5716, 5717 )

Centres should note that the GCSE in C&BE is different from earlier construction-based qualifications and has many characteristics that specifically relate to study at GCSE level. This implies the need for new, separate, dedicated documentation written to fit the requirements of this new qualification.

- There was often little evidence of effective setting out and marking out. (5713, 5714, 5715, 5716)

Centres should note that evidence of either setting out or marking out is required in every practical task. This should be included in the technical report and used to compare drawing dimensions with actual dimensions. For example, in 'Carpentry and Joinery', photographs of the 'marked out' joints with hatched areas of waste should be provided. In 'Painting and Decorating' evidence of checking wallpaper for plumb, measuring and cutting wallpaper accurately with the minimum of waste and appropriate positioning of that wallpaper should be provided. In 'Brickwork' evidence of setting a line to gauge, setting out the feature and setting out to plumb should be provided.

- In 'Carpentry and Joinery' joints should be photographed upon completion, before any shrinkage occurs. (5713)
- In 'Painting and Decorating' some centres failed to address all three of the internally assessed tasks. This made it very difficult for the candidate to access the higher mark bands. (5714)

- In the brickwork module centres must complete a wall with a minimum area of 1m<sup>2</sup> - there is no advantage of going above this size. In order to access the upper end of mark band 3 it is necessary to introduce a flush feature in bricks of a different colour to the main brickwork. The provision of more complex features, arches etc., does not enhance the candidates marks as it is the quality of a straight brickwork panel that is under assessment (5715)
- Centres should recognise that the Board of Moderators is highly supportive of the concept of 'value added', if there is sufficient time left over after the specified assessment task has been completed, but that the additional, more complex, work will attract no extra marks. The unit is entitled 'Brickwork' not 'Bricklaying' and the idea is to use brickwork as a vehicle for learning and not solely as preparation for a job. Completion of the specified model, supported by the technical report required by the unit specification, is the ideal.

## ACHIEVEMENT

The figure in the box shows the cumulative percentage achieving each grade for the internally assessed component of the units shown.

Unit	A*	A	B	C	D	E	F	G	U
5711	0.4	6.2	25.7	45.8	59.6	68.2	75.7	81.8	100.0
5713	0.8	6.4	24.7	43.5	61.0	72.8	81.1	86.5	100.0
5714	0.3	4.3	15.6	32.0	45.5	52.7	63.7	83.6	100.0
5715	5.4	20.0	41.6	57.8	73.0	79.2	83.1	86.2	100.0
5716	0.0	0.0	3.3	21.7	51.7	71.1	88.9	97.2	100.0
5717	15.2	22.3	29.5	38.4	61.6	80.4	88.4	90.2	100.0
5718	15.5	29.8	57.1	71.4	79.8	85.7	90.5	90.5	100.0
5719	0.0	0.0	7.4	33.3	59.3	66.7	66.7	70.4	100.0

The Board exercised great care to ensure that standards were comparable across the full range of units, and that the moderated marks were based solely on the mark bands and the extended assessment guidance provided.

The post-moderation results obtained exhibited a good correlation with the Key Stage 3 indicators that were used by the Board, post-moderation, to triangulate the results. In effect, those candidates who had done well prior to commencing the course, did well on the course, as might be expected.

The judgement of the Board of Moderators is that the second year of the pilot has gone well, in terms of the internally assessed components of the qualification with many centres showing substantial improvements this year as they have better addressed the requirements of the qualification. Most centres deserve great praise for coming to terms with the demands of this exacting qualification so quickly. If the advice and guidance provided above can help other centres to improve their provision to match that of the best centres, we can look forward to an even stronger performance next year.



## CHIEF EXAMINER'S REPORT ON THE ON-SCREEN UNITS

This second year of the pilot brought about a substantial increase in entries across all units. This improved the accuracy of the statistical information produced this year. In 2006 one poorly performing or exceptionally good centre could skew the statistics because of the small cohort entered for some units.

This year's cohort was, based on prior performance, more capable than the 2006 entries. In the 2006 cohort prior attainment at level 5 KS3 was 60.4% and this rose to 67.3% for the equivalent units. Unit 5716 (Building Services) did not have any entries in 2006 but the prior attainment of the 2007 cohort was 79.5%. The three technical units, available for the first time this year, attracted some very capable candidates with an average prior attainment of 94.6%. This trend towards more capable cohorts is encouraging and reflects upon the technical nature of some of the GCSE units.

The following codes apply to papers in the second year of the pilot:

5712/01	The Built Environment and the Construction Industry (core)
5712/21	Carpentry and Joinery (optional)
5712/22	Painting and Decorating (optional)
5712/23	Brickwork (optional)
5712/24	Building Services (optional)
5712/25	Construction Processes and Technology (optional)
5720/21	Carpentry and Joinery (optional)
5720/22	Painting and Decorating (optional)
5720/23	Brickwork (optional)
5720/24	Building Services (optional)
5720/25	Construction Processes and Technology (optional)
5720/26	Building Design
5720/27	Surveying

This is the second year of awarding for the single GCSE and the first year of awarding for the double GCSE. Copies of the previous years papers had been circulated to members of the board in preparation for the awarding meeting. Evidence indicates that the examinations were of equal rigour and difficulty with good correlations between the core results and the option results. Additionally board members with experience of other level 1 and level 2 qualifications confirmed that the papers compared favourably with these other awards. In general the 'ramping' of the papers proved to be effective, however question 3 often provided difficulties for a number of candidates who performed better elsewhere on the paper.

### Advice and guidance for centres

- Centres should use the Sample Assessment Materials available, and the tests that were used in June 2006 and 2007, as mock tests to familiarise candidates with the format of the test questions that will be used in June 2008.
- Centres should note that the on-screen tests scheduled for June 2008 will follow the same format as those used in June 2007. It follows that the questions will be 'ramped' in a similar fashion, with the same techniques used, in the same order, to test the candidate's knowledge and understanding of the unit specifications. Question 7 may be redesigned to allow candidates access to marks for sections 2, 3 and 4 should the first part of the question be answered incorrectly. It will still test the application of mathematics in an applied context and will require the same skills of multiplication, addition and use of percentages.

- Centres should note that the concept of 'ramping' implies that the questions become increasingly more difficult as the candidate proceeds through the test. Theoretically, question 1 is pitched at the F/G grade level, Q 6 at about C grade level and Q10 at the A grade level. This worked very well in June 2007 following the removal of the free text entry for questions 6 and 8. The same principle will apply in 2008 i.e. question 6 will be a selection from drop down lists of 5 options and question 8 will be a selection from a drop down list of 6 options with increasingly 'close' distracters to allow appropriate ramping.
- Centres should arrange for at least one key member of the programme team to attend the nearest Edexcel examination feedback meeting or INSET event.
- Centres should ensure that calculators are available to candidates for use in question 7 of every test.

## ACHIEVEMENT

The figure in the box shows the cumulative percentage achieving each grade for the externally assessed on-screen test component of the units shown.

Paper	A*	A	B	C	D	E	F	G	U
Unit 2	0.6	6.8	30.7	65.3	81.9	90.8	93.9	96.9	100.0
Unit 10	2.9	12.0	37.3	63.5	84.5	91.4	96.6	99.0	100.0

The overall results for the single and double award are detailed below:

Paper	A*	A	B	C	D	E	F	G	U
Single	0.3	3.8	20.4	43.3	65.3	77.2	86.8	94.1	100.0
Double	2.2	5.7	17.2	46.4	67.7	80.9	87.6	93.1	100.0

The statistics indicate a better performance on the double award this is however in line with expectations based both upon prior performance and the anticipated extra commitment of candidates opting for the double award.

The judgement of the Board of Examiners is that the second year of the pilot has gone well, in terms of the externally assessed components of the qualification with many centres showing substantial improvements this year as they have better addressed the requirements of the qualification.

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