

Moderators' Report/  
Principal Moderator Feedback

January 2012

Level 2 Principal Learning  
Controlled Assessments:  
Construction and the Built  
Environment

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## General Introduction

This series saw a decrease in the amount of coursework submitted for moderation in January by centres from a range of work submitted across all six moderated units. However the standards had again risen this year as centres have settled into the marking bands and encouraged candidates in producing some quality independent evidence.

The majority of centres managed to meet the submission deadline with many submitting earlier than this date. This is appreciated by the moderating team which enabled moderation to start earlier than expected.

The majority of centres that submitted work for moderation this series supplied the correct moderation samples however centres are reminded that they must follow the instructions on the submission of coursework evidence given in the Centre Guidance Document, and include the highest and lowest with their coursework sample.

Centres made full use of the Candidate Record Sheets attached to each piece of coursework, but many centres did not state the candidate number.

Centres are reminded that 'any assignment briefs the candidate used must be included with the evidence', as indicated on the Candidate Record Sheets. This is especially useful for the moderator when trying to interpret where marks have been awarded.

Centres are reminded that candidates' work must be their own. Any work that has been downloaded and pasted into an evidence portfolio should have its source acknowledged but carry no merit for marks.

The extra guidance to candidates by centres has declined this year as candidates develop the independent learning that is the main strategy behind the diploma.

It is recommended that centres make use of the Tutor Support Materials which provide supplementary guidance for the units when devising learning activities for candidates to accrue evidence to meet the Learning Outcomes more closely. Copies are available to download at [www.edexcel.com](http://www.edexcel.com). Tutors should specifically refer to the extended marking guidance which will assist with the setting and marking of assignments. Assignments written in line with this guide would enable candidates to get a much clearer understanding of what evidence is required in order to achieve a higher banding.

There was limited evidence of internal moderation processes where work could have been moderated by Domain Assessors prior to submission.

## **Level 2 Unit 1 Design the Built Environment: The Design Process**

### **General Comments**

As with previous examination series most centres used the assignment brief contained within the Tutor Support Material available on the Edexcel website. This continues to be a good method of using the support that has been provided for this line of learning. Centres are also encouraged to develop their own assessment materials and link this to a local building project/scenario which may capture a candidate's respective enthusiasm and interest.

### **Learning Outcome 1**

As in previous series of this exam many candidates covered the first area of local factors well. Factors described included, infrastructure, environmental issues, public consultation and the socio-economic impact of the development. Responses in relation to legislation requirements were often weakly described and were generic in detail with limited application to the intended assignment brief. The concept of embodied or embedded energy or energy efficient materials linked to reducing the carbon footprint was often only briefly explored by candidates. To achieve band 3 standard candidates are also required to justify their range of sustainable design features, this was rarely seen in the work submitted for moderation.

### **Learning Outcome 2**

This Learning Outcome covers the nature and availability of utilities and how they may affect the design process. Most candidates identified the services of water, gas or electricity. The telecommunication and drainage utility apparatus was sometimes not identified or described by candidates. Most provided relevant colour identification of the services, but did not identify nor explain the importance of the depth of each service. An expansion of the description of the disruption to infrastructure caused during utility installation or maintenance could also be built on by candidates. This could include the expansion on issues such as e.g. road closure, traffic delays. There was little coverage of utility distribution in relation to drainage and telecommunications. Isolation points e.g. water valves, stopcocks etc were also lacking in the responses provided. Centres could invite guest speakers from the maintenance sector or utility experts and link discussions to the school or college with which they are being taught in. The impact of the utility on the environment was briefly attempted by most candidates, which included the visual effects of pylons and emissions from power plants.

### **Learning Outcome 3**

This Learning Outcome covers the external building envelope and be able to understand and apply technical information in relation to a chosen specification. Many students failed to link their respective responses to the external envelope and local climate. Aspects in relation to shelter (roof and wall aspects), insulation (roof and wall), the external appearance of the structure and the transfer of sound (cavity wall, insulation, double glazing, etc) and security elements were often attempted by most candidates.

However, the requirement of structural stability and fire were often only very briefly described or not included at all in candidate responses. Many candidates identified materials and gave general specification information; however, the specification information often lacked detailed information such as depth or width of material or link to British Standards or other technical information used in relation to the specification, as outlined in the unit content.

## **Level 2 Unit 2 Design the Built Environment: Materials and Structures**

### **Learning Outcome 1**

This Learning Outcome covers knowledge about construction materials, their function within structures and the use of different structural forms. Candidates' work often identified and described to mark band 2 standards, the materials and their respective function linked to a proposed structure. The key materials forming the structural elements often included; fill materials, concrete, steel (including reinforcement), materials providing shelter and security, including materials that allow the passage of natural light, materials that provide insulation and reduce heat transfer, materials and components providing access to the building. Candidates need to continue to develop their skills as to how to evaluate how different materials work together to perform different functions. Candidates continue to offer only limited responses in relation to the examination of a range of construction elements.

### **Learning Outcome 2**

This Learning Outcome covers how to use materials in a sustainable way. Most candidates attempted or showed some understanding of aspects including the local sourcing of materials, recycling and obtaining materials from sustainable sources. Candidates should be encouraged to further develop their understanding and future responses to include; the use of alternative materials that are not derived from fossil fuel sources ;if the material may be produced from recycled materials for example plastic lumber; consider the amount of energy that has been put into manufacturing, transporting and fixing the material.

In the weaker submitted work candidates did not explain how materials could be used in a sustainable manner linked to their proposed or scenario based project/building. To access the higher Mark Bands, as stated in previous Examiner Reports, candidates need to justify the use of a range of sustainable materials and analyse more clearly, in sustainability terms, the benefits and drawbacks of all of the key materials used on the project, considering their effects on the environment.

### **Learning Outcome 3**

This Learning Outcome covers how to evaluate and use different structural forms. Most candidates were able to identify the structural form that was used on drawings in their assignment brief, which was in general a structural steel frame. They then identified or described the different structural forms of timber and concrete frame, shell, cellular and cross wall. To achieve higher band marks though candidates need to describe more clearly the benefits or advantages of the each alternative form and link these back to the project brief. Higher marks are also awarded for the evaluation of the suitability of alternative structural forms.

The Learning Outcome also requires candidates to examine and analyse construction details, for higher marks this should include a range of details. As in previous years this was generally poorly attempted by candidates.

Details could include, for example, the junction of the roof and wall or the junction of the wall and foundation.

## **Level 2 Unit 3 Design the Built Environment: Applying Design Principles**

### **General Comments**

For the January 2012 series the work submitted related to an exemplar scenario set in the Tutor Support Material with a few minor adjustments. However, increasingly popular and beneficial to the candidates are when the centres devise their own scenario set within their local environment. This allowed the candidates to draw upon their local knowledge and relate their understanding to the learning objectives of this unit from others, specifically Unit 6.

In this series, the majority of the moderators were provided with a copy of the candidates' brief, as in the previous series. If the TSM scenario was selected any alterations were obvious to the moderator.

The centres were prompt with their delivery of the coursework, and all the required paperwork was included and completed correctly. A concern raised by the moderation team is the need for the centres to increase their annotation to support the marks they have awarded to assist the marking process.

### **Learning Outcome 1**

The candidates addressed a wide range and different combinations of outcomes in line with the previous series. The work presented took the form of either, a series of leaflets for each job role addressed, or a poster. Other candidates produced a combination of both in an attempt to fully address the Learning Outcome. All approaches were acceptable outcomes. There was a reduction in the copy and paste approach. This was pleasing to see as candidates are applying their own work throughout the entire project.

The candidates completed the identification and description aspects of the Learning Outcome correctly, by addressing the correct types of job roles. In previous years, some candidates had selected job roles outside the intended "designing occupations" arena, usually craft job roles.

A high percentage of the candidates briefly described and described the job roles. Teamwork and progression routes were addressed to a higher standard than previous January series, but their work could have been expanded further for the majority of the candidates, especially in regarding progression paths.

Finally, the role of the professional institutions and a justification of their role were addressed with more vigour in many instances, but lacked deep description and justification to access the highest mark band.

### **Learning Outcome 2**

This Learning Outcome carries the majority of the marks of the unit. It has been strongly recommended that centres chose a domestic dwelling scenario as this can support most candidates. The candidate can fully engage with the task due to personal experience and circumstance.

Therefore, the assumption is made that the candidates are more likely to be able to include a greater depth of quality to their work. An example would be when addressing materials to be used, structural form, light fittings, door paths, kitchen units, an increased understanding of the space for their floor layouts and elevations. In addition, the locality of the proposed structure can be experienced by the candidates prior or during the assignment period, this would further enhance their potential to access the highest marks.

This Learning Outcome is broken down into three aspects, commenting on the client's brief, producing a design solution and evaluating their design proposal.

- (A) Describes clearly, illustrates and justifies features that will meet all of the client's needs.

The candidates in commenting on the client's brief the candidates should aim to produce a specification for their potential design solution. The majority of centres were successful in achieving Mark Band 1 & 2 marks for this outcome. Some candidates were unable to describe the main requirements of the client and therefore, unable to develop a specification to create a design solution. However, there were exceptions, as a few centres did achieve marks awarded within Mark Band 3.

- (B) Produces a solution and portfolio of high quality design work that shows consistently precise attention to detail.

The candidates demonstrated a range of outcomes from free – hand work to CAD in producing a design solution. The candidates produced floor layouts, elevations and 3D presentations, with some dimensioning. There was not an improvement on previous series regarding the amount of annotation supporting the drawings. However, there were a few exceptions where the candidates achieve very high Mark Band 3 marks. The candidates who did achieve extremely positive marks demonstrated a detailed understanding of the previous part of the Learning Outcome where they addressed the client's needs.

To conclude, many candidates failed to annotate their design proposals in line with the requirements of the specification. In many cases, the lack of annotation limited the marks awarded.

- (C) Evaluates the final design in detail against all of the requirements in the brief.

The third and final part of the Learning Outcome is to evaluate the design proposal. Many candidates mirrored their performance in the first aspect of the Learning Outcome when addressing the needs of the client. However, there was a marginal improvement in marks awarded generally. This could be due to the fact the candidates found it easier to comment on their designs produced, rather create a plan from a client's brief.

Evaluations for some candidates were very brief. Evaluative comments can appear throughout the Learning Outcome and support the design ideas. This

could be very clearly identified to the moderator, and could be paired with annotation for the design ideas.

In conclusion, centres were slightly lenient in awarding marks candidates in this Learning Objective. The design proposals needed annotation to support their design work to access the higher mark bands. Many candidates were unable to access the higher mark bands due to not fully annotating their design ideas.



## **Level 2 Unit 5 Create the Built Environment: Using Tools**

### **General Comments**

In the January 2012 series, the work submitted was in accordance with the practical requirements of the specification and followed the guidance in the specification. There was a fair selection of practical tasks undertaken, predominately C & J and brickwork. The majority of centres included a candidate's brief to the moderator and the working drawings provided to the candidates.

It is important to note, the unit has two marking grids A and B, where B is ephemeral evidence and the moderators are only assessing Mark Grid A.

The candidates' work was on the whole annotated to a suitable standard by assessors. However, there were exceptions where the moderation process would have greatly benefitted from further information from the centre.

Centres should ensure that where photographs are submitted, they are of good quality to support the marks awarded. Larger and more detailed photographs would help to correctly identify some of the Mark Band B criteria within the witnessed evidence. In addition, the photographs should show hidden detail, for instance hidden joints in C & J, and aspects of the practical tasks that are not able to be recorded in the final outcome. This could also support marks awarded for Health and Safety and Personal Protective Equipment (PPE).

### **Learning Outcomes 1, 2 and 3**

The Learning Outcomes were attempted by many Centre's as separate aspects; learning outcome by learning outcome. However, a percentage of centres did complete Unit 5 as a complete task and there was very little, if any, to distinguish between each learning outcome. This did not aid the moderation process.

### **Mark Grid A**

#### **Learning Outcome 1**

This outcome produced a mixture of responses by the centres submitting work this series. Many candidates were able to describe hazards and risks, PPE required, people at risk, manual handling of materials, but on the whole the work lacked detail to access the highest mark bands. Some aspects of the Learning Outcome were poorly addressed. For example, COSHH and self-reflection were only briefly attempted, with a small percentage failing to cover this aspect of the Learning Outcome at all.

#### **Learning Outcome 2**

The majority of the candidates were able to briefly describe, but were not able to demonstrate a level of understanding relating to the working characteristics of the chosen materials. Manual handling of the chosen materials, the safe storage of materials on site and the advantages and disadvantages of other materials were all areas certain candidates failed to

address. To achieve higher band marks a greater and clearer description of the characteristics and safe use of materials needs to be undertaken. There is a need for the candidates to justify their responses in all aspects of the Learning Outcome to access Mark band 3.

### **Learning Outcome 3**

Photographic evidence is essential to the successful completion of this Learning Outcome supported with detailed and evaluative annotation addressing the candidates' good working practice, and the general progress of the manufacturing process, and reference to tolerances. It was noted that some centres produced excellent evaluations of their practical work commenting on the manufacturing process to a high standard.

Sadly, some centres failed to support their photographic evidence with annotation at all, where others produced a basic description of the activity in the picture. Particular areas of concern were where the candidates failed to refer to the measurements and tolerances. This is a key aspect of Quality Control records.

It is suggested a possible way to access all the marks available in this Learning Outcome would be to present the work in a PowerPoint presentation recording the "practical journey". This would provide the candidates with an opportunity to demonstrate the Quality Control procedures and evaluation skills employed during the manufacturing process by annotating the photographic images.

### **Learning Outcome 4**

The Learning Outcome was suitably answered by the candidates who were able to describe a series of craft job roles and progression paths. However, a few centres failed to describe solely craft roles and included non-craft job role such as an Architect. Teamwork aspects and the role of and relevant professional institutions were not attempted to a good standard with many candidates falling to access Mark Band 3 merit.

To achieve mark band 3 standard, candidates should include fuller descriptions of the interaction with technical, supervisory and professional roles, as this was only briefly addressed. In addition, regarding relevant professional institutions; most candidates failed to clearly describe and justify the role they play within the industry. This is essential to access Mark Band 3.

To achieve overall higher band marks, centres are recommended to consult further with the Tutor Support Material on the Edexcel website and to consider the comments above.

### **Mark Grid B**

Included within samples, the centres used the correct documentation to support the awarding of the centre's marks to candidates.

In conclusion many centres were lenient in their marking selecting the incorrect mark band or awarding the marks inaccurately within the mark

band. Correct adjustments in both directions, were made by the moderators.

Finally, centres are reminded to ensure they provide sufficient information (ideally annotated images) to support the merits given to candidates for Mark Grid B.



## **Level 2 Unit 6 Value and Use of the Built Environment: Communities**

This is one of the later units for the qualification and candidates tend to answer the first learning objective well, however the following outcomes tend to be weaker. This year saw more evidence of the application of the unit to the maintenance and improvement of the built environment.

### **Learning Outcome 1**

This Learning Outcome asks candidates to describe some sustainable practices that are linked to the overall maintenance of the built environment. Candidates described some sustainable practices and did try to link these to the maintenance of the built environment. The work for this increased in quality and marks were often within band two which is encouraging.

Marks could be lifted into higher mark bands by candidates describing the use of locally sourced materials for maintenance, the use of materials from sustainable sources, the use of energy saving replacements fittings, the minimisation and recycling of maintenance and operational waste, the increased expenditure on higher specification materials to promote longer life spans, and finally how feedback to the design team could improve future projects. The latter is still an aspect that many candidates have not grasped which would attract additional marks.

### **Learning outcome 2**

This learning objective asks candidates to describe the local property market and identify factors that lead to the development of sustainable communities, and to describe ways in which construction and the built environment contribute to the creation of wealth.

Many candidates managed to describe the local domestic property market, but did not include a detailed description on commercial and industrial property. The creation of wealth through the construction and built environment was not considered in any depth by many candidates.

Higher mark bands could be achieved by evaluating the property market, and the range of ways in which the built environment contributes to the creation of wealth.

### **Learning Outcome 3**

This learning objective asks the candidate to describe ways in which the built environment could be improved, stating the benefits of designing for future expansion, and to describe the key factors influencing the development of sustainable communities.

The candidates described improving the built environment and future expansion issues but did not consider this in any depth. Marks could have been improved by describing the benefits of future expansion along with factors that influence the development of sustainable communities. Planned and routine maintenance could also be addressed.

#### **Learning Outcome 4**

This Learning Outcome asks candidates to describe key job roles, including teamwork aspects and progression paths within building maintenance property services and facilities management and to describe the role of the professional institutions.

Candidates have described the various facilities management and maintenance roles but did not detail enough about teamwork aspects or progression pathways. The role of the professional institutions was only briefly described by many candidates and needed to be expanded into what they provided for their members.

Candidates could have lifted their marks into higher mark bands by identifying the links with supervisory roles, and justifying the role of the professional institutions, that is, what do they provide for industry and their members.

## **Level 2 Unit 7 Value and Use of the Built Environment: Facilities Management**

This year has seen some improvement in the quality of the work provided by centres.

### **Learning Outcome 1**

This Learning Outcome asks the candidate to know about the maintenance of the built environment, in terms of reactive, cyclical, and preventative measures. The level of evidence from many candidates consists of brief descriptions of some types of maintenance along with some examples of maintenance items.

Candidates could have lifted their work into higher mark bands by a more detailed description of the three types of maintenance, examining three typical maintenance items in detail and explaining the benefits of undertaking this work, along with standard contract maintenance items in the defects liability period. The latter was considered by some candidates who had examined the unit specification. Higher mark bands require a detailed justification of the purpose and benefits of maintenance.

### **Learning Outcome 2**

This Learning Outcome asks candidates to understand how services are provided, to include a description of direct labour methods, utilising external contractors, life cycle costing, how maintenance extends a buildings life and three economic and social benefits.

Candidates have provided good evidence on the social and economic benefits but only briefly provided evidence applied on an organisations use of direct labour and external contractors.

Marks could have been lifted into higher mark bands by a more detailed description of the impact of such services on a buildings lifespan, the use and methods of contracted out services, and detailed descriptions of the social and economic benefits provide by the use of such managed services.

### **Learning Outcome 3**

Candidates provided some aspects of facilities management along with the benefits of this provision. The roles of the people involved within FM were obtained from external sources with some adaptation by candidates.

Marks could have been lifted by a more detailed description of four key features of the company's facilities management provision, along with what is managed for each of the above key features and what are the benefits. The relative merits of direct labour and contracted services required detailed explanation along with alternative approaches to the facilities management of the companies that candidates had examined.

## **Grade Boundaries**

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