

# **6720-34 Level 3 Advanced Technical Certificate in Constructing the Built Environment**

**2019**

**Qualification Report**

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# Introduction

This document has been prepared by the Chief Examiner and Principal Moderator; it is designed to be used as a feedback tool for centres in order to enhance teaching and preparation for assessment. It is advised that this document is referred to when planning delivery and when preparing candidates for City & Guilds Technical assessments.

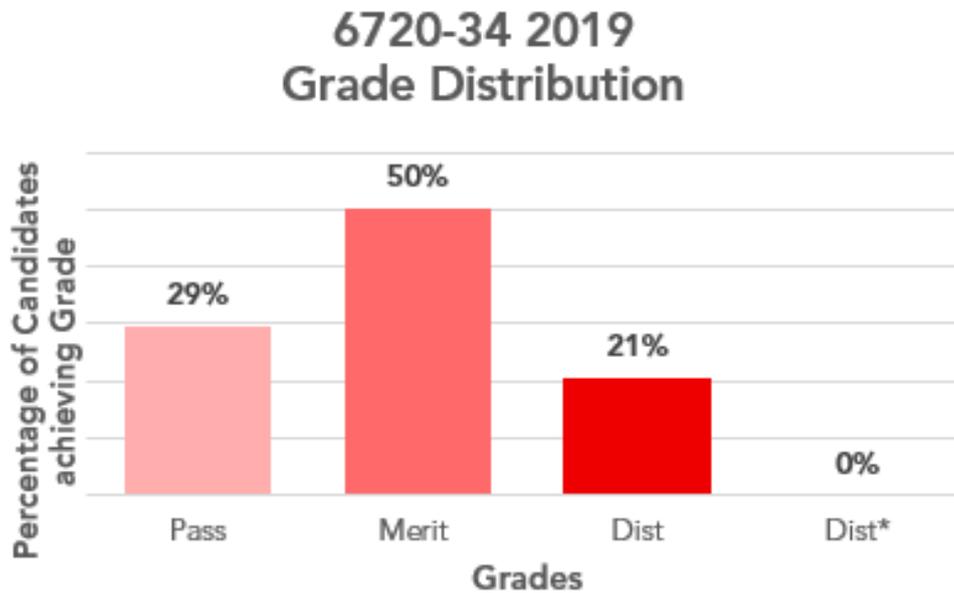
This report provides general commentary on candidate performance in both the synoptic assignment and theory exam. It highlights common themes in relation to the technical aspects explored within the assessment, giving areas of strengths and weakness demonstrated by the cohort of candidates who sat assessments in the 2019 academic year. It will explain aspects which caused difficulty and potentially why the difficulties arose.

The document provides commentary on the following assessments:

- 6720-040/540 Level 3 Constructing the Built Environment – Theory exam (1)
  - March 2019 (Spring)
  - June 2019 (Summer)
- 6720-041 Level 3 Constructing the Built Environment – Synoptic Assignment (1)

# Qualification Grade Distribution

The approximate grade distribution for this qualification is shown below:



Please note City & Guilds will only report qualification grades for candidates who have achieved all of the required assessment components, including Employer Involvement, optional units and any other centre assessed components as indicated within the Qualification Handbook. The grade distribution shown above could include performance from previous years.

# Theory Exam

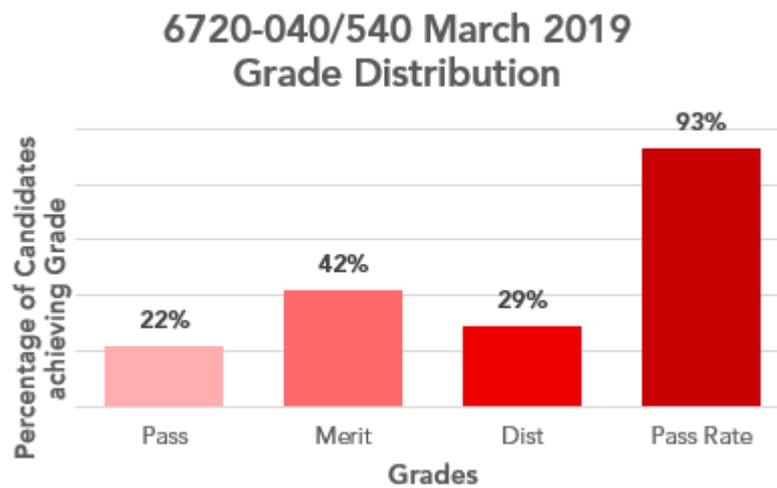
## Grade Boundaries

Assessment: 6720-040/540  
Series: March 2019 (Spring)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

<b>Total marks available</b>	<b>60</b>
Pass mark	24
Merit mark	33
Distinction mark	43

The graph below shows the approximate distributions of grades and pass rate for this assessment:

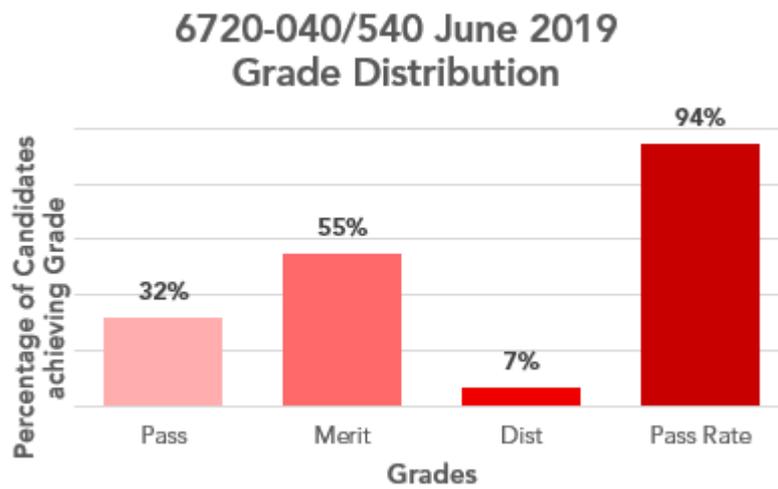


Assessment: 6720-040/540  
Series: June 2019 (Summer)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

<b>Total marks available</b>	<b>60</b>
Pass mark	24
Merit mark	33
Distinction mark	42

The graph below shows the approximate distributions of grades and pass rate for this assessment:



# Chief Examiner Commentary

## 6720-040/540 Level 3 Constructing the Built Environment – Theory exam (1)

### Series 1 – March 2019

The overall performance by candidates for this paper was good. However, some candidates displayed issues concerning the technical descriptions, and this suggested that these candidates may not have been performing at Level 3. Centres need to carefully consider the concept of *'the right learner for the right course'*, as this qualification is a university entrance qualification.

Both systems of entry were evidenced with candidates using both 'Evolve' (online) and paper-based examinations. Centre examination officers need to make it clear to candidates that they can request additional sheets if they run out of space.

Most of the questions were attempted by candidates, and many provided extended writing responses that contained both detail and depth of understanding. Candidates were often able to achieve marks for identification at pass level whilst some attained merit or distinction results by giving explanatory responses linked back to the contextualised question stems.

Technical areas that were answered well by candidates included: the benefits of thin-joint masonry systems, the provision of acceptable thermal performance of external walls, the functions of windows, and the reasons why the position of trees, hedges and fences must be clearly recorded.

Areas of weakness included questions on suspended ceilings and the use of proprietary helical thin-joint masonry wall-ties. Neither was sufficiently well-understood by candidates sitting this exam and centres should aim to cover these topics in more depth. . The use of a permit to work on site was also misunderstood by candidates, who often confused it with the right to work in the UK. .

Higher-scoring candidates were able to give linked responses to the stem, developing questions from identification into 'why' and 'how' with an appropriate explanation to gain the additional marks.

Lower-scoring candidates struggled with contextualised questions, often not relating their responses to the question stem, or were unable to provide linked responses to identified issues. Some candidates struggled to clearly explain their responses and often gave brief, superficial responses such as, 'it is cheaper, quicker, easier, safer and more sustainable'. Centres and candidates should note that this form of generic response will rarely meet the needs of the mark scheme and will not attract marks.

For the extended response question, higher-scoring candidates were able to give linked responses to the provided case study. Many were able to describe a suitable foundation for the steelwork and the retail unit. They also detailed the safe construction of the foundations and the roof, which were separately considered by candidates. These candidates often achieved the top of mark band 2 or mark band 3 for the extended response question. Weaknesses candidate responses were illustrated by a lack of depth and application, with little justification of the technology selected against the case study.

Centres are advised to revisit current handbooks, test specifications, schemes of work and previous papers to fine-tune the delivery of their programmes. Getting candidates to embrace a CPD culture of exploring construction technology in general through site visits, videos and reading current textbooks will benefit them in future examination series.

## Series 2 – June 2019

The overall performance by candidates for this paper was good. Most of the questions were attempted by candidates and some provided responses to the extended writing questions that contained detail and depth of understanding.

Both systems of entry were evidenced, with candidates using evolve and paper based examinations. Centre examination officers need to make it clear to candidates that they can request additional sheets to attach to their papers for additional space.

Candidates were often able to achieve recall of knowledge marks at pass level. Those candidates demonstrating a series of linked explanation responses relating back to the scenario's context were able to obtain a merit or distinction grade. Candidates should be encouraged to leave no questions blank as responses may gain marks.

Technical areas that were answered well by candidates included the identification of primary and secondary elements of superstructures, aspects of volumetric construction, site waste management and types of industrial buildings.

Areas of weakness include questions on volumetric construction, fire regulations for single storey structures, technical language, diaphragm walling and site welfare facilities.

What is evident still is that many candidates had a limited grasp of knowledge and understanding of technical descriptions and the language within an exam question. For example, candidates did not know what "site welfare" was in the context of a construction site. Centres would be advised to take candidates to a live site for a knowledge visit or shown videos of different types of construction to address this lack of awareness. Revision and extending their core knowledge is the key to a successful candidate's performance.

Higher scoring candidates were able to give linked responses to the questions, correctly identifying an item and then providing an explanation to gain the second or additional mark.

Lower scoring candidates struggled with contextualised questions, often not relating their responses to the question stem or being unable to provide linked responses to identified issues.

For the extended response question, the scenario of an agricultural building conversion performed well, with candidates applying health and safety and construction technology to show depth of understanding. Candidates were able to grasp concepts and latch onto parts of the scenario, for example modern methods of construction and contaminated ground. They then used this imaginatively and in context within their answers.

Centres are advised to revisit current handbooks, test specifications and previous papers to fine-tune the delivery of their programmes. Getting candidates to embrace a CPD culture of exploring construction technology in general through site visits, videos and reading current textbooks will benefit them in future examination series.

# Synoptic Assignment

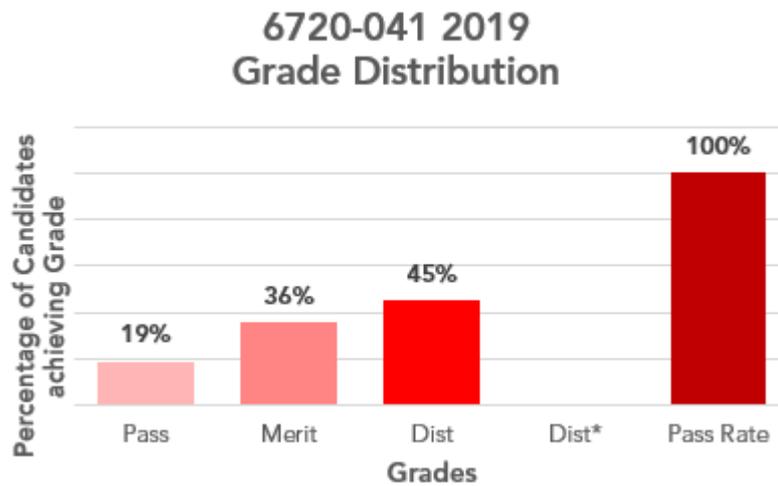
## Grade Boundaries

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 6720-041  
Series: 2019

<b>Total marks available</b>	<b>60</b>
Pass mark	24
Merit mark	34
Distinction mark	44

The graph below shows the approximate distributions of grades and pass rate for this assessment:



## Principal Moderator Commentary

The assignment brief was based on a project to create residential and commercial buildings in a town's high street. The brief was realistic and allowed candidates to consider what they could research and provided direction for the areas to be assessed within the tasks.

The overall performance for this synoptic assignment was generally high, with candidates performing well in the Health and Safety/Risk Assessment task and there was a better standard than in previous years.

### **AO1 Recall of knowledge relating to the qualification learning outcomes**

General recall tended to be good throughout the assignment and has improved this year. In particular, candidates showed good knowledge of the health and safety report and risk assessment in task 2. Higher end responses showed a clear knowledge of many technical points required in the assignment tasks: brickwork, blockwork and thermal insulation materials; heating systems and heating fuels; sustainable building design and construction. Less effective AO1 responses only noted some construction materials but not necessarily in the context of the task.

### **AO2 Understanding of concepts, theories and processes relating to the learning outcomes**

Overall, candidates did not perform as strongly on this assessment objective as AO1, except in the health & safety report and risk assessment. Higher end responses showed clear understanding (evidenced by reading and references) of woodchip fuel and community or district heating schemes and that woodchip fuel is from a renewable source, but is not specifically a zero carbon fuel. Less effective responses evaluated woodchip biomass boilers and district heating in a somewhat superficial way.

### **AO3 Application of practical/technical skills**

This assessment objective is only worth 6 marks as there are limited opportunities to show practical skills and work was variable. Higher scoring candidates did well on the drawing task. However, candidates' drawing skills would benefit from further development to ensure all drawings are properly annotated and drawn to scale. Hand drawings used throughout the tasks were generally weaker and could be improved.

### **AO4 Bringing it all together – coherence of the whole subject**

Higher scoring candidates were able to integrate various important aspects of more than one task. For example, linking the external wall specification tasks aimed at excellent energy efficiency standards along with the heating system subject matter and occupant health and wellbeing and energy bills, which integrated tasks 1, 3 and 4. Candidates who grasped the concept of passivhaus construction did well.

Less effective responses connected some aspects of the various tasks. For example, some candidates stated correctly that tasks 3 and 4 are basically about heating energy efficiency, but did not connect them to task 1 and without noting that both energy supply systems and energy demand estimates need to be considered together.

### **AO5 Attending to detail/perfecting**

There was a mixed response for this assessment objective. Higher scoring assignments showed good attention to detail by ensuring they checked online that the manual U value calculation they provided for the external wall specification was correct. However, in other cases, there was a general lack of checking and accuracy in text, with some work having basic errors in its technical content. Candidates need to be highly focused with attention to detail to provide a client centred outcome and to be able to provide a report that would be acceptable in the industry.

## **Best practice**

It was clear from the evidence submitted that centres have interpreted the assignments appropriately and the majority of candidates have approached each task fully and following the assignment briefs.

Centres are reminded that the information given within the assignment brief is designed largely to assess the candidates' ability to research, balance arguments, make decisions and specify actions to be taken.

There were no issues within the assignment that made it difficult for the candidates to complete or the moderators to moderate. Centres have risen to the challenge of marking holistically, and are improving on a year-by-year basis. CRFs and authenticity statements are rarely missing or incomplete and employer involvement issues are now well-understood. Also, there are far fewer examples of where a centre has been 'over-optimistic' in their assessment and moderators have found that centres are less likely to be assessing out of tolerance.

Centres are reminded that all evidence must be uploaded to the Moderation Portal in a format that can be accessed by all, for example Microsoft Word, Excel, PowerPoint or PDF. Any CAD drawings must be converted to PDF before being uploaded.