

# **T Level Technical Qualification in Onsite Construction**

**8711-30 Core Report (Autumn 2022)**

# Contents

<b>Foreword</b> .....	<b>2</b>
<b>Introduction</b> .....	<b>3</b>
<b>8711-031 Paper 1</b> .....	<b>4</b>
<b>8711-032 Paper 2</b> .....	<b>7</b>
<b>8711 Sub-Component: Exam</b> .....	<b>10</b>
Grade boundaries .....	11
<b>8711-033 Sub-Component: Employer-Set Project</b> .....	<b>12</b>
<b>8711-30 Onsite Construction Core</b> .....	<b>13</b>
UMS grade boundaries .....	13

# Foreword

## Autumn 2022 Results

The technical qualification is made up of two components, both of which need to be successfully achieved to attain the T Level Technical Qualification in Onsite Construction. This takes into account the best result for a specific component from the summer and autumn series. This document covers the Core Examinations only.

In summer 2022 T level awarding organisations, including City & Guilds and Ofqual discussed the approach to standard setting before setting the grade boundaries. We agreed to award the Core more generously in the summer, to recognise the unfamiliarity of providers with the new assessments. This reflects the approach to first awarding in other new or reformed qualifications. The approach to awarding was also designed to help mitigate the impact of Covid-19 related disruption to learning in the 2021-2022 academic year. Learners taking other qualifications were also seeing some acknowledgement of this in the way the grade boundaries were determined in the summer ([What's behind this summer's VTQ results? - The Ofqual blog](#)).

For the autumn 2022 assessment series, Ofqual recommended that T Level awarding organisations align the standard with the summer assessment series, taking into account that these are new qualifications and the continued disruption from the pandemic.

## Introduction

This document has been prepared to be used as a feedback tool for providers in order to support and enhance teaching and preparation for assessment. It is advised that this document is referred to when planning delivery and when preparing candidates for the T Level Technical Qualification (TQ) in Onsite Construction **Core** examinations.

This report provides general commentary on candidate performance in both the examination papers. 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 autumn 2022 assessment series.

There were no entries for the Employer-Set Project (ESP) for this series and so this report will not provide feedback on this assessment.

The grade boundaries (and notional boundaries where appropriate) that were used to determine candidate's final autumn 2022 results are also provided. **For autumn 2022, as per Ofqual guidance, the approach to grading recognises that these are new qualifications, and the ongoing impact of the pandemic.**

More information regarding T Levels TQ grading, awarding, UMS and rules for retakes can be found in the T Levels Technical Qualifications Grading Guide available on the [City & Guilds T Levels Resources and Support Hub](#).

# 8711-031 Paper 1

This exam paper covers the following elements of the Onsite Construction core content:

- Health and safety in construction
- Construction design principles
- Construction and the built environment industry
- Construction sustainability principles
- Building technology principles
- Tools, equipment, and materials

This exam paper allowed for candidates to demonstrate a broad range of subject knowledge within the Onsite Construction core element.

The exam has been split into **two** sections. Below details the types of questions and marks available for each section.

**Section A** is made up of **60** marks and includes **12** short answer and medium answer questions.

**Section B** is made up of **30** marks and includes **3** extended response questions.

The exam is designed to provide sufficient sampling across the content and consists of a mixture of short answer questions (SAQs), some of which are structured, and extended response questions (ERQs). The exam assesses across assessment objectives (AOs) 1a/b, 2 and 3 to allow for the appropriate assessment and differentiation of candidates to support the reliable setting of boundaries. The assessment objectives represent the following:

- **AO1 a** Demonstrate knowledge
- **AO1 b** Demonstrate understanding
- **AO2** Apply knowledge and understanding to different situations and context
- **AO3** Analyse and evaluate information and issues

A small number of candidates undertook this exam series. Most candidates were resitting following their first attempt in summer 2022. Numbers are forecast to increase in the coming years, with many new providers being approved to deliver the T Level award and specialisms.

Overall, most candidates within the cohort were able to demonstrate some knowledge of the core content, often scoring marks for recalling knowledge when asked to name, state or identify information. There was a clear differentiation of performance within the cohort when candidates were asked to demonstrate understanding, application, analysis, or evaluation. Often weaker responses achieved marks through demonstration of knowledge but did not show any further depth of understanding of the subject. It was also observed that weaker responses often did not respond to the command verbs used in questions. This was evident across the exam cohort (see best practice section).

Topic areas that were well answered by most candidates were as follows:

- Safety legislation
- Safety signs
- Sustainability

In these topic areas better candidates typically responded with a little more detail and demonstrated greater breadth of knowledge. For some questions, some candidates obtained the full marks available.

Topic areas that were not well answered by most candidates were as follows:

- Building Regulations
- Listed buildings
- Roof components
- Calculations for volumes
- Continuing Professional Development (CPD)
- Environmental performance measures

Overall, there were a lot of weaker responses to these questions and some candidates found these topic areas challenging and did not provide a response. Some candidates attempted these questions, responding with some depth and detail.

It was noted for one question (Q11) that most candidates confused the Health and Safety Executive and safety regulations with the Building Regulations.

Candidates' responses to some questions indicated that technical terminology is not always understood. This misunderstanding and limited interpretation of technical terminology hindered candidates from achieving marks as well preventing candidates from accessing the higher mark ranges.

There was one maths type question (Q12) in the paper and only a few candidates were able to answer this accurately with clear working out. Most generally struggled with working out volumes and had difficulty recalling and then using the correct mathematical formulas. Some candidates did not attempt this question.

Overall, for the extended response questions (ERQs), responses were weak in this exam section and techniques to answer these questions need to be further developed. Many candidates focused on particular elements of the ERQ, rather than responding to the full requirements of the question. This meant higher mark bands were often not achieved. Candidates often provided lengthy responses. However these were not always coherent and contained inaccuracies.

The first ERQ (Q13) was discounted. Further details can be found in the section below.

The second ERQ (Q14) concerned the hazards involved with converting a loft, centering around power tool use. Some hazards were linked to control measures, but the majority presented a limited discussion relevant to the scenario. Higher marks could have been achieved by thorough use of analysis of the different hazards that would have been encountered when converting the loft, application of knowledge and understanding on how to minimise the risk through control measures, and thorough evaluation skills and justifications on which PPE is best suited for the different trades and tasks.

The third ERQ (Q15) involved choosing materials for a house design that were natural, sustainable and that would blend into a rural environment. There was limited discussion, mostly related to the broad categories of materials. While some candidates gave lengthy responses, the responses often lacked focus and contained inaccuracies. As with the first ERQ, candidates could have improved marks by giving the advantages and disadvantages of using different materials and the building methods to meet the brief and planning requirements.

### **Discounted questions**

**Q3b** – This question was worth 1 mark and asked candidates to identify a part of a roof truss. As rafters are not explicitly mentioned within the Core specification, this question was deemed to have the potential to disadvantage candidates.

**Q13** – This question was worth 8 marks and asked candidates to discuss the considerations for the best foundation type for a large superstore building. As steel frame structures and the steel erecting process are not explicitly mentioned within the Core specification, this question was deemed to have the potential to disadvantage candidates.

For both questions we undertook additional statistical analysis to predict each candidate's likely performance on the discounted questions based upon their overall score across the assessment. Where there was a difference between the predicted and examiner assigned mark, the higher of the two was awarded.

## 8711-032 Paper 2

This exam paper covers the following elements of the Onsite Construction core content:

- Construction science principles
- Construction measurement principles
- Construction information and data principles
- Relationship management in construction
- Digital technology in construction
- Construction commercial/business principles

The exam has been split into **two** sections. Below details the types of questions and marks available for each section.

**Section A** is made up of **60** marks and includes **11** short answer and medium answer questions.

**Section B** is made up of **30** marks and includes **3** extended response questions.

The exam is designed to provide sufficient sampling across the content and consists of a mixture of short answer questions (SAQs), some of which are structured, and some are extended response questions (ERQs). The exam assesses across assessment objectives (AOs) 1a/b, 2 and 3 that will allow for the appropriate differentiation of candidates to support the reliable setting of boundaries. The assessment objectives represent the following:

- **AO1 a** Demonstrate knowledge
- **AO1 b** Demonstrate understanding
- **AO2** Apply knowledge and understanding to different situations and context
- **AO3** Analyse and evaluate information and issues

A small number of candidates undertook this exam series. Most candidates were resitting following their first attempt in summer 2022. Numbers are forecast to increase in the coming years, with many new providers being approved to deliver the T Level award and specialisms.

Overall, most candidates within the cohort were able to demonstrate some knowledge of the core content, often scoring marks for recalling knowledge when asked to name or state information. There was a clear differentiation of performance within the cohort when candidates were asked to demonstrate understanding, application, analysis, or evaluation. Often weaker responses only achieved marks by demonstrating knowledge but struggled to show any further depth of understanding of the subject. It was also observed that responses to the command verbs used in the questions were often not as expected. This was evident across the exam cohort (see best practice section).

Topic areas that were well answered by most candidates are as follows:

- Equality Act
- Site measurements
- Building Information Modelling (BIM)



Many candidates responded well to these topic areas, with the better responses showing more depth and detail. Some responses were worthy of full marks available for these questions.

Candidates responded well to one understanding (AO1b) question (Q6) which asked for an explanation on the advantages of Building Information Modelling (BIM). Most candidates in the cohort explained visualisation as an advantage. To gain higher marks, a linked response to the command verb 'explain' is needed for each advantage rather than just listing them.

Topic areas that were not well answered by most candidates are as follows:

- Thermal properties of plastics
- SMART targets
- Loads on building components
- Communication
- Purpose/application of drawings/scales
- Calculations of volumes/ratios
- Entrepreneurship
- Construction planning methods

Generally, candidates found these topic areas challenging when making a response. Some of the questions in these topic areas were not attempted at all by some candidates. Better responses showed some depth and detail.

A significant number of responses indicated that candidates did not fully understand technical terminology. This misunderstanding of technical terminology hindered candidates from achieving all marks available for questions. For example, responses were weak on a question on the acronym SMART (Q3) in regard to setting targets, resulting in only low marks being accessed. Candidates also showed very limited awareness of construction drawings and the use of scales (Q9).

There was one maths question (Q11) in this paper and some responses were fully accurate with clear working out. Weaker responses struggled to show workings out the required ratios of cement and aggregate required for a concrete mix and associated volume of concrete required.

Overall, for the extended response questions (ERQs), responses in this exam section were weaker and techniques to answer these questions need to be further developed. Many candidates focussed on particular elements of the ERQ, rather than responding to the full demands of the task, meaning higher mark bands were often not achieved. Candidates often provided lengthy responses. However, these were not always coherent and contained inaccuracies.

The first ERQ (Q12) asked about the entrepreneurship skills required to set up a construction business. Responses centred around the day-to-day running of a business. To access higher mark bands, responses needed to expand on what skills were required to set up and grow the business to make it a success.

The second ERQ (Q13) related to the planning requirements for a construction project, with an emphasis on specialist resources which would likely involve attention to lead-in times. Responses generally missed the focus of this question resulting in marks not being awarded in the top mark band.

The third ERQ (Q14) involved analysis around a given set of common building faults that would be found on an older style property that had poor loft insulation and minimal ventilation to the roof space. Weaker responses indicated that the question was not read and understood fully, as they only covered the main issue of condensation related to the lack of insulation. Most responses did not show a full diagnosis the causes of the mould growth. Responses also referenced roof defects in their responses even though the stem of the question clearly stated the roof was in good condition. Responses could have been improved by reading the question thoroughly to understand the cues given in the question to enable them to properly diagnose and then rectify the building faults.

### **Discounted question**

**Q10** – This question was worth 8 marks and asked candidates to discuss the process for setting out a plot of land. As the term “setting out” and its process, in the context of a plot of land, are not explicitly mentioned within the Core specification, this question was deemed to have the potential to disadvantage candidates.

For this question a calculation was carried out to determine candidate marks for each excluded question using their performance overall to generate a proposed mark for that specific question. This calculated mark was then compared to their actual performance in the question and the higher mark of the two (original vs calculated) was awarded.

## **8711 Sub-Component: Exam**

### **Best practice and guidance to providers on potential areas for improving performance in assessment**

It is recommended that Providers utilise and deliver the sample examinations as well as past papers (Summer 2022 and Autumn 2022) as formative assessment to support candidates in preparation for summative assessment.

Providers can help emphasise the importance of candidates thoroughly reading and re-reading the question to determine the content and level of response required. This includes considering the command verb and the number of marks available for each question.

Some of the papers had very unclear handwriting, making it difficult for the marker to read the response. Providers should encourage candidates to ensure their handwriting is legible. Writing in block capital letters may be a possible solution if a candidate's handwriting is not legible.

Candidates should be encouraged to develop their skill set to construct detailed and in-depth response given ERQ type questions. Providers can help candidates focus on question responses by devising their own targeted exam revision for both short / medium answer questions and ERQ questions, as well as offering support and guidance on various answer/response techniques. Providers should be aware of using the Sample and past series questions on the City & Guilds webpages, to help and guide both staff and candidates.

## Grade boundaries

The table below shows the grade mark ranges for the Exam, along with the notional boundaries for Paper 1 and Paper 2 – **for the autumn 2022 series**.

Grade	Mark range	Notional boundaries	
		Paper 1 (8711-031)	Paper 2 (8711-032)
A*	149 - 180	74 - 90	74 - 90
A	128 - 148	64 - 73	64 - 73
B	107 - 127	53 - 63	53 - 63
C	86 - 106	43 - 52	43 - 52
D	66 - 85	33 - 42	33 - 42
E	46 - 65	23 - 32	23 - 32
Unclassified (U)	0 - 45	0 - 22	0 - 22

## **8711-033 Sub-Component: Employer-Set Project**

There were no candidates entered for the Employer-Set Project for Autumn 2022. See the Core Report from Summer 2022 for best practice guidance.

## 8711-30 Onsite Construction Core

The T Levels Technical Qualification (TQ) in Onsite Construction core is made up of the below sub-components (and weightings).

- Exam (70%)
- Employer-Set Project (30%)

### UMS grade boundaries

The table below shows the UMS values available for grades in the sub-components. It also shows the UMS values required to achieve each grade for the overall Core. This table will not vary across the series, the values are fixed for this TQ.

Grade boundary	Exam sub-component	ESP sub-component	Overall Core
A*	252 - 280	108 - 120	360 - 400
A	224 - 251	96 - 107	320 - 359
B	196 - 223	84 - 95	280 - 319
C	168 - 195	72 - 83	240 - 279
D	140 - 167	60 - 71	200 - 239
E	112 - 139	48 - 59	160 - 199
Unclassified (U)	0 - 111	0 - 47	0 - 159

## Get in touch

The City & Guilds Quality team are here to answer any queries you may have regarding your T Level Technical Qualification delivery.

Should you require assistance, please contact us using the details below:

Monday - Friday | 08:30 - 17:00 GMT

T: 0300 303 53 52

E: [technicals.quality@cityandguilds.com](mailto:technicals.quality@cityandguilds.com)

W: <http://www.cityandguilds.com/tlevels>

Web chat available [here](#).

The T Level is a qualification approved and managed by the Institute for Apprenticeships and Technical Education.

Copyright in this document belongs to, and is used under licence from, the Institute for Apprenticeships and Technical Education, © 2023. 'T-LEVELS' is a registered trademark of the Department for Education. 'T Level' is a registered trademark of the Institute for Apprenticeships and Technical Education. 'Institute for Apprenticeships & Technical Education' and logo are registered trademarks of the Institute for Apprenticeships and Technical Education.

We make every effort to ensure that the information contained in this publication is true and correct at the time of going to press. However, City & Guilds' products and services are subject to continuous development and improvement, and the right is reserved to change products and services from time to time. City & Guilds cannot accept responsibility for any loss or damage arising from the use of information in this publication.

City & Guilds is a trademark of the City & Guilds of London Institute, a charity established to promote education and training registered in England & Wales (312832) and Scotland (SC039576). City and Guilds Group Giltspur House, 5–6 Giltspur Street London EC1A 9DE