T Level Technical Qualification in Onsite Construction

8711-30 Core Report (Summer 2023)

Version 1.0

Contents

Foreword

Summer 2023 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.

We discussed the approach to standard setting/maintaining with Ofqual and the other awarding organisations before awarding this year. We have agreed to take account of the newness of qualifications in how we award this year to recognise that students and teachers are less familiar with the assessments ([Vocational and technical qualifications grading in 2023 – Ofqual blog](#)), whilst also recognising the standards required for these qualifications.

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 summer 2023 assessment series.

The grade boundaries (and notional boundaries where appropriate) that were used to determine candidate's final summer 2023 results are also provided. **For summer 2023, as per Ofqual guidance, the approach to grading recognises that these are new qualifications.**

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 **16** 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 larger number of candidates (162) undertook this exam series than in previous series. Numbers are forecast to increase further in the coming years, with many new providers being approved to deliver the T Level award and specialisms.

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.

Areas of strength include:

- Q1 asking about Continuing Professional Development (CPD). Responses stated a broad range of CPD types.

- Q2 asking for safe systems of work. A good breath of answers was given, although some responses referred to PPE as a system without specifically linking it to a construction site.

- Q5 on the responsibilities to a construction business under the Hazardous Waste Regulations. Responses demonstrated a good awareness of working with hazardous materials.

- Q6 asking for the correct fire procedure to follow. This was generally answered well, although some responses left out the stage to call the emergency services.

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. It is noteworthy that questions on CPD in previous papers had not been as well responded to, so this is an area that has been improved for this series.

There was one maths type question (Q16) in the paper asking candidates to calculate the number and cost resources. The majority of candidates were able to answer this accurately with clear working out.

Areas of weakness include:

- stating benefits of Common Minimum Standards (CMS) (Q4). Mixed responses were given showing little awareness of CMS. Many responses just repeated the question stem instead of providing the benefits.

- understanding the core responsibilities of a Quantity Surveyor (QS) (Q7). There was a lack of awareness of the activities that a QS would be involved in. Most responses given were brief and demonstrated limited understanding.

- understanding the difference between two notices issued by the Health and Safety Executive (HSE). The responses given for Q8a showed a lack of understanding in the different notices. Better understanding was demonstrated in Q8b on the impact of these notices being issued.

- understanding the liabilities to a contractor for the public and employers when completing construction work at a school (Q11). Responses focused on insurance and there was little mention of the school children and their safety. There were a few incorrect references to 'noise' as a liability.

- understanding of the Life Cycle Assessment (LCA) for a new office building (Q14). There were many references to sustainable materials without a connection to a whole building approach.

Overall, there were a lot of weaker responses to these questions and some candidates did not provide a response. Where candidates attempted these questions, better responses showed some depth and detail.

Responses to extended response questions (ERQs)
The majority of candidates attempted the ERQs. There were some encouraging responses showing higher level of analysis and evaluation skills. However, a high proportion provided a lot of text but did not demonstrate clear understanding of the scenario and struggled to display evaluation skills and justification for their choices and/or rationale.

The first ERQ (Q17) was how an extension could be built with consideration to the existing building and with sustainability in mind. There was a wide variety of responses on this question, with some candidates achieving a reasonable mark. Some good responses were given on recycling the bricks. Higher marks would be achieved by producing a full discussion around the approaches suitable to ensure the extension matches the existing structure in terms of aesthetics and using sustainable materials.

The second ERQ (Q18) concerned the risks involved in replacing a fragile roof on a factory. There were some good responses where some candidates decerned that the roof may be made of asbestos with the additional requirements for disposal of a hazardous waste. Many candidates wrote about the danger of falling through the roof and the use of appropriate PPE. Higher marks would be achieved by fully understanding the scenario, identifying all risks, and evaluating strategies that could be adopted whilst working in this potentially risky environment.

The third ERQ (Q19) involved a discussion around the construction of a new road and the potential impact on the economy and environment. Candidates responded well to this question with a wide variety of responses, many of them warranting a higher band mark. Higher marks would be achieved by producing a full discussion around the impact of the road identifying advantages and disadvantages to economy and environment. Responses would show comprehensive and extensive analysis, application and evaluation.

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

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 **15** 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 larger number of candidates (160) undertook this exam series than in previous series. Numbers are forecast to increase further in the coming years, with many new providers being approved to deliver the T Level award and specialisms.

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.

Areas of strength include:

- stating tests undertaken on concrete (Q1). Most candidates were able to give at least one test – most common answer was slump test.

- identifying team dynamics (Q2).

- summarising methods to measure success in a business (Q4). A good awareness of how a construction company can measure success was demonstrated. Many responses focused on profitability and reputation. Benchmarking was not a common answer so is an area for teaching in future.

- understanding how to reduce heat loss when refurbishing a building (Q9). Most candidates recognised the need to improve insulation and replacing windows with double/triple glazing.

- calculating areas (Q15a) was answered well.

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.

Areas of weakness include:

- identifying the benefits of using social networking (Q3). This question was attempted by most candidates, but the majority were unable to gain full marks, some expressing the same benefit in different ways.

- understanding conflict management techniques (Q5). Most candidates attempted the question and gave two techniques that the question asked for, however the majority struggled to detail how the technique would be applied to resolve a conflict between operatives.

- comparing methods of mixing mortar (Q6). There were mixed responses to this question, with some identifying two methods but no comparison made between them. Other candidates interpreted the question as referring to mortar mix ratios rather than the methods.

- understanding quality management techniques (Q8). For part A on self-assessment, this had a mix of responses, most were quite vague referring to checking own work. For part B on external audit, very few candidates were able to explain using an external auditing organisation, such as NHBC or members of the design team, ie architect.

- an understanding of Corporate Social Responsibility (CSR) when refurbishing a community centre (Q10). Varied responses with responses generally linking it to consideration of the community or confused it with the need to control waste management. There were a few of good responses that focused on using local labour and materials.

- understanding customer service principles to restore customer satisfaction (Q11). Some responses talked about contract issues such as penalty clauses rather than customer service principles. Most responses centred on communication, but very few responses linked to efficiency, honesty and integrity which would enable full marks be awarded for this question.

- understanding how to negotiate change requests (Q12). Very few responses were able to accurately explain how the change would be done from beginning to end. There was an awareness that negotiation had to be undertaken but it wasn't always clear at what level.

- calculating volume and bulking (Q15b/c). A very good response with some correct answers but quite a few candidates were unable to calculate a correct answer. The use of units of measurements and rounding techniques were not used correctly.

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.

Responses to extended response questions (ERQs)

There was a mixed response for the ERQs in this paper and it appeared that many candidates found the questions challenging. The majority struggled to achieve higher than mark band 1.

The first ERQ (Q16) was about a not-for profit construction company, and its likely business objectives. Candidates found this question particularly challenging and talked about the not-for-profit business rather than the business objectives that need to be applied to the business. There were very few if any candidates who could clearly identify business objectives. Higher marks would be given for responses that showed a full discussion around business objectives; financial, social, ethical, cultural, innovative, sustainable, quality and compliance considerations, in relation to the scenario.

The second ERQ (Q17) concerned the integration of smart technology into a building. Responses were not detailed, and many candidates explained how technology could be used to design the building, rather than its use in the existing building. Some candidates confused renewable energy sources with smart technology. Correct responses mainly included smart glass and automatic lights. Higher marks would be given for responses that showed a full discussion around the use of smart technology within the office building, demonstrating a thorough analysis, application and evaluation.

The third ERQ (Q18) involved a discussion around the structural science principles affecting the design of foundations for an office block. The ground conditions for the building plot are unstable and there are nearby trees. Responses were generally limited and linked weakly to structural science principles. Most candidates focused on the ground conditions, with a limited number discussing the impact of the nearby trees. Some candidates did identify a suitable solution for the foundation type to be used. Higher marks would be given for responses that showed a full discussion around the effects of trees, ground conditions and other possible considerations and how this would inform the choice of foundation.

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. Candidates would benefit from understanding what different command verbs are asking of them. For example, the type of response required by an 'Explain' question requires a higher level of response than a 'Describe' question.

Where a question requires a specific number of responses, for example "state **three** reasons..." only the first three responses will be marked, and any following responses will be disregarded. Crossed out responses will not be counted as these first responses. Providers can remind candidates about this when undertaking formative assessment and prior to the exam.

ERQ performance could be further enhanced by preparing candidates to consider in-depth explanations and analysis (including secondary implications where appropriate) on different scenarios and relating it back to the context. To score the higher bands candidates needed to include more detailed conclusions and justifications in their responses.

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.

In conclusion, candidates must be reminded of the need to ensure they fully read all questions before responding. In particular the ERQ scenario-based questions and questions assessing both understanding and the application of knowledge and understanding.
An additional focus for candidates should be applied to making sense of what is being asked of them in the question.

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 summer 2023 series.**

Grade	Mark range	Notional boundaries	
		Paper 1 (8711-031)	Paper 2 (8711-032)
A*	153 - 180	76 - 90	76 - 90
A	133 - 152	67 - 75	66 - 75
B	113 - 132	56 - 66	56 - 65
C	93 - 112	46 - 55	46 - 55
D	73 - 92	36 - 45	36 - 45
E	53 - 72	26 - 35	27 - 35
Unclassified (U)	0 - 52	0 - 25	0 - 26

8711-033 Sub-Component: Employer-Set Project

The Employer-Set Project (ESP) assessment is a project comprised of a number of tasks, based on a scenario comparable to a real-life project in the industry. The assessment is designed to allow candidates to show how they can perform on a project using the Core knowledge and skills. This approach to assessment emphasises to candidates the importance and applicability of the full range of their learning to industry practice.

The ESP covers the following elements of the Onsite Construction core content:

- Health and safety in construction
- Construction design principles
- Construction sustainability principles

The Employer-Set Project allowed for candidates to demonstrate a broad range of subject knowledge within the onsite construction Core element. The ESP assesses across assessment objectives that will allow for the appropriate differentiation of candidates to support the reliable setting of boundaries. The assessment objectives represent the following:

- **AO1** Planning skills and strategies
- **AO2** Apply knowledge and skills to the context of the project
- **AO3** Analyse contexts to make informed decisions
- **AO4** Use maths, English and digital skills
- **AO5** Carry out tasks and evaluate for fitness for purpose

The project is based around a brief which provides information on an Onsite Construction project and specific relevant details and resources. Candidates have to draw on their Core knowledge and skills and independently select the correct processes and approaches to take to provide a solution and the evidence specified in the project brief. All tasks are completed under supervised/controlled conditions.

This was the second year for the assessment component. Generally, candidates responded well to the ESP and its constituent tasks. Candidates demonstrated good research skills as a solid foundation to start the project. Presenting their work and debating within a team allowed candidates to demonstrate their knowledge confidently. Providers should be encouraged by the quality of the ESP produced by candidates. Candidates were able to use the time provided on the different tasks well, with very few weaknesses in the full answers given with no evident gaps.

This version of the ESP elicited lower performances compared to summer 2022 which had the same task structure, making grid etc. The topic area for summer 2023 (restoration and conservation) was felt to be less topical than summer 2022 (renewable technology and sustainability), however this topic area is within the published specification. This was taken into account when setting grade boundaries for this series.
The change in performance may be due to the topic/task, but is also likely reflect other factors such as preparation of candidates for the ESP by providers.

Employer-Set Project tasks overview

Task	Task type	Assessment Objectives covered	Max mark	Task weighting
1.1	Research	AO1: Knowledge, AO2a: Apply knowledge, AO3: Select, AO4c: Digital	9	9%
1.2	Report	AO1: Knowledge	6	26%
		AO2a: Apply knowledge, AO2b: Apply skills	12	
		AO3: Select	2	
		AO4a: Maths, AO4b: English, AO4c: Digital	6	
1.3	Plan	AO1: Knowledge, AO3: Select, AO4a: Maths	8	24%
		AO2a: Apply knowledge, AO2b: Apply skills	16	
1.4	Presentation	AO1: Knowledge, AO3: Select, AO4b: English	6	18%
		AO2a: Apply knowledge, AO2b: Apply skills	12	
2.1	Collaborative Problem Solving	AO2a: Apply knowledge, AO2b: Apply skills, AO3: Select, AO5a: Realise project outcome	15	15%
2.2	Evaluation	AO4b: English, AO5b: Review outcome against brief	8	8%

Task 1.1 – Research

A well-performing task which produced valuable research notes which are then taken forward into the Task 1.2 Report. Many candidates missed the Planning legislation associated with a 100 year old building, in terms of conservation of existing features. Materials to be refurbished were covered well along with the costs associated with the repointing works for the external brickwork, most covered the aspect of lime mortar. Some candidates tended to concentrate on the application of building regulations which is slightly misdirected away from planning permission, conservation areas and listed consent, in terms of obtaining permission to alter the building.

Task 1.2 – Report

Reports were well written on the whole and did contain some structure and subheadings. Research was pulled from Task 1.1 into the report, where most of the aspects of the brief were answered well.
Some candidates just copied and pasted large parts of the research notes rather than word it themselves. Some candidates struggled to elaborate on the research and at times did not reference the brief requirements fully.

Task 1.3 – Project plan

A high level of variations in the production of the Gantt charts (project plans). Many candidates appeared not to have any knowledge of how a schedule of works is put together and how time is used left to right. Some candidates produced outstanding Gantt charts with added detail beyond that provided in the simple trade table. Some candidates did not submit a Gantt chart.

Task 1.4 – Presentation

The presentations were all based on PowerPoint formats for the actual documentation. Candidates did not generally show the ability to deliver presentations from notes and many just read the slides onscreen. The observation records completed by the assessors tended to mirror the observed recorded presentations.

Task 2.1 – Collaborative problem-solving

Many providers had more than the allowed 2-3 candidates in the group for the collaborative problem solving task, which is against provider guidance for this task and meant that it was harder for some candidates to get involved in the discussions.

Task 2.2 – Evaluation

Candidates attempted to describe how well they performed, but this was mostly in generic comments on each task rather than applied to achieving the outcome of each task in relation to the brief.   Most candidates did not reflect much on the project brief but concentrated on what they liked and did not like doing. Learners still not quite grasping the outcome of the task, more what they did well and what they needed to improve on (Self-reflection)

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

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

- Providers should ensure files and documents are named better to ensure consistency and ease of access. This also includes the use of assessment component headers.

- Providers are strongly encouraged to use evidence headers for each task, to allow for ease of identification of candidate evidence and efficiency in marking. All information within the task headers should be completed. Candidate evidence should be included **within** the header document and not as a separate file.

- Observation records should be submitted as separate documents for each task and not scanned into one document.

- The 'what must be presented for marking' section of each task outlines the minimum expectations of evidence that must be submitted for marking. Providers must detail where evidence has not been submitted.

- Providers are advised that individual tasks are marked in isolation and that each task has been weighted in relation to the assessment objectives covered. This information is detailed in the qualification Specification. As all tasks are marked separately, where evidence produced by a candidate is contained in another task, that evidence will not be considered.

- The only evidence considered for the marking of an individual task is what is listed within the 'what must be produced for marking' section within the assessment materials. Evidence for another task that may demonstrate knowledge or skills will not be considered when marking that task.

- Providers are advised to ensure the tutor and candidate both sign and date declarations prior to uploading evidence.

- Providers should request that candidates include a word count for all written reports and tasks where applicable.

Task 1.1 – Research

Providers are advised to ensure candidates take time to read the brief and task requirements. Providers should make clear to candidates that they must include all required aspects in their research notes, as the internet is not allowed for Task 1.2 report writing. Candidates can include as much information as they need in their research, and then extract the relevant information into their written reports. Providers are also advised to work with candidates to improve their skills in relation to referencing.

Task 1.2 – Report

Providers are reminded of the published guidance which states that no internet access is allowed for Task 1.2. Candidates should use only their research from Task 1.1, when writing their report.

Providers are advised to ensure candidates have the opportunity to develop their report writing skills including providing justifications where required.

Providers are advised to ensure candidates have the opportunity to develop their digital skills including layout of reports to include tables, calculations and images.

Task 1.3 – Project plan

Providers are advised to ensure candidates have the opportunity to develop the skills required, to plan a project including the production of Gantt charts and programme of works. Candidates need to know how a Gantt chart works in terms of sequencing, durations and logic. This requires scheduling trades and activities into a coherent programme relative to time/dates relative to the brief.
taken into account when constructing the project plan.

Task 1.4 – Presentation

Providers should ensure that candidates can be clearly heard during their presentations. Some coaching on presenting to an audience without reading directly from notes may help candidates to achieve higher marks. Providers are reminded that presentations should not include any research materials from the internet, unless they were already included in Task 1.1, as internet access is not permitted during this task.

Providers are reminded that observation records must be completed and uploaded as part of the evidence upload. These must be based on the candidate's performance using the terminology from the sample marking grids. Notes must be detailed, accurate and differentiating. They should identify areas of strength and weakness to distinguish different levels of performance quality.

Providers are advised to consider the layout of the room and where the tutor/marker and the candidate are positioned.

Task 2.1 – Collaborative problem-solving

Providers are advised to support learners in how to put emails together including key requirements and layout.

Providers should introduce candidates or give them ID sheet when working on the collaborative task to enable easy identification of candidates.

Providers should be aware that group discussions must be held between either 2 or 3 candidates. Having 4 or more candidates is against provider guidance for this task and could lead to an unbalanced discussion and may disadvantage candidates.

Task 2.2 – Evaluation

Providers are advised to ensure candidates have the opportunity to develop their self-evaluation skills, including evaluation their performance against the requirements of each task, and how they could improve. This also included making reference to the project brief.

Grade boundaries

The table below shows the grade mark ranges for the Employer-Set Project – **for the summer 2023 series.**

Grade	Mark range
A*	77 - 100
A	68 - 76
B	59 - 67
C	50 - 58
D	41 - 49
E	32 - 40
Unclassified (U)	0 - 31

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:

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Web chat available **here**.