T-LEVELS | Institute for Apprenticeships & Technical Education

T Level Technical Qualification in Maintenance, Installation and Repair for Engineering and Manufacturing

8730-12 Core Report (Summer 2023)

Version 1.0

City & Guilds | eal

Contents

Foreword **2**

Introduction **3**

8730-031 Paper 1 ..... **4**

8730-032 Paper 2 ..... **7**

8730 Sub-Component: Exam **11**

Grade boundaries 12

8730-033 Sub-Component: Employer-Set Project **13**

Employer-Set Project tasks overview 14

Grade boundaries 20

8730-12 Maintenance, Installation and Repair for Engineering and Manufacturing Core **21**

UMS grade boundaries 21

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 Engineering and Manufacturing. This document covers the Core component 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 Engineering & Manufacturing Core assessments.

This report provides general commentary on candidate performance in both the examination papers and Employer-Set Project (ESP). 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.

8730-031 Paper 1

This exam paper covers the following elements of the Engineering & Manufacturing core content:

- Essential mathematics for engineering and manufacturing
- Essential science for engineering and manufacturing
- Materials and their properties
- Mechanical principles
- Electrical and electronic principles
- Mechatronics

This exam paper allowed for candidates to demonstrate a broad range of subject knowledge within the Engineering and Manufacturing 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 **67** marks and includes **17** short answer questions.

Section B is made up of **33** 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) 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

This was the first series of this examination being sat. The paper is common to the three pathways of Engineering & Manufacturing; Design & Development (D&D), Maintenance, Installation and Repair (MIR) and Engineering, Manufacturing, Processing and Control (EMPC).

The examination paper is designed so that it gradually increases in challenge. Questions were ramped in terms of difficulty throughout section A starting with AO1a through to AO2, this allowed for the level of demand to be increased steadily throughout the paper. The extended response questions (ERQ) in section B were scenario based and ramped with AO2 and AO3 questions.

Areas of strength include:

- application of probability (Q13), where candidates were asked to determine the probability within an applied context.
- comparison of renewable energy methods of wind power against solar power in the context of an oil rig (Q16). Candidates were able to demonstrate understanding of the two renewable technologies and apply that understanding to the needs and constraints of an oil rig.

Overall candidates tended to perform better on questions which required a written response rather than a solution that required mathematical methods to be used. These question types also saw a slightly stronger discrimination of performance.

The understanding of mathematics and scientific principles was noticeably poor and candidates' overall responses were not as expected for Level 3. During marking, it was noted that there were a high proportion of scripts where candidates left questions within section A blank. There wasn't a noted pattern across certain questions.

Areas of weakness include:

- recalling knowledge on Kirchhoff's law of voltage and current (Q1). Many candidates left this question blank, or if they did attempt the question, they recalled Ohms law rather than Kirchhoff's.
- converting a binary number into a hexadecimal format (Q2). Some were able to convert the binary to a decimal, gaining one mark, however they were then unable to convert this into a hexadecimal.
- understanding of trigonometry and the use of the cosine rule (Q7). Some candidates failed to achieve marks here as they were unable to make A the subject of the equation, not knowing the inverse of cos was $\cos^{-1}$ or they failed to recognise they needed to use cosine.
- understanding of the voltage divider rule (Q8), most candidates failed to calculate the output voltage value successfully but were able to calculate the net parallel resistance. Candidates then struggled to recognise that for a potential divider the voltage output is determined by the ratio of the two resistances. In part B there was understanding that the Ohms law was needed, but candidates failed to apply the calculation correctly.
- using differentiation to determine a minimum value from a relationship (Q15). The majority of candidates did not demonstrate they understood the methodology of how to differentiate an equation, or if they did differentiate correctly, they did not equate the differentiated equation to zero to establish the minimum value.

With written responses candidate's responses often lacked the detail to demonstrate they had the knowledge required to award marks. Responses were often generic and lacked the use of technical terminology. This was particularly evident when describing the properties of materials (Q5), candidates often used basic terminology and referred to materials being made more strong and less brittle (which is the inverse).

The last question within section A was a non-constrained question around how the orientation of fibre reinforcement would impact the properties of a part. Candidates struggled to use appropriate terminology and showed a very basic understanding of the properties of materials. Lower-level candidates tended to attempt to describe what uniaxial and matrix orientations were, but failed to explain how this impacted the properties of the part.

Responses to extended response questions (ERQs)

The majority of candidates attempted the ERQ's within Section B. It was also noted that often candidates were able to demonstrate some knowledge and understanding of basic engineering principles within these questions, even when they struggled to respond to questions in Section A. Responses were generally structured well and coherent. Whilst the overall performance in the ERQs saw the majority of the cohort placed in band 1, there was a spread of marks across the bands for all three questions.

These questions had the highest discrimination across the paper, meaning candidates who score highly across the paper tended to score higher marks for these questions, hence the question differentiated performance. Those who scored highly provided responses with more depth and detail in comparison to the low achieving candidates.

Often, candidates struggled to display their evaluation skills, justifying their choices and rationales, explaining why they had made the choices or statements they had. It's also important to emphasise the need to relate back to the context of the question to exemplify answers and demonstrate application of knowledge and understanding.

It's noted that candidate's performance was weaker on Q19, which focuses on hydraulic and pneumatic power transmission systems, however this was the item that discriminated performance on the paper the most.

8730-032 Paper 2

This exam paper covers the following elements of the Engineering and Manufacturing core content:

- Working in the Engineering and Manufacturing sectors
- Engineering and manufacturing past, present, and future
- Engineering representations
- Engineering and manufacturing control systems
- Quality management
- Health and Safety principles and coverage
- Business, commercial, and financial awareness
- Professional responsibilities, attitudes, and behaviours
- Stock and asset management
- Continuous improvement
- Project and programme management

This exam paper allowed for candidates to demonstrate a broad range of subject knowledge within the Engineering and Manufacturing 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 **67** marks and includes **15** short answer and medium answer questions.

Section B is made up of **33** 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) 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

This was the first series of this examination being sat. The paper is common to the three pathways of Engineering and Manufacturing; Design & Development (D&D), Maintenance, Installation and Repair (MIR) and Engineering, Manufacturing, Processing and Control (EMPC).

Questions were ramped in terms of difficulty throughout section A starting with AO1a through to AO2, this allowed for the level of demand to be increased steadily throughout the paper. The extended response questions ERQ questions in section B were scenario based and ramped with AO2 and AO3 questions.

Areas of strength include:

- recalling the importance of health and safety within the workplace and the consequences of failing to comply (Q4). A small number of candidates lost marks through focusing on the effects on a business, rather than the individual engineer as stated in the question.
- understanding the reasons for quality control within engineering (Q8a). Most candidates answered this question well, with their answers being focused on customer requirements, the specification and ensuring that there are no defects.
- identifying appropriate PPE for a pylon repair and explain why it was necessary (Q10). Where marks were lost, it was usually down to candidates not being specific enough with the PPE selected i.e. stating glove rather than insulated gloves, which is important given the context of working with electricity. Candidates were also generally able to identify and give reasons for the additional health and safety considerations that would need to be taken into account during the repair. It was clear that there was through understanding of this topic.
- understanding how depreciation occurs in an engineering context (Q12). Most candidates answered this question well, the most common response being ‘wear and tear’ and the impacts of high mileage due to the extended time on the road. A small number of candidates also explained the impact of obsolescence.
- understanding of how international markets may impact upon engineering operations (Q13a). This produced a broad range of responses including the impact of shipping costs, having a USP and the different standards and language barriers associated with operating in different countries.
- comparison of pneumatic control systems to hydraulic control systems when manufacturing food (Q14). The majority of candidates showed some knowledge and understanding on the general characteristics of pneumatic and hydraulic systems, with some then going on to apply these to the context stated in the question. For example, recognising that fluid leaks from hydraulic systems could damage the food products. More detailed reasoning and justifications would have allowed more candidates to access band 3.

Areas of weakness include:

- recalling common engineering abbreviations (Q2), should have been fundamental knowledge recall, but was answered very poorly. A number of candidates left one or both parts of this question blank.
- describing the function of passive sensors in control systems(Q3). Candidates mainly attempted to describe a sensor in general, with very few showing any knowledge of the ‘passive’ aspect of the sensor. Where candidates did score a mark it was usually

for stating that a sensor detects changes in the environment. A number of candidates also left this question blank.

- understanding of the initial stages in the linear design process (Q7) was generally not answered well, some candidates identified two valid steps of the linear design process, but then failed to expand on what happens in those stages sufficiently to gain the additional marks available. Some candidates gave or explained steps that would take place after initial design ideas had been completed.
- understanding the impact of the Clean Air Act (Q9), this showed a lack of understanding around the purpose of the legislation, therefore candidate were not able to explain the impact it had upon engineering practices. Often candidates gave answers about reduced pollution in the air, which awarded then 1 mark.
- understanding aspects of 100% sampling and SPC in context (Q11). A significant number of candidates gave answers relating to 'less work' and easier manageability, which were not technically accurate. A general assumption was made that the question referred to small batches. Although the batches for manufacture may be smaller, carrying out 100% sampling would significantly increase the amount of work needed within the manufacture of the product. Some candidates made points about accuracy or efficiency – many just made general points that showed an overall lack of understanding of SPC.
- understanding of how 'force majeure' may be used in a given situation (Q13b). Most candidates recognised the potential issue with flooding, with some linking this to the liability protection offered by a 'force majeure' clause. There were some irrelevant responses given to this question that showed a lack of understanding of what a force majeure is. For example, some candidates referred to the river as the source/means of transporting goods etc.

A common area of weakness throughout the cohort was the frequent lack of relevant expansion points on questions assessing understanding, e.g. with the command verb of 'Explain'. For these types of question candidates would often state two or more basic points, but not expand them in sufficient detail to demonstrate they have the understanding of the subject matter, or why it was relevant to mention in their response.

Responses to extended questions (ERQs)

The three Section B ERQs had the highest discrimination indexes of all the questions on the paper, with question 16 having the highest. These questions generally produced a broad range of marks, but with most responses sitting in bands 1 and 2. Where structure of the responses was assessed (Qs 17 and 18) most responses were generally presented in a logical, well planned and structured format.

Question 16 focuses on how engineering development in relation to electrical sources of artificial lighting have contributed to the social and economic development of the UK. Common responses related to increased social life at night and longer working hours being made possible. A few candidates discussed the history of artificial lighting and analysed the advantages of modern lighting over older gas-based systems. Some candidates completely misinterpreted the question and gave answers relating to renewable energy sources, such as solar and wind energy.

Question 17 explored how clients and engineering organisations can work together through the design and manufacturing of a given product. A number of candidates made general points relating to communication with the client without linking to the main context in more than just a superficial manner. Some candidates focused on design and manufacturing equally, whereas some focused mainly on the design aspects. The better answers evaluated the use of specific techniques and approaches such as user-centred design, iterative design and gaining user feedback from prototyping. To achieve the higher bands candidates needed to demonstrate more comprehensive and thorough evaluative skills in relation to the specific context.

Question 18 explored how three key pieces of health and safety legislation/regulations impacted upon engineering operations. A number of candidates gave very general responses that outlined the relevant legislative requirements but did not link sufficiently into the specific context or wider specification content. Most candidates did however show relevant knowledge and understanding of at least two of the three items of H&S legislation, with many covering all three.

8730 Sub-Component: Exam

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

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. Candidates should be reminded of the need to ensure they fully read and understand all questions before responding.

Providers should support candidates on developing their skills in writing responses to questions that ask for demonstrating of understanding, application of knowledge, analysis and evaluation.

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 achieve 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 is a possible solution if a candidate’s handwriting is not legible or alternatively utilising a scribe.

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 (8730-031)	Paper 2 (8730-032)
A*	160-200	79-100	80-100
A	139-159	68-78	71-79
B	118-138	57-67	60-70
C	97-117	46-56	50-59
D	76-96	35-45	40-49
E	55-75	25-34	30-39
Unclassified (U)	0-54	0-24	0-29

8730-033 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 project is made up of a number of tasks which all relate to the same employer-set project brief and tender specification.

- Research
- Report
- Plan
- Present

The project draws on the content from the core knowledge that sits across all specialisms in Maintenance, Installation and Repair for Engineering and Manufacturing.

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 Plan approach to meet the brief
- AO2 Apply knowledge and skills to contexts
- AO3 Select techniques and resources to meet brief
- AO4 Use maths, English and digital skills
- AO5 Release project outcome and evaluate

This was the first series for the Employer-Set Project. The project is based around a brief which provides information on a Maintenance, Installation and Repair 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.

Employer-Set Project tasks overview

Task	Task Type	Assessment Objectives covered	Max Mark	Task weighting
1	Research	AO1, AO2a, AO3 (Planning, core knowledge, selecting techniques and resource)	9	16.6%
		AO2b (Core Skills)	6	
2	Report	AO1, AO3 (Planned approach, selecting techniques)	6	26.7%
		AO2a (Core knowledge)	6	
		AO2b (Core Skills)	6	
		AO5a, AO5b (Realise outcome, review outcome)	6	
3	Plan	AO1, AO3 (Planned approach, selecting techniques)	6	20%
		AO2a (Core knowledge)	6	
		AO2b (Core Skills)	6	
4	Present	AO1, AO3 (Planned approach, selecting techniques)	6	26.7%
		AO2a (Core knowledge)	6	
		AO2b (Core Skills)	6	
		AO5a, AO5b (Realise outcome, review outcome)	6	
Maths, English and digital skills		AO4a (Maths)	3	10%
		AO4b (English)	3	
		AO4c (Digital Skills)	3	

Task 1 Research:

Candidates were required to conduct research into possible potential causes and modifications to the scenario outlined in the brief.

The general approach to research was good, with the majority of candidates awarded marks within band 2.

- Most candidates provided links to a range of research materials to develop their ideas, however a reference list was often omitted.
- Not all aspects of the research task were fully investigated demonstrating a lack of planning and time management; often candidates were missing flowrate calculations, calibration requirements and estimated costs, and they did not consider pre-existing installation or estimated costs of modification.
- The Health and Safety aspect with regards to the dangers of Chlorine seemed to be covered by the majority of candidates.
- The research was collated in the form of a technical brief and supporting images, engineering drawings, schematics, specifications, diagrams and sketches could have been included, however most candidates only submitted downloaded images from the internet to support their research.
- Candidates often failed to provide details of the sources they used for their research which therefore limited them being able to access higher mark bands. Where some did provide sources, there was a list of websites which were not fully detailed and presented fully.
- Candidates relied heavily on the internet as their main research source. If candidates used a variety of websites and considered the reliability of the information within those websites, often verifying the information they found from a secondary source, they were able to access the higher band demonstrating they used comprehensive research technique.
- Some candidates utilised artificial intelligence when carrying out their research. Whilst this is seen as a valid research technique, providers are reminded candidates must be made aware of the risks of using artificial intelligence and potential malpractice. Where candidates did use artificial intelligence, they often did not go on to verify the information they were provided with from a secondary source.

Actions providers can take to support delivery of the assessment for future series:

Providers are advised to work with candidates to improve their skills in relation to research and correct referencing. Further guidance is needed on how to provide research and use reliable sources, verifying the information they have found, rather than accepting the first source as fact, and reference these sources. Also, if stipulated by the task, it is advised that candidates are encouraged to use calculus and calculations to meet all criteria of the task. Providers are advised to ensure candidates have the opportunity to develop their writing skills including providing justifications where required.

Task 2 Report:

Candidates were required to draft a report. Within the report candidates were asked to include: benefits and limitation of chosen modification, considerations when implementing the modification (which includes access requirements, isolation and drainage procedures, risk assessment and H&S regulations), on-going maintenance requirements. In addition to this they were asked to provide a labelled schematic diagram which showed piping and instrumentation, electrical and mechanical connections.

- There were often gaps in evidence for this task, candidates did not address all the requirements outlined within the task within their report. Candidates must ensure their reports contains all the features detailed within the task as a minimum. They tended to focus on the system and modifications but failed to explore risk assessments or on-going maintenance requirements.
- A lot of reports were heavily based on the information sourced in Task 1 with little elaboration or expansion.
- A significant observation is that many candidates failed to provide clear reasoning for how they have met the requirements outlined in the project brief. Often decisions were made, without providing justification and supporting evidence. They stated what they wanted to do but failed to justify why they'd decided this. There was therefore limited evidence of their understanding of wider engineering principles.
- Some candidates failed to submit drawings, or when they were provided, frequently they were not in accordance with the brief instructions, for example not showing electrical and mechanical connections, and lacking drawing skills required by current industry standards.

Actions providers can take to support delivery of the assessment for future series:

Providers are advised to ensure candidates have had opportunities to develop their report writing skills, including the importance of providing rationales with justifications. Providers should also ensure that candidates are clear on what their reports must include as a minimum, the task outlined the minimum expectation of what needs to be included. Also provide opportunities for the candidates to practice their skill drawing schematic diagrams.

Task 3 Plan:

Candidates were required to create a planning chart of work, taking into account a number of considerations (highlighted in the task brief) and submit a supporting statement to justify the decisions made in the planning chart. The majority of candidates achieved marks within the lower end of band 2 for this task.

- Candidates were asked to present a planning chart, not all candidates produced an industry recognised format (such as a Gantt charts, critical path diagram etc). There was a range of approaches candidates took, lower scoring candidates tended to give a list of activities, whereas higher scoring candidates tended to use multiple methods to communicate their plans such as Gantt charts and critical path analysis. To access higher marks candidates may present their plans in a range of formats in order to cover the full range of the task.

- Out of those candidates that did provide a chart (usually on an excel document), these were limited to just colour coding which illustrated the sequence of events, without further explanations (e.g. the selection of tools and equipment were not well justified).
- Some candidates produced a written statement, but it did not support or justify their programme of work plan.
- Supporting statements were limited and lacked additional detail such as job roles and responsibilities.

Actions providers can take to support delivery of the assessment for future series:

Providers are advised to ensure candidates have the opportunity to develop the skills required to plan a project including the production of Gantt charts, critical path diagrams, and the importance of supporting these plans with written explanations.

Task 4 Presentation:

Candidates were required to produce and deliver a presentation which addressed the task brief.

- Most candidates' presentation materials were well structured and had a logical approach, although techniques in delivery could have been better.
- Most of the candidates did not provide explanation for how they felt they had met the brief requirement which led to a lack of evidence related to evaluation skills.
- Some candidate's presentation skills were weak, with not all information being relayed effectively and the audience not being considered. For example, there were several examples of candidates just reading directly from their slides and not expanding beyond to content of the slides.
- Distraction behaviours were also evident in some candidates, with pacing back and forward and limited eye contact.
- There was limited use in digital skills within this task, and candidates missed opportunities to utilise the functionality on the software to aid in the delivery of their presentation.

Actions providers can take to support delivery of the assessment for future series:

Providers are advised to ensure candidates have the opportunity to develop their presentation skills, including the production of presentations, and presenting information to the appropriate audience. It is important that candidates are made aware of distraction behaviours (pacing, fidgeting, no eye contact). Within this task, a lack of evaluation was noted, and candidates are encouraged to reflect on how fully they have met the requirements of the brief, what challenges were faced throughout the project and how they had overcome them, and any improvements. It should not be seen as a weakness to critical evaluate self-performance, instead it should be made clear to candidates that this evaluation will allow them access to higher marks.

When recording the presentation for task 4, a single camera or viewpoint where the candidate is located in front of a screen or projection of their presentation must be adhered to. This is mentioned in the provider guidance but was not followed by most providers. Providers are advised to ensure video presentation recordings work prior to uploading, some did not play or had poor sound quality. Providers are advised to check the quality of video evidence prior to submitting it and to ensure that additional microphones beyond just those attached to the recording camera are used.

In relation to Task 4, all questions to the candidates must be asked at the end of the presentation and not lead candidates to mention details of their project which otherwise would not be provided. They should focus on diving into the content that the candidate has covered. Candidates must not deliver their presentation in front of other candidates.

English, Maths and Digital Skills

Evidence across all four tasks is taken into consideration when assessing English, maths and Digital Skills. Generally, the majority of candidates were within band 2 for English, Maths and Digital Skills. Maths skills were the weaker of the three.

- Very few candidates offered calculations for flowrates or operating parameters. Most calculations were fairly basic to address costs.
- Some candidates produced written evidence in large paragraphs of over half a page with some long sentences. This made reading and interpreting their answers difficult and often had to be read multiple times. Language was mostly used correctly with technical language present in both written and video evidence. Within the presentation, most candidates were able to communicate well.
- Most candidates appeared conversant using PowerPoint as a presentation aid. There were very few instances of candidates using a range of digital features to support their presentation.

Actions providers can take to support delivery of the assessment for future series:

Providers are advised to highlight the importance of maths, English and digital skills throughout the entirety of the ESP. Candidates should be encouraged to use spell check and check the correct use of terminology. Candidates could have considered further the text size and layout on their presentations and further thought could have been given to adding animation, exploded drawings to support their verbal presentation.

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

There was an issue with some file conventions for evidence making it difficult for markers to identify evidence. Providers are advised to ensure that candidate documents are uploaded correctly and contain the relevant content and labelled with the correct filename to ensure consistency and ease of access. For example:
Task_1_Research_[Registration numbers #]_[surname]_[first letter of first name]

In some instances, providers uploaded evidence for the incorrect candidate. Providers should be aware that this could lead to a delay in results being issued. Providers are asked to check the evidence hasn't corrupted prior to upload and that any videos play and have sufficient sound. This should then be declared on the evidence checklist.

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.

Providers should complete and submit the ‘Evidence checklist’ and must detail on this where evidence has not been submitted. This is designed to be a checklist of the minimum evidence that is expected for a candidate. The checklist must align to what has been uploaded to the system.

Providers are reminded that each task is marked in isolation and that each task has been weighted in relation to the assessment objectives covered. This information is detailed in the specification and sample assessments. All tasks are marked separately, so where evidence that originated in another task within the Employer Set Project is produced by a candidate, no marks will be retrospectively awarded for that evidence in previous tasks, despite the knowledge or skills that it may demonstrate. 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 each marking grid.

Providers are advised to ensure the tutor and candidate both sign and date Declarations of Authenticity once the assessment has been completed. This confirms that the assessment has been conducted in line with the stipulated conditions and guidance. Each candidate only requires one declaration each, declarations are not required for each task. Providers only have to upload the declaration as evidence of compliance to the assessment conditions, there is no need to upload further evidence such as records of the candidates search history. If City and Guilds have concerns relating to the conduct of the assessment and require further evidence, we will contact Providers for this.

Grade boundaries

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

Grade	Mark range
A*	70-90
A	62-69
B	54-61
C	46-53
D	38-45
E	30-37
Unclassified (U)	0-29

8730-12 Maintenance, Installation and Repair for Engineering and Manufacturing Core

The T Levels Technical Qualification (TQ) in Engineering & Manufacturing 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**

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 Limited (Reg No 16513878). All rights reserved. City & Guilds is a trademark of City & Guilds Limited. City and Guilds Group Giltspur House, 5–6 Giltspur Street London EC1A 9DE