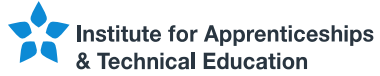


**T-LEVELS**



## T Level Preparing for Core Assessment Autumn Series

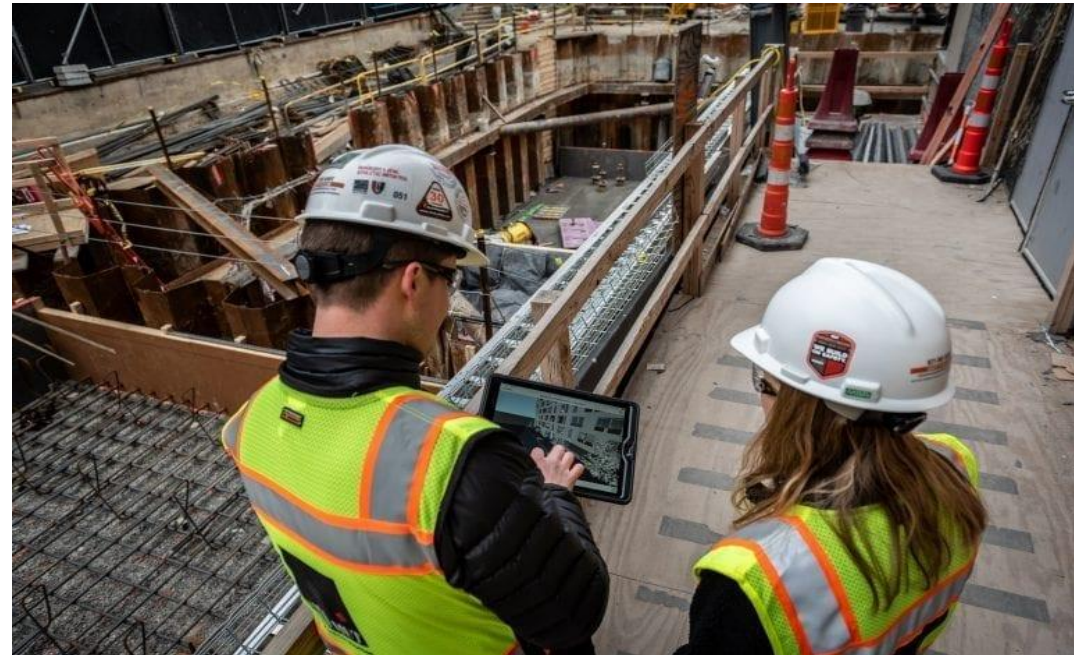
### Building Services Engineering (BSE) and On-site Construction

The Webinar will begin shortly

**Paul Brown**  
C&G Technical Advisor Construction  
**Rob Mallender**  
C&G Technical Advisor BSE  
**Mark Jones**  
EAL EQA Manager  
**Alison Whittle**  
C&G Technical Advisor Post 16



A City & Guilds Group Collaboration



# Webinar Platform



**Send any questions in the question area throughout the webinar**



**All attendees will be in listen only mode**



**Webinar resources and a CPD certificate will be sent out to all attendees the following day**

# Construction and BSE T Level Team



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## Agenda

1	Introductions
2	Core exam overview, hints and tips, examiners comments
3	Employer-Set Project (ESP) overview, hints and tips, examiners comments
4	Q&A



- Support for Autumn series and core assessments
- Hints and tips and feedback from summer series of assessments



- Structure of assessments and AO's
- Processes of assessment delivery
- Grading

T Level Construction On-site and BSE preparing for core assessment (Core Exams) -

[download the slides](#) | [watch the webinar recording](#)

T Level Construction On-site and BSE preparing for core assessment Employer-Set Project (ESP) -

[download the slides](#) | [watch the webinar recording](#)



# BSE/OSC

**Core exam**

**Paper 1**

**Paper 2**

**Extended response questions**



# BSE and OSC paper 1

## What went well

Lower mark questions AO1(a) /AO1(B) recall of knowledge

Overall performance was better in paper 1

Majority of learners attempted every question

## What could be improved

Extended response questions learners gave generic responses and didn't contextualise the response to the question

Handwriting was poor in some cases

## Hints and tips

More understanding of assessment objective AO2

Use of white space provided on exam paper

Type of writing implement used

Look at learners handwriting / **block letters, print script or manuscript**

45% of questions are weighted against AO2

# BSE and OSC paper 2

**What went well** Lower mark questions AO1(a) /AO1(b) recall of knowledge

Extended response questions, learners gave generic responses and didn't contextualise their responses to the question

**What could be improved**

Maths was poor in some cases (particularly in BSE)

Lack of correct terminology when answering questions

Not reading questions properly

**Hints and tips**

Practice two-part questions and answers

Marks are given for acronyms and industry abbreviations including workings out even if end answer is incorrect

Timings – it seems learners may have run out of time as in some cases papers weren't completed  
Delivery, particularly in BSE- consider first exam series to be in Autumn to allow full coverage of the core  
45% of questions are weighted against AO2

# ESP BSE/OSC

## What went well

Overall performance was much better in both ESPs than exams

Learners' marks were consistent across ESPs (e.g. high performing/average consistent throughout all tasks)

Some learners achieved high marks

The majority of tasks were consistently good

The evaluation task in particular was of a good standard generally

## What could be improved

Task 1.2 the report was inconsistent with some learners not answering all the brief

Task 1.3 There were significant differences in the quality of some of the plans submitted

Tasks 1.4 presentation and 2.1 collaborative discussion - in many cases the observation record was not detailed enough or was the same for every candidate. These must be detailed and contextualised for each candidate

## Hints and tips

Look at the marks awarded for each task to determine the weighting and importance of the task involved

When submitting video evidence consider the equipment being used (microphones not picking up sound)

Look at observation record and relate to marking grid using the appropriate terminology to support tutor observation



# Looking at the detail papers 1&2 BSE/OSC

1. There was a clear differentiation of performance within the cohort when candidates were asked to demonstrate **understanding, application, analysis, or evaluation**.
2. Overall, it was evident that candidates would benefit from support in developing their **extended response answering techniques**, as candidates underperformed in **Section B** of these exams
3. Candidates also found it challenging when having to respond to and follow question **command verbs**.
4. In the ERQ questions, candidates were asked to explain how a proposed new development can create a flood risk, including evaluating flood risk reduction methods that could be implemented, to combat flooding issues. The question response needs to be twofold, as the question is asking for two explanation/discussion points. Candidate's responses overall did not address the question fully, as responses never encompassed all question elements to access the higher marks available.
5. The type of response required by an '**Explain**' question requires a higher level of response than a '**Describe**' question

Construction and BSE T levels

## Assessment Weightings (more detailed explanations available in QHB)

Assessment Objective (AO)	Description The learner is required to..	OSC Weightings (for OSC and BSE)	Typical Tariffs (marks)	Questions/ examination tasks that might prompt this sort of evidence	Typical command words used
<b>AO2</b> Apply knowledge and understanding to different situations and contexts	take the understanding of generalities (AO1b) and apply them to specific novel situations.	45%	Medium to high tariff (marks), will require the candidate to take their knowledge and understanding and apply it to the context/scenario given within the question	<p>Given a clear, straightforward/narrow situation, the question requires selection and application of relevant principles and procedures in a way that is specific to the situation (rather than in general terms):</p> <p>what is the best approach to... in this situation?</p> <p>explain the process/ procedure to take when...</p> <p>what are the implications of ... (specific rather than general situation).</p>	<p>Given information/ a narrow situation:</p> <ul style="list-style-type: none"> <li>• What is the best...</li> <li>• Explain the process when...</li> <li>• Use</li> <li>• Apply</li> <li>• Calculate</li> <li>• Work out</li> <li>• Estimate</li> </ul>

[illegible]

# Question Layout Paper 2 BSE

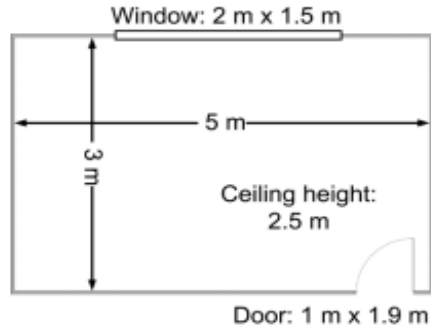


Figure 3

Figure 3 shows a garden room / summer house to be used as a home office, that requires heating. The room's U values are shown in Table 2 below. The desired internal temperature is 22 °C and the outside temperature is assumed to be 5 °C and there are two air changes per hour. All walls are external.

External blockwork & insulated walls U value	0.35
Wooden Floor U value	0.20
Flat roof with insulation U value	0.25
Windows U value	2.9
Door U value	2.9
Air change factor	0.33

Table 2

Analyse the total heat loss based on the information provided and recommend an efficient method of space heating. Show your workings.

Many questions cover various:-  
Assessment objectives

learning outcomes

Maths, English and digital skills.

This is cross referenced to the course handbook.

In this example many learners didn't attempt the last part of the question.

Tip. This style could be used in sample questions

Indicative content	Guidance	Max marks	Test Spec ref & AO
Room volume $5 \times 3 \times 2.5 = 37.5 \text{ m}^3$	<b>For no awardable content, award 0 marks.</b>	12	AO2 (3) AO3a (6) AO3b (3)
Air change loss $37.5 \times (22 - 5) \times 2 \times 0.33 = 420.75 \text{ Watts}$	<b>Band 1 1-3 marks</b> Demonstrates a basic understanding of heat principles. Some basic calculations and some basic explanation of heating systems		2.2 2.6 2.7
Wall area (3 m walls) $3 \times 2.5 = 7.5 \times 2 = 15 \text{ m}^2$			MC2 MC4
(5 m walls) $5 \times 2.5 = 12.5 \times 2 = 25 \text{ m}^2$	<b>Band 2 4-6 marks</b> Demonstrates a good understanding of heat principles. Most calculations achieved and good explanation of heating systems		
Less door $1 \times 1.9 = 1.9 \text{ m}^2$			
Less window $2 \times 1.5 = 3 \text{ m}^2$	<b>Band 2 7-9 marks</b> Demonstrates a thorough understanding with minor detail missing		
Total $25 - 3 - 1.9 = 20.1 \text{ m}^2$	<b>Band 4 10-12 marks</b> Demonstrates comprehensive understanding with detailed calculations and a full understanding of heating principles and suitable systems		
Total wall $20.1 + 15 = 35.1 \text{ m}^2$			
Wall loss $35.1 \times (22 - 5) \times 0.35 = 208.85 \text{ Watts}$			

# Deconstructing the question.

Question with key words highlighted.

**Analyse** the total heat loss based on the information provided and **recommend** an **efficient** method of space heating.

## Deconstruction.

- **Analyse** the total heat loss based on the information provided

Study the results of the heat loss calculation and building characteristics in detail to suggest potential heat sources for the building.

- **recommend** an **efficient** method of space heating.

Suggest a suitable method of space heating and include detail as to why this will be effective and capable of heating the room



# Question Layout Paper 2 BSE

An old house is to have a new heating system installed and pre-work inspections reveal that none of the BSE systems have been updated or maintained since their installation in the late 1960s. Before any new installation work can commence, all existing systems and services need to be inspected and checked to determine any likely issues and dangers. The house is currently occupied so removal or loss of services must be minimised.

The electrical supply to the house is a 230 V TN-C-S (PME) supply and other services include gas, water and telephone systems.

Discuss the likely condition of the services within the building including what approaches need to be taken to minimise disruption and maintain safety.

Indicative content	Guidance	Max marks	Test Spec ref & AO
Discussion to include likely issues, such as:	<b>For no awardable content, award 0 marks.</b>	12	AO2 (3) AO3a (4) AO3b (5)
Electrical system	<b>Band 1 1-3 marks</b>  Demonstrates a basic understanding of older systems but no understanding of the risks involved and no recommendations or evaluated risk		12.7 12.6 12.1
<ul style="list-style-type: none"> <li>VIR cables which may damage on movement. Care needed when removing switch covers as insulation failure is likely</li> <li>Rewireable fuses may contain asbestos. Do not disturb or disrupt as particles may become present in the atmosphere causing harm</li> <li>Consumer unit may not have suitable basic protection and inspection may lead to risks of shock through contact with live terminals as IP2X protection not present</li> <li>PME system and bonding connection if removed may create a shock risk due to open PEN in supply. Disconnecting</li> </ul>	<b>Band 2 4-6 marks</b>  Demonstrates a good understanding of older systems and offers partial understanding of the risks involved with limited		

Again we need to break down the key parts of the question

See in the mark scheme how the examiners use bands to award marks

bonding may create the risk of circulating current path being broken leading to potential differences where extraneous parts are used as return path

- metalwork may be used as an earth return path under fault conditions within the installation. Undetected faults may create potential difference between metalwork and earth

Other services

- presence of asbestos in lagging around pipes or in boxing which becomes a danger if disrupted and in these quantities will require specialist removal when work begins
- inspection may cause debris to block boiler flue and if boiler is open flue then there is a risk of carbon monoxide poisoning for residents after inspection work
- As the future planned work is very likely to create a problems with disturbance of the electrical system, recommend a full electrical rewire is carried out before or during the works as the heating installation is certain to disrupt the system creating a risk to installers and disruption to client

recommendations or evaluated risk

## **Band 3 7-9 marks**

Demonstrates a thorough understanding with minor detail missing

## **Band 4 10-12 marks**

Demonstrates comprehensive understanding with detailed understanding of risks and recommendations

# Deconstructing the question.

Question with key words highlighted.

**Discuss** the likely condition of the services within the building including **what approaches** need to be taken to **minimise disruption** and **maintain safety**.

Deconstructing a two part question.

- **Discuss** the likely condition of the services within the building.

(talk/write about the condition of the services of the property in the question brief in detail, considering the different issues, ideas, opinions related to it).

- **What approaches** need to be taken to **minimise disruption** and **maintain safety**.

**Approach** means a way of dealing with someone or something; a way of doing or thinking about something such as a problem or a task.

**Minimise disruption** means lessen any problems

**maintain** means to keep in an existing state (as of repair, efficiency, or validity) :

The response needs to ensure the approaches which both minimise (lessen) disruption and maintain (keep) safety are considered to achieve a good mark.

# Continued

If the question is broken down so learners can have a clear understanding of all of the instructions within an ERQ it may help them to focus their answers in more detail.

Key point: ERQ questions are worded in a certain way to differentiate between learners.

**Discuss** the likely condition of the services within the building including **what approaches** need to be taken to **minimise disruption** and **maintain safety**.

## Example

P1-Write about the condition of the services of the property in detail, think about the different issues, related to it .

P2-Then write about the different ways you would deal with any problems whilst making sure that there is little risk of disruption to the people living there and you have thought about your safety and the safety of the people there whilst the work is being carried out.

# ERQ question

A company involved with ministry of defence work is taking on a cohort of trainees, and as part of the training induction, ERR (Employment Rights and Responsibilities) is to be delivered.

Discuss **three** subjects that would be included in the training for the trainees, and why they are important to the construction industry. (12 marks)

<b>Max marks</b>	12	<b>Test Spec ref &amp; AO</b>	9.11 , AO2 (4), AO3a (4), AO3b (4)
------------------	----	-------------------------------	------------------------------------

Indicative content	Guidance
<p><b>Intention:</b> To allow learners to evaluate various topics and if they are covered by ERR</p> <p><b>Indicative content:</b> A discussion around the following topics</p> <p><b>Employment rights:</b> Minimum wage, pensions Holidays/sickness/maternity leave Equality H&amp;S Welfare arrangements Grievance procedures</p> <p><b>Employee responsibilities:</b> Working to contract H&amp;S compliance Confidentiality Compliance with employers' requirements</p>	<p><b>For no awardable content, award 0 marks.</b></p> <p>It is expected that the candidate's response will cover both employers and employees' responsibilities</p> <p>Answers must include explanations of why the subjects are important to the sector.</p>

# ERQ bands for marking and markers guidance

<b><u>Band 1 1-3 marks</u></b>	<p>Demonstrates a <b>basic</b> use of analysis of topics covered under ERR</p> <p>Demonstrates basic application of knowledge and understanding in relation to ERR</p> <p>Demonstrates basic evaluative skills with limited reasoning to which content would be included in the training</p>
<b><u>Band 2 4-6 marks</u></b>	<p>Demonstrates a <b>good</b> use of analysis of topics under ERR</p> <p>Demonstrate good application of knowledge and understanding in relation of ERR</p> <p>Demonstrates good evaluative skills with clear reasoning to which content would be included in the training</p>
<b><u>Band 3 7-9 marks</u></b>	<p>Demonstrates a <b>thorough</b> use of analysis of topics under ERR</p> <p>Demonstrate thorough application of knowledge and understanding of ERR</p> <p>Demonstrates thorough evaluative skills with thorough reasoning and justifications to which content would be included in the training</p>
<b><u>Band 4 10-12 marks</u></b>	<p>Demonstrates <b>comprehensive</b> use of analysis</p> <p>Demonstrate comprehensive application of knowledge and understanding of ERR</p> <p>Demonstrates comprehensive evaluative skills comprehensive reasoning and justifications to which content would be included with the training</p> <p>References to confidentiality</p>

	<b>AO2 Application</b>	<b>AO3a Analysis</b>	<b>AO3b Evaluation</b>
<b>Basic</b>	Limited understanding that is relevant to the context or question. Limited accuracy in interpretation through lack of application of relevant knowledge and understanding.	Limited accuracy in analysis through lack of application of relevant knowledge and understanding.	Un-supported evaluation through lack of application of knowledge and understanding. Un-supported judgement through lack of application of knowledge and understanding.
<b>Good</b>	Some understanding that is relevant to the context or question. Some accuracy in interpretation through the application of some relevant knowledge and understanding.	Some accuracy in analysis through the application of some relevant knowledge and understanding.	Partially supported evaluation through the application of some relevant knowledge and understanding. Partially supported judgement through the application of some relevant knowledge and understanding.
<b>Thorough</b>	A range of accurate understanding that is relevant to the context or question. Accurate interpretation through the application of relevant knowledge and understanding.	Accurate analysis through the application of relevant knowledge and understanding.	Supported evaluation through the application of relevant knowledge and understanding. Supported judgement through the application of relevant knowledge and understanding.
<b>Comprehensive</b>	A range of detailed and accurate understanding that is fully relevant to the context or question. Detailed and accurate interpretation through the application of relevant knowledge and understanding.	Detailed and accurate analysis through the application of relevant knowledge and understanding.	Detailed and substantiated evaluation through the application of relevant knowledge and understanding. Detailed and substantiated judgement through the application of relevant knowledge and understanding.



# Learners responses

## Candidate Response (Band 1)

### Top of band 1 response - 3 marks

*A subject I would expect to be covered is an employee's right of holiday. This is greatly important because it keeps the employees happy. As well as this, it will improve the quality of work as they will be happy to work for you as they are treated fairly.*

*I would also expect the responsibility of employees to be covered. This is a good topic to cover as it will tell the trainees what is expected of them by you the employer.*

### Examiner Commentary on application of mark scheme

The candidate has provided a basic analysis of the topics which fall under EER. They have been asked to identify three subjects, and this candidate has only identified two given some analysis around one of these subjects. The subjects identified are correct, however, in response to the context given they are of less important than other subjects which haven't been considered. Their response also focuses only on the employee and does not consider the employer.

There is basic application of knowledge, the candidate has failed to use any of the context given in the question in order to form their response, they comment on general considerations of ERR, rather than those applied to the situation given.

The candidate makes limited reasoning and makes judgements which are un-supported.

## Candidate Response (Band 4)

### Bottom of Band 4 - 10 marks

*The employment rights and responsibilities induction will contain all of the information about the trainees jobs. The three subjects will include: their pay, their sick pay/allowed time off, as well as their entitlement to breaks during work.*

*Firstly, the employees pay. This is vital as it is used to incentivise the employee and make them want to work, this is especially important in the construction industry as some companies keep retention of their employees as well as pension contributions.*

*Secondly, sick pay or time off in general is a subject heavily discussed to the trainee, this is required in the construction industry as everyone is entitled to time off if needed whether it is maternity leave or holiday pay, it is a human right. This is also very important in the construction industry as injuries can be easy to come by and employees must know what to do if they are injured and who to report it to, as well as how long they're allowed off.*

*Finally, the employees entitlement to breaks during work must be discussed, as it is also a human right if working for a long period of time. This is vital in the construction industry as prolonged periods of work without rest can lead to exhaustion or greatly increase the risk of injury. These are also used as incentives for workers as free time helps employees to relax, refuel.*

*All of these subjects are discussed under ERR as they are all human rights for employees and must legally be discussed.*

### Examiner Commentary on application of mark scheme

The candidate has met the requirements of the questions and considered at least three EER subjects which need to be covered as part of the induction which are all relevant to EER. For each point made the candidate evaluates the importance of the subject and reflects on why it is needed in a construction context showing detailed and substantiated evaluation and judgements.

The candidate remains towards the bottom of the band as the subjects they have chosen are still generic and their response is not tailored to the context of working for the Ministry of Defence and the contextualisation this requires in their response.

**Q. Calculate the volume of concrete required to pour a pile foundation measuring 600 mm in diameter with a depth of 8 m. Show all workings and provide the answer to 2 decimal places.**

Acceptable answer(s)	Guidance	Max marks	Test Spec ref & AO
Concrete pile foundations are cylindrical therefore requiring the formula height x pi x radius <sup>2</sup> (1 mark) 0.6 diameter/2 to obtain radius 0.3 (1 mark) 0.3 x 0.3 is 0.09 (1 mark) 0.09 x pi 3.14 is 0.2826 (1 mark) 0.2826 x 8 is 2.26 Answer: 2.26 m <sup>3</sup> to 2 decimal places (1 mark)	If only answer given with no workings shown, a maximum of 3 marks can be awarded. Award max. 4 marks if answer is NOT given in unit/ m <sup>3</sup> Some candidates will have been taught 3.142 or 3.14 so accept either for pi.	5	7.2 (MC2) AO2
KQ ref: Building technology principles			

## 7.2 Forms of construction

### Range:

**Forms** - substructure, superstructure, infrastructure, internal/external walls, external work.

### What do learners need to learn?

Current forms of construction and their use and suitability for both built environment and civil engineering structures.

Substructures: types of foundations, basements, retainer wall

Superstructure: roofs, walls, floors, windows, doors and frames

Infrastructure: roads, sewage systems, railways, bridges

Internal/external walls: cavity, solid, infill, stud, openings vertical and horizontal damp proof, weather tight, preventing water ingress and allowing for egress (weep holes)

External work: paving, boundaries, drainage, parking, (finished surfaces, sub-base materials)

### Skills

EC1  
EC2  
EC4  
EC6

## Example Candidate Response (worth 5 marks)

$$600 \div 2 = 300$$

$$300^2 \times \pi = 282743.3388$$

$$282743.3388 \times 8000 = 2261946711 \text{ mm}^3$$

$$2261946711 \text{ mm}^3 = 2.261946711 \text{ m}^3$$

$$= 2.26 \text{ m}^3 \text{ of concrete}$$

### Examiner Commentary on application of mark scheme

Mark 1: The candidate demonstrated they were able to apply their understanding of the shape of a pile foundation being cylindrical by identifying the appropriate formula. Despite not using the method in the order outlined in the mark scheme, the candidate was still able to recall and use the appropriate formula of  $h \times \pi \times r^2$ .

Mark 2: The candidate had the knowledge that the radius was half of the diameter and therefore halved 600.

Mark 3: Candidate was able to correctly calculate the area of the circle  $\pi \times r^2$

Mark 4: Candidate was able to correct multiple the area of the circle by the height of the foundation.

Mark 5: The candidate was able to present their answer in the correct SI unit ( $\text{m}^3$ ) to 2 ~~dp~~.

### Examiner hints and tips

- Encourage candidates to always show their working out, they may be able to pick up marks for following the correct method, even when calculations have gone wrong.
- If candidates only present an answer and do not show the method they used for the calculation they may not achieve full marks.
- Where candidates make errors in their calculations or the method used, they should cross through their working.
- Candidates should note the SI unit/unit of measure that their answer needs to be presented using.
- Candidate should note the number of decimal places or significant figures they are asked to give their answer too.

**T-LEVELS**



Institute for Apprenticeships  
& Technical Education

# Support materials

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eal®



The BSE and Onsite exam guides and an exemplar Observation Record for a ESP task (1.4 Presentation) are now on the relevant qual web pages, eg:

The screenshot shows a web interface for assessment materials. It has a red header bar with the text 'Assessment materials' and an upward arrow. Below this is a sub-header '8710-30 Core' with an upward arrow. Underneath is a red bar for '2022 Summer' with a downward arrow. Below that is another red bar for 'Exam Guide and Support' with an upward arrow. The main content area lists two files:

File Name	Size	Date	Action
8710-30 BSE exam guide v1-0 pdf	825 KB	06 Oct 2022	Download (red circle with down arrow)
ESP Task 1-4 Observation Record exemplar pdf	109 KB	11 Oct 2022	Download (red circle with down arrow)

Red arrows point from the text 'A real insight into what should be produced for assessment and can be found [here](#)' to the two files listed.

A real insight into what should be produced for assessment and can be found [here](#)

# We're currently advertising for Associates for BSE quals:

Technicals Moderator For Plumbing Level 2 & 3 - <https://eqarecruitment.cityandguilds.com/vacancy/technicals-moderator-for-plumbing-level-2-3-490892.html>

Technicals Moderator For Electrical Installation Level 2 & 3 - <https://eqarecruitment.cityandguilds.com/vacancy/technicals-moderator-for-electrical-installation-level-2-3-490847.html>

T Levels Moderator for Electrotechnical Engineering - <https://eqarecruitment.cityandguilds.com/vacancy/t-level-moderator-electrotechnical-engineering-490832.html>

T Levels Moderator for Plumbing & Heating - <https://eqarecruitment.cityandguilds.com/vacancy/t-level-moderator-plumbing-heating-engineering-490830.html>

# Paid for resources: supporting delivery with Hodder Education Building Services Engineering and Construction T Level: Core



- Complete coverage of T Level's core component
- Prepares students for core exams and ESP
- Available in print and digital formats
- E-mail Ruth Murphy if you would like to review the full book proofs or request sample chapter
- [ruth.murphy@hoddereducation.co.uk](mailto:ruth.murphy@hoddereducation.co.uk)
- [Link](#) to Hodder Website

[Link](#) to Hodder Website also has the link to the mapping grids (bottom of the webpage) which can show how other books can deliver the Occupational Specialism

# Paid for resources: supporting delivery with Hodder Education Building Services Engineering and Construction T Level: Core

## Key term

**Superstructure:** the part of a building above ground level, built on the basement or foundation



▲ Figure 3.1 Superstructure and substructure of a building

## Industry tip

Never deviate from approved working drawings during the construction phase without written consent from either Local Authority Building Control or a government-approved private building inspector. Changes to the design without permission can be expensive to put right if the work fails to meet building regulations approval.

## Improve your English

'Luminaire' is a word used to describe a source of artificial light. Write a paragraph to explain the use of different types of luminaire in a building, and explain why natural light is always a better source of energy.

## Improve your maths

Research the average wages for five different trades in your area, then determine the annual median wage.

## Research

Search online for 'PAS 2030:2019 Specification for the installation of energy efficiency measures in existing dwellings and insulation in residential park homes'.

Identify the standards of PAS 2030:2019 for retrofit installers and explain how they benefit the construction industry.



▲ Figure 3.17 Retrofit installer fitting an energy-efficient boiler

## Test yourself

What part of a building is the superstructure?

# Paid for resources: supporting delivery with Hodder Education Building Services Engineering and Construction T Level: Core

The Hodder text books have some great ideas of how to develop learners' skills and the use of the relevant verbs in assessment questions.

This can also help with setting sample questions in the classroom at various intervals in delivery.

**Tip. Also set sample questions across multiple learning outcomes and units.**

## Assessment practice

### Short answer

- 1 Which Approved Document influences the design of a building's energy sources?
- 2 Under what rights are contractors and individuals allowed to carry out certain construction projects without planning permission?
- 3 Identify three stages of building work that are usually inspected by a building control officer.
- 4 What is the name of the design and process management tool used to bring greater clarity for the client at different stages of a building project?
- 5 Name one modern building method where components are constructed off site.

### Long answer

- 6 Explain the difference between brownfield and greenfield sites.
- 7 Explain what is meant by vernacular construction and why it can impact on the profitability of projects.
- 8 Explain the role of a BIM designer.
- 9 What factors could influence changes to a building design?
- 10 List the steps for obtaining planning permission from the local planning department.

## Project practice

A principal contractor has been appointed by a client for a 'design and build' project. A rural greenfield site has already been acquired by the client, but it does not have planning permission.

An application has been made to the local planning department, with plans for six new 3- and 4-bedroom low-rise dwellings. However, the plans have been initially refused by Local Authority Building Control.

Discuss in a group the potential grounds for LABC to oppose the planning application.

Bearing in mind the possible reasons you have identified for rejecting the planning application, prepare a new application to address each of the issues. To achieve this, you may need to:

- ▶ research construction materials to ascertain their properties and suitability
- ▶ consider sustainable construction solutions
- ▶ research corporate social responsibility towards the community.



# The Employer-Set Project (ESP)

## Core Assessment BSE/Onsite

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 generally 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.



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%

# Assessment Objectives and Weightings-Employer Set project

Assessment objective	Typical evidence (examples in brief)	Approximate weighting and marks
AO1 Planning skills and strategies	Clearly structured response to brief, cohesive response with ordered sections, logical approach to referencing, research and sources	14%
AO2 Apply knowledge and skills to the context of the project	Relevant core knowledge applied to respond to brief, references relevant legislation, building controls, materials, concepts, waste disposal and site access considerations.	54%
AO3 Select relevant techniques and resources to meet the brief	Techniques and resources are relevant to the task undertaken.	10%
AO4 Use maths, English and digital skills	Use of correct terminology, abbreviations, units of measurement in context, (technical versus nontechnical wording), use of calculations/graphs etc appropriately, consideration of the use of ICT in presentation.	16%
AO5 Carry out tasks and evaluate for fitness for purpose	Considered analysis and evaluation of project outcome, what went well and what could be improved.	6%

# Research 1.1

(The logical investigation into and study of materials and sources in order to establish facts and reach new conclusions).  
**(3 hours) (9 marks)**

## Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks	AO1	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
Part 1										
1.1 Research	2	3	0	2	0	0	2	0	0	9

**Evidence required:** Research notes and a record of where they **sourced** these notes from.

## Examiners report said

- Candidate's research was not always referenced as required by the task and, in some instances, not referenced at all.
- A number of candidates used copy and paste to lift information directly from websites. This was evident on a number of completed tasks and included various fonts/sizes and text style

## Hints and tips for learners .

- Learners to copy and paste any source materials e. g. websites used.
- Ensure if lifting information e.g copy and pasting, fonts and font sizes are all the same.





## 1.2 – Report-(written account of something that has been investigated)

(6 hours) (26 marks)

### Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks	AO1	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
Part 1										
1.2 Report	6	6	6	2	2	2	2	0	0	26

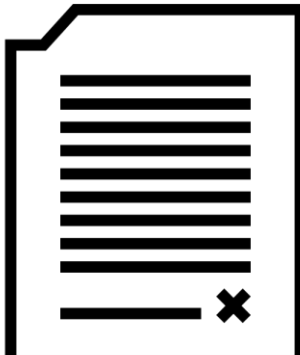
**Evidence required:** Report minimum 1500 words and a record of where they sourced their information from.

### Examiners report said:

- Most candidates found this task challenging and used the copy and paste function to reproduce the information obtained in Task 1.1, without amending the structure or tailoring content to meet the requirements of the report.
- Many candidates provided no **reasoning/justification** for decisions made.
- The evidence offered from the majority of candidates was very brief.

### Hints and tips 4 stages to writing a report

- **Overview:** the overview is a brief summary which tells the reader quickly what the report is all about. ...
- **Background:** the background sets the scene for your reader. ...
- **Discussion:** the discussion presents your findings. ...
- **Conclusion:** conclusions briefly state the major points that can be drawn from the discussion.



# 1.3 – Project plan

(A project plan outlines everything that's needed to create a successful project) **(3 hours) (24 marks)**

## Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks	AO1	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
Part 1										
1.3 Project plan	4	10	6	2	2	0	0	0	0	24

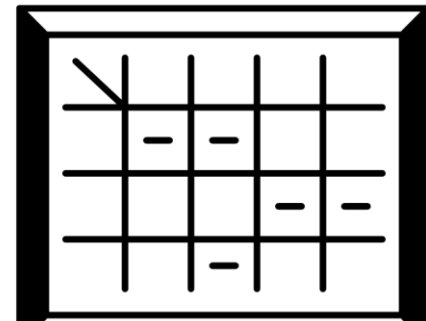
**Evidence required: programme of work and a supporting statement**

**Examiners report said:**

- Not all candidates produced any type of programme of work plan, as required by the task.

## Hints and tips

- A lot of marks available for the plan
- AO2 Relevant core knowledge applied to respond to brief, references relevant legislation, building controls, materials, concepts, waste disposal and site access considerations.





# 1.4 – Presentation

(conveys information from a speaker to an audience)

(2.5 hours) (18 marks)

## Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

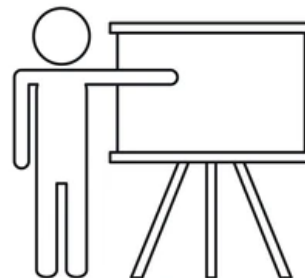
Tasks	AO1	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
Part 1										
1.4 Presentation	2	6	6	2	0	2	0	0	0	18

## Examiners report said :

- Some PowerPoint presentations included more text than needed, sometimes copied directly from previous tasks.
- Some candidate's presentation skills were very weak with not all information being relayed effectively.
- This task must be presented (eg candidate standing next to a screen), 'presenting' via MS Teams/Zoom (ie sharing a screen) is not acceptable, and will disadvantage candidates.

## Hints and tips

- Only bullet point on slides candidates can use note to accompany slides.
- Crib sheet for presenting e.g name–subject- eye contact-projection of voice –microphone.



## 2.1 – Collaborative problem-solving

(A team approach, a collaboration between peers who help one another solve a problem).

**(1 ½ hours) (15 marks)**

### Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks	AO1	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
Part 2										
2.1 Collaborative problem-solving	0	6	5	2	0	0	0	2	0	15

### Examiners report said :

- Some candidates failed to fully engage in the collaborative task due to a lack of preparation.

### Hints and tips

- Observation records should use positive language throughout.
- Only a maximum of three candidates at a time to be observed for this task.
- Providers to introduce candidates or give them ID sheet (name badge etc) when working on the collaborative task to enable easy identification of candidates.
- A separate microphone positioned between the candidates is recommended.



# 1.4 and 2.1 – Observation records and video recordings

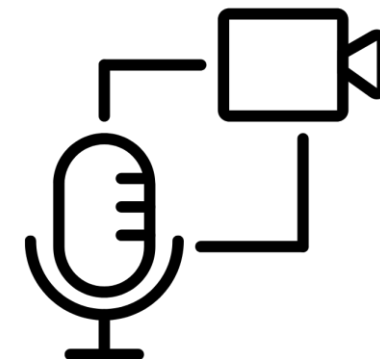
Not all candidates identified themselves at the beginning of the tasks, as per the guidance instructions. This must be carried out verbally and/or with ID sheets.

## Observation records:

- The relevant section of the mark grid from the sample materials should be used as a reference (to better understand the expectations and commentary required for external marking).
- Observation records must be detailed and contextualised to each individual candidate utilising the prompts provided.
- Tutors can refer back to the video/audio recording to complete the observation records if necessary.

## Video and audio:

- Video and audio must be checked before (eg test) and after.
- 2K/4K video is **not** required. Video file size must be considered and **not** exceed 2Gb per file.
- Zoom, MS Teams etc can be used to **record** the video/audio – but they must **not** be used to run the presentation.
- Use of microphones separate from the camera are recommended (especially for the collaborative discussion).



## 2.2 – Evaluation

How well did the project outcome meet the requirements of the brief

(1 hour) (8 marks)

What went well? what didn't go well? what would I do differently?

### Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks	AO1	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
2.2 Evaluation	0	0	0	0	0	4	0	0	4	8
Total	0	6	5	2	0	4	0	2	4	23
AO	14	54		10	16			6		100

### Examiner report said:

- The evaluation was attempted reasonably well by most candidates.
- Not all candidates linked their evaluation to the task and project brief.
- Most candidates gave a task-by-task explanation of their work.

### Hints and tips

- Candidates evaluate their performance against the requirements of each task, and how they could improve.



# Future Networks how can we help

Please complete our short survey and tell us what you need for the future.

<https://forms.office.com/r/qkzfv6pML0>





# ***T-LEVELS***

Thank you

Any further questions or comments before we close?

## About City & Guilds

Founded in 1878 to develop the knowledge, skills, and behaviours needed to help businesses thrive, we offer a broad and imaginative range of products and services that help people achieve their potential through work-based learning. We believe in a world where people and organisations have the confidence and capabilities to prosper, today and in the future. So we work with likeminded partners to develop the skills that industries demand across the world.

## About ILM

ILM is the leading specialist provider of leadership qualifications in the UK. Last year, over 70,000 people enhanced their skills and performance with ILM, including 14,000 management apprentices. We believe that great leaders can come from anywhere. With the right support, anyone can grow and develop to make a real difference to their team and organisation. Which is why we help individuals from all levels to realise and apply their potential, so that the organisations they work for can reap the benefits.

## About EAL

EAL is the specialist awarding organisation for engineering and manufacturing qualifications and apprenticeships. We invest in the industries we serve and the careers of those within them. Our unrivalled understanding of employer skills needs stems from decades of experience forging industry partnerships. That's why employers trust our skills solutions to deliver real career benefits for learners.