EAL Progression in Building Services Engineering (Level 2)

Assessment Pack

Contents

Version information

Version and publication date	Changes
v1 June 2021	Original document
V2 July 2022	Grade boundaries for the on-screen assessments updated; results information updated (p13- 14). Grade aggregation – example updated using the plumbing figures (p33).
V3 September 2023	Guidance was added on grade setting (p13).

1. Introduction

What is in this document?

- Assessment structure and criteria
- Learner tasks and guidance
- Assessor guidance on assessments, tasks and grading

Assessment overview

The focus of the assessments is for the learner to fully demonstrate the knowledge, skills and understanding set out in the qualification content.

The learner will be assessed in a number of ways to provide a clear indication of their learning. For this qualification, the learner must successfully complete:

- An **On-screen assessment** consisting of a range of multiple-choice question types
- A **Practical Project** made up of three sections that requires the learner to show their planning, performing and evaluating skills
- A **Guided Discussion** that contains two sections, including the learner's reflection on completion of their Practical Project.

Due to the nature of the assessments, the Practical Project **must** be undertaken prior to the Guided Discussion.

Assessment structure

Assessment	On-screen assessment	Practical Project	Guided Discussion
Approach	Externally set and marked	Externally set and verified, internally marked	Externally set and verified, internally marked
Output	Grade	Grade	Grade
Weighting (contribution to overall qualification grade)	20%	60%	20%

General delivery guidance

Introducing the assessment to learners

The assessor must introduce each of the assessments to the learner when they are deemed ready and prepared to undertake the assessment. This must take place following a period of learning and formative assessment. The assessor must provide a full overview of the assessment process and of the different assessments, so that the learner is fully clear on the assessment journey before they start their first assessment.

Release of the assessment to the learner confirms that the internal assessor has confidence that the learner has undergone sufficient teaching and guidance to have developed a depth of understanding that provides them the opportunity to respond successfully to each of the tasks.

Timings between assessments

The Guided Discussion can only take place once the learner has completed the Practical Project. Centres must ensure a manageable transition between these two assessments. As the discussion builds on the learner's project, it is recommended that a gap of no more than three weeks is left between the learner's finalisation of their project and completion of the Guided Discussion.

The On-screen assessment may be taken at any stage in the assessment process, although it is recommended that this is completed prior to the Practical Project and Guided Discussion.

Equal opportunities and diversity

The Consortium expects individuals to have equal access to this assessment irrespective of their sex, marital status, age, religion, colour, race, nationality, ethnic origin or disability. In essence, complying with relevant equalities legislation.

Centres are required to have in place a policy to ensure that such discrimination does not occur either directly, indirectly or as a result of pressure from other bodies. This policy must apply to all satellite Centres and there must be arrangements in place to monitor its application and effectiveness. In the unlikely event that complaints relating to issues of inequality cannot be satisfactorily resolved by the Centre; learners must be made aware of their right to appeal to the Consortium through the arrangements outlined in our Appeals Policy.

Level of language

The assessment is intended for learners within Wales. It is not a test of Welsh or English comprehension. Therefore, with the exception of technical terms that are appropriate to the purpose and level of the assessment, the language must be at an appropriate level for the learner. Assessors must also take care to ensure that use of language takes account of the fact that not all learners may have Welsh/English as their first or additional language.

Plagiarism

The assessor can clarify task instruction and methods for saving work but cannot assist during the assessment in any way.
This is an assessment of the learner's abilities, so the work must be all the learner's work and carried out under the conditions stated within this document.
Where research is allowed, the tutor/assessor must be able to identify which work the learner has done themself, and what the learner has found from other sources. It is therefore important to make sure the learner acknowledge all sources and clearly reference any information taken from them.

Academic misconduct

Where the assessor suspects malpractice by the centre/learner – including academic misconduct or collusion, this must be reported in line with EAL's malpractice policy which can be found on Online Services.

2. Learner guidance

Assessment overview

You are required to complete the following assessments:

On-screen assessment

The On-screen assessment will consist of a range of multiple-choice question types and will assess your knowledge and understanding.

Practical Project

The Practical Project will assess your abilities in your chosen trade area, and will require you to

- **Plan** out the works required for your chosen trade in the context of a larger building services engineering project
- **Perform** the practical tasks, demonstrating your skills in your chosen trade
- **Evaluate** the approaches you have taken towards completing the project and the quality of your outcomes.

The Practical Project is also designed to ensure you have the opportunity to demonstrate wider employability skills including:

- Calculation of costs and resourcing
- Time management
- Effective planning
- Setting personal targets
- Problem-solving.

Each element of the project (planning, performing and evaluation) will be marked by your assessor and the overall project will be graded.

You must complete the project task within the time specified in the trade-specific project briefs contained within this Project Pack.

Guided Discussion

Following completion of your Practical Project, you will be required to complete a Guided Discussion. The Guided Discussion will consist of two parts which will allow you to review and reflect on the tasks that you have undertaken, and explore your knowledge and understanding of self-employment in your chosen trade.

Practical Project task instructions

This is a formal assessment in which you will be awarded marks based on the quality and accuracy of your practical performance. It is therefore important that you carry out your work to the highest standard possible. You must show how well you know and understand your chosen trade and how you are able to use your knowledge and skills together to complete the tasks.

You will be provided with a project brief for your chosen trade area by your assessor.

This project has three elements: planning, performing and evaluating.
You have:

- 14 hours allocated for the planning of all 3 tasks (planning),
- 40 hours allocated to carry out all 3 tasks (performing),
- 6 hours to evaluate all 3 tasks in the project (evaluating).

You may not use the time you have been given for each element for another element. For example, if you complete your planning in 12 hours, you may not use the other 2 hours for either the performing or the evaluating elements.

You will be required to devise plans for all 3 tasks showing the approach you will take to undertake the work required in the tasks, underpinned by an overall schedule of works.

Once the task has been completed you will be required to evaluate your work.

You must adhere to all relevant health and safety procedures at all times.

Planning and Evaluation guidance below is also provided in the Project Pack which will be provided by your assessor, information is included within this document to support understanding of the process and provide context.

You are required to complete the three sections of the assessment (Planning, Performing, Evaluating) in the order outlined below:

Planning task

This will be undertaken in a classroom environment where you will have access to IT equipment and appropriate resources to carry out your research. These materials may include guidance notes, regulations, and manufacturers' instructions/literature.

You will be required to produce the following:

- a resource list including tools, materials and equipment needed to complete each task (refer to the task specifications provided)
- a risk assessment
- a method statement including a schedule of works (with timelines) - your plan must indicate how long you estimate you will take on each task, identifying the key activities/phases of work within each task and how long you expect these to take, any potential dependencies between activities/phases of work, any milestones you wish to achieve – for example the main activities in tasks
- drawings/diagrams (if indicated in the task specification)
- a customer estimate for each task (see the project costs information provided below)

- a set of success criteria that you have set yourself for the performance tasks. Your success criteria can relate to whatever you think is appropriate for the work, for example the quality of the installation/finish, ways of working (e.g. measuring and marking out, drilling, fixing, bending, fabricating, clipping etc.). Think about why you have set the success criteria and how these will support a quality output.

  Think about:

  'What does a good build/installation look like in my trade area? How can I achieve this?'

Your learning provider will provide proformas to support your responses to this task.

You must include this information above in your plans.

Project costs task

For this element you are required to produce an estimate for a customer for **each of the tasks within the trade brief provided by your assessor.**

You are self-employed and work alone; your overheads include insurances, van running costs, and admin costs that total £6.25 per working hour, your hourly rate is £25 per hour, and your business operates on a 25% profit margin.

Use the resource list and the timelines from the schedule of works you have produced to produce an estimate for a customer.

This estimate must include:

- an overview of the work to be undertaken
- the overall price to the customer for the task – including how this was determined (please show working)
- the duration of the task
- a resource list with costs

You will complete plans for all 3 tasks within the Practical Project, all 3 must meet the threshold pass mark for the planning element before moving on to the performing element of the Practical Project.

Two copies of each plan are required; one must be submitted to your assessor and one copy kept for use in the performing element of the project.

Performing

This element of the project will be carried out in the centre's workshop.

Prior to starting the assessment, you must check the working environment and confirm the safety of the work location/immediate work area for yourself and others Any issues need to be identified and brought to the attention of your assessor before you continue. You must also select appropriate PPE to carry out the task(s).

Using the resource list, any diagrams and method statement you devised previously, select the appropriate tools materials, components and fixings and complete the task(s) specified in the project brief provided by your assessor, ensuring any testing required is completed within the time provided.

Evaluating

Upon completion of the performance element you are required to write **one** evaluation report which reflects **all tasks** undertaken as part of the project. Within this report you must evaluate the approaches taken towards completing the tasks and the quality of the outcomes, comparing the project outcomes with the task requirements and your plan including the success criteria you have previously set.

You will undertake this evaluation in a classroom environment.

When completing your project evaluation you will have access to your planning documentation to support this activity.

Your evaluation must answer the following:

- Did you meet the requirements of your plan?
- Did you meet your success criteria?
- Did you meet the requirements for all tasks?

Also consider as relevant:

- What went well? What were your strengths?
- What did not go well? Did you have any areas of improvement?
- What would you do differently if you were to complete the task(s) again? Would you use a different approach next time?
- How well did you plan? Should you have done more?
- What problems did you encounter? How did you overcome them?
- Did the practical tasks go to plan? (e.g. resources, time)
- If you carried out testing/commissioning what did your results mean?
- What did you learn from the project?

Health and safety

You must always work safely. You must always follow any relevant health and safety regulations and codes of practice.
If your tutor/assessor sees you working in a way that is unsafe for yourself or others, they will ask you to stop immediately, and tell you why. This may lead you to failing the assessment depending on the severity of the infraction.

Presentation of work

Written responses are required for the tasks within the planning and evaluation section of the project. Written responses must be provided as electronic, typed responses. You must ensure that your work is presentable, i.e. use a standard font in a readable size (for example Times New Roman, or equivalent, size 12), use double spacing and include adequate margins.

You must make sure that each piece of work is clearly labelled with your name, centre number, learner number and the assignment reference.
All electronic files must be saved in the following format: SURNAME_FIRST NAME_NAME OF ASSESSMENT_DATE _VERSION NUMBER

Guided Discussion

The Guided Discussion has two parts, completed in one timed sitting.

The purpose of the Guided Discussion is to confirm:

- your ability to review and reflect on the tasks that you have undertaken as part of the Practical Project and for you to demonstrate what you have learned from these tasks.
- your knowledge and understanding of how you could work in the building services engineering sector self-employed; considering the characteristics, advantages and disadvantages of self-employment and the considerations necessary to ensure you have a duty of care for end users.
- your knowledge of the trade bodies and organisations that exist within the sector and for your chosen trade, and how they would interact with them if they were self-employed.

The Guided Discussion will last for 40 minutes and be conducted by an assessor under quiet and uninterrupted conditions

The evidence from your completed project can be referred to during the Guided Discussion.

You are advised that your assessor will record the Guided Discussion for assessment purposes.

The Guided Discussion will cover the content areas as outlined in the table on the next page.

A minimum number of marks must be achieved within each section of the Guided Discussion, your assessor will provide information on these requirements before the assessment takes place.

Information to support preparation for the Guided Discussion:

Within this assessment assessors will seek to gather evidence from across the following discussion areas:

Unit 201 1.1 The trade bodies and organisations relevant to the trade 1.2 The role of trade bodies and organisations within the building services engineering sector 2.1 The characteristics of self-employment 2.2 The advantages and disadvantages of self-employment 2.3 The responsibilities of being self-employed 2.4 Patterns in employment and rises and falls in demand 2.5 The duty of care in ensuring products and work are safe for end users 3.1 The importance of effective and appropriate communication with others 3.2 The importance of emotional intelligence in effective communication. 3.3 How to plan and manage one's own time. 3.4 How to set targets and success criteria. 3.5 The importance of reflective practice. 4.1 Recognise problems that may occur within building services projects. 4.2 How to identify solutions to problems. 4.3 How to test and evaluate solutions.
Unit 204 1.1 The main techniques used for estimating jobs/projects in building services engineering 1.2 How to identify resource requirements 1.3 How to estimate time requirements 2.1 Identify resources required to complete the task 2.2 Plan the activities and the ordering/phasing of work to complete the task 2.3 Identify success Criteria for the task 3.1 Evaluate completed work against the task brief and success criteria

3. Assessor guidance - On-screen assessment (Progression Test)

Introduction

The On-screen assessment provides learners with the opportunity to demonstrate their knowledge and understanding from across the core learning areas.

First assessments can be taken from 1st March 2022.

Assessment Specification - On-screen assessment

Assessment specifications for the On-screen assessments for each trade can be found in Appendix 1 of this document.

Assessment information

Number of questions	50
Marks available	50
Grade setting	The learner must achieve the required standard in order to be awarded the relevant grade. The standard is determined by subject matter experts during the exam development process. The subject matter experts set a cut score requirement for the pass (P1) and distinction (D1) grade boundaries. All other grades within an assessment are derived using these agreed cut scores. In practice this means that while the required standard remains the same the pass mark may change across different versions of the exam
Grading	The table below provides indicative grade boundaries for the on-screen assessments; these may vary between versions of these assessments.

Plumbing

Marks (Sample test example)	Assessment Grade	Points
0 - 30	Fail	0
31 - 32	P1	1
33 - 33	P2	2
34 - 35	M1	3
36 - 37	M2	4
38 - 41	D1	5
42 - 45	D2	6
46 - 50	D3	7

Electrical

Marks (Sample test example)	Assessment Grade	Points
0 - 27	Fail	0
28 - 29	P1	1
30 - 31	P2	2
32 - 34	M1	3
35 - 37	M2	4
38 - 41	D1	5
42 - 45	D2	6
46 - 50	D3	7

Type of questions	Multiple-choice
Time allowed	75 minutes

Availability	This assessment is available on-screen on demand from 1st March, 2022. Centres are able to 'book' tests for their learners on a date and time suitable for them. Learners will sit the assessment securely via the on-screen platform.
Assessment conditions	The test will be carried out online and marked electronically. There is no internal or external verification required. Assessments must be invigilated by a member of staff who have undertaken invigilator training. No reference material permitted. Non-programmable calculator required.
Results	Results for the first 50 learners will be held and reviewed by EAL for up to 20 working days from the assessment date for new versions when they are released. Following this review, results will otherwise be released immediately post assessment.
Resit arrangements	Learners who fail to achieve the required mark for a pass on sitting the assessment are permitted to re-sit. If learners fail to successfully achieve the assessment at the first attempt, they are permitted to resit. There are no limits to the number of times that a learner may resit the assessment. When resitting, learners can achieve the full range of marks and grades available.

4. Assessor guidance – Practical Project

A separate Project Pack has been provided which contains trade-specific project briefs and marking grids for the planning, performing, and evaluating sections of the project.

Introduction

Learners are required to complete a Practical Project assessment that covers their chosen trade area. The task instructions provided to learners are generic for all trades, with specific project briefs developed for each trade area. The assessor must provide the required project brief (found in the Project Pack) to the learner prior to the start of the assessment.

For this assessment, the current live trade-specific project briefs (a minimum of two will be available at all times) must be downloaded securely from the Consortium website prior to the assessment taking place. This must be downloaded at least three weeks prior to the assessment to allow the centre to confirm and source (if needed) the materials and tools required. The project brief must be provided to learners only at the commencement of the assessment period.

Assessment specification

The assessment specification below provides a high-level overview of the outcomes covered within the different elements of the Practical Project.

Part 1. Planning	
Knowledge, Skills and Understanding of:	**Unit & Learning Outcome**
1 Project Planning	
Identify resource requirements to complete the task	Unit 204: LO1
Plan the activities and the ordering/phasing of work to complete the task	Unit 204: LO2
The main techniques used for estimating jobs/projects in building services engineering	Unit 204: LO1
Identify success criteria for the task	Unit 204: LO2

Part 2. Performing	
Knowledge, Skills and Understanding of:	**Unit & Learning Outcome**
2 Project Practical area: Trade Specific Content	
Plumbing and Heating	Unit 212PH LO1 – LO9
Electrical	Unit 208E LO1 – LO16

Part 3. Evaluating	
Knowledge, Skills and Understanding of:	**Unit & Learning Outcome**
3 Project Evaluation area: Trade Specific Content Areas	
Evaluate completed work against the task brief and success criteria	Unit 204: LO3

Task specific guidance

Planning and Evaluation guidance below is also provided in the Project Pack to support delivery, information is included within this document to support understanding of the process and provide context.

Planning task

The learner will need to devise a plan for each of the tasks within their chosen trade's project brief.

Learners must complete their planning within a classroom environment monitored by centre staff who have undergone invigilation training. Learners must have access to IT facilities with access to the internet, manufacturers' information, wholesalers' catalogues, HSE guidance notes and any other material that would be available to them as if this project was to be carried out in the workplace.

No set recording forms have been provided for written documentation such as risk assessments or method statements. Centres must provide proformas to learners for the planning element of the project.

Once the learner has completed the planning task a copy of their plan must be submitted to the assessor for assessment purposes and a copy retained by the learner to be used in the performing element of the project. As per the guidance provided to learners, this must be provided as an electronic copy.

To support ongoing assessment, the assessor must mark the planning element and **confirm that a minimum threshold for a pass has been achieved in all 3 task plans before the learner may progress to the performing element of the Practical Project**. This ensures that learners only progress when they have identified sufficient health and safety requirements, as well as the necessary materials and equipment for the tasks.

Only the mark from the highest scoring plan will contribute to the overall project mark.

Assessment decisions and confirmation of next steps must be provided to the learner within one week of completion of the planning element.

In order to support the manageability of the practical tasks, a tools and materials list has been provided as part of the project brief for each trade (see separate Project Pack). **Please note that these lists are for centre-use only and must not be provided to learners** – learners must use their own developed material and equipment list from their planning.

Learners will be required to produce the following:

- a resource list including tools, materials and equipment needed to complete each task (refer to the task specifications provided) **(marking grid reference a)**
- a risk assessment **(marking grid reference b)**
- a method statement including a schedule of works (with timelines) identifying the key activities/phases of work within each task and how long learners expect these to take, any potential dependencies between activities/phases of work, any milestones they wish to achieve – for example the main activities in tasks **(marking grid reference b & d)**
- drawings/diagrams (if indicated in the task specification) **(marking grid reference b)**

- a customer estimate for each task (see the project costs information provided below) **(marking grid reference c)**
- success criteria for each task. This can relate to whatever they think is appropriate for the tasks, for example the quality of the installation, ways of working (e.g. measuring and marking out, drilling, fixing, bending, fabricating, clipping etc.). Learners should be able to justify why they have set the success criteria they have and how they support quality outputs/outcomes. **(marking grid reference e).**

Project cost task

This element of the assessment requires the learner to develop an estimate for the customer **for each of the tasks from the trade brief of their chosen trade.** The project brief for the chosen trade must be provided to the learner before they begin this assessment, project briefs can be found in the Project Pack.

The learner will complete the following task:
You are self-employed and work alone; your overheads include insurances, van running costs, and admin costs that total £6.25 per working hour, your hourly rate is £25 per hour, and your business operates on a 25% profit margin.

Use the resource list and the timelines from the schedule of works you have produced for one of the tasks to produce an estimate for a customer for the chosen task.

This estimate must include:

- an overview of the work to be undertaken
- an overall price for the customer for the task – including how this was determined (please show working)
- the duration of the task
- a resource list with costs.

They have **14 hours** to complete the planning element. If they complete in less time, they cannot use the extra time in the other elements of this project or take time from other elements to add time here.

Practical task (Performing)

This element of the assessment will comprise of three tasks.
The learner will use the plans they have created to support them in completing the tasks within the time specified.

This will be carried out in the centre's workshop, supervised at all times by centre staff, ensuring learners have access to sufficient materials, tools, equipment and consumables to complete the three tasks.

Additional requests for materials due to wastage will result in points being deducted as shown on the marking sheet.

The assessor must take photo evidence of the completed work, and mark using the provided marking scheme. The photo evidence will create a record of the completed work and help justify the marks awarded by the assessor in conjunction with the performance marking scheme.

Learners will be marked on their ability to work safely during the Practical Project. They must follow health and safety requirements.

In the event of unsafe working stop the learner immediately and tell them why. If it is classed as a minor infraction, they must be instructed why what they did was unsafe (e.g. creating a trip hazard) and then allowed to continue with the assessment. If they work in a manner that is classed as a major infraction of health and safety (such as intentionally misusing tools and equipment thus creating a dangerous hazard to themselves/others), or they have more than three minor infractions then the assessment must be stopped, and they will fail the assessment.

Learners have **40 hours** to complete this practical element, using this time as they deem appropriate across the three tasks in line with their plans. If they complete in less time, they cannot use the extra time in the other elements of this project or take time from other elements to add time here.

Evaluation

Once learners have completed the performing element of the project they must produce **one** evaluation report which reflects on the whole project and includes all tasks. Within this report learners must evaluate the approaches they took towards completing the tasks and the quality of the outcomes, comparing the results/outcomes of their project with the task requirements and their plan including the success criteria set.

This will be undertaken in a classroom environment under supervision from centre staff, ensuring learners have access to their planning documentation to support their review and evaluation activity.

They will have **6 hours** to complete this element.

General guidance

Timings

The expectation is that this Practical Project will be taken at a time within the programme of learning as deemed appropriate by the centre, allowing time for re-sits if needed. The assessment must be planned by centre staff to support all tasks to be undertaken in a manageable timeframe for both the learner and the centre. The learner must be supported throughout this period to enable progression within the tasks without any undue gaps or delays to assessment.

If the learner requires additional time to complete the assessment(s) due to illness/compassionate leave, then any consideration for this must be followed in-line with EAL Reasonable Adjustments and Special Considerations policy and practice. See further details in the Qualification Handbook.

Re-sit/resubmission

If the learner fails the assessment, they are permitted to resubmit.

Learners are only required to resubmit any elements of the assessment that they failed. Further guidance is provided below for each section of the Practical Project.

When resubmitting, learners can achieve the full range of marks and grades available.

If a learner does not meet the required marking criteria, the centre must work with the learner to address criteria failed and provide opportunities for improvement to help them prepare to reach the standard required.

If learners are unhappy with their assessment outcomes, they must be informed of their right to appeal.

Centres must record any actions taken and/or any additional support given to the learner.

The following specific guidance must be followed where a resit/resubmission is required for the individual sections of the project.

Planning

If the learner fails to successfully achieve a threshold pass mark in any of their task plans, they are permitted to resubmit the plan(s) against the same project brief(s) originally attempted. Assessors must be advised that only high-level feedback is permitted to be provided to the learner, that outlines key areas where they failed to meet the criteria – but **must not provide advice to the learner on what they need to do** to rectify these areas. Work done for resubmission of planning work must not exceed 4 hours per task. Resubmitted plans cannot be used to determine the final mark used for grading (i.e. a resubmitted plan cannot become the highest scoring plan); they will only contribute to the achievement of a threshold pass across the 3 plans submitted.

Performing

If the learner fails to successfully achieve a threshold pass mark in their practical task(s), they are permitted to retake/resubmit against the same project brief originally attempted, using their original plan. Where a learner has failed to achieve a threshold pass mark but is a narrow fail (classified as 19-23 marks), then the learner may be directed to rework areas of the original work presented for

assessment. Where a learner result is a clear fail (18 marks or less), they must be instructed to restart the task from the beginning.

Evaluating

If the learner fails to successfully achieve a threshold pass mark in their evaluating task, they are permitted to resubmit. Assessors must be advised that only high-level feedback is permitted to be provided to the learner, that outlines key areas where they failed to meet the criteria – but **must not provide advice to the learner on what they need to do** to rectify these areas. Learners are allowed no more than 6 hours to complete work to support resubmission.

Marking and grading

Marking information and grids can be found in the Project Pack.

Please see below for an overview of the total marks available within each section of the Practical Project and the overall marking and grading for this assessment.

Overall Practical Project mark

This table indicates the total marks available within each section of the Practical Project and the minimum mark which must be gained within each section.

Project Section	Marks Available	Threshold Pass Mark
Planning	90	30
Trade Task 1	60	24
Trade Task 2	60	24
Trade Task 3	60	24
Evaluating	42	14
Total	**312**	**116**

Marks awarded within each section must be totalled and combined to create and overall project mark, the table below indicates the grade to be awarded based on the learner's overall mark.

Please note: the threshold pass mark indicates the minimum score that learners must achieve in each section of the project, but does not set the minimum score which must be achieved overall – the total mark required to pass this assessment can be found in the table below.

Determining overall grade

The table below identifies how many marks overall are required to achieve each grade within this assessment component:

Total Mark	Grade	Points
0 - 115	Fail	0
116 - 143	P1	1
144 - 171	P2	2
172 - 199	M1	3
200 - 227	M2	4
228 - 255	D1	5
256 - 283	D2	6
284 - 312	D3	7

The assessor must use this table to calculate a provisional grade for the learner. Notification of this provisional grade must be given to the learner within one week of completion of the assessment, with guidance given on the provisional nature of the grade. Provisional results will be subject to internal quality assurance procedures, followed by external quality assurance activity completed by EAL. Results will be submitted to EAL and the final assessment grade aggregated with the other assessment methods to award an overall qualification grade, which will be issued by EAL.

5. Assessor guidance – Guided Discussion

Assessment purpose and overview

The Guided Discussion will be undertaken with the learner in one timed sitting and has two key areas for exploration:

- The *first area* for exploration will be the learner's evaluation and reflections on their Practical Project. They will consider the task(s) carried out and provide an overview of their:
  - effectiveness whilst **planning and preparing** to carry out common tasks in the chosen trade area
  - **work performance** in carrying out common tasks in this trade area, both in relation to the set requirements and their own success criteria

  The learner will be required to reflect on their areas of strengths, and those areas where they experienced the greatest level of challenge. They will demonstrate ways that they would approach future and different work tasks within the trade and across the building services engineering industry based on their reflections. They will reflect on appropriate and effective communication methods when working within the chosen trade, as well as how to recognise problems, and identify and test solutions.

- The *second area* of exploration will build on from the learner's evaluation and will consider their readiness for working as a self-employed person in the building services engineering industry as a whole. The discussion will explore the learner's understanding of
  - the self-employment characteristics and advantages and disadvantages that need to be taken into account when working as a self-employed person within the trade area
  - the trade bodies and organisations that exist within the chosen trade and how they would interact with them if self-employed
  - the specific responsibilities of being self-employed that the learner will need to demonstrate when working within the trade
  - the patterns of employment whilst self-employed, considering rise and fall in demand
  - the approaches that the learner will use to ensure they have a duty of care for end users

Guidance on the minimum number of marks which must be achieved within each section can be found in the Marking and Grading section below. Learners must be made aware of these requirements prior to commencing this assessment.

The Guided Discussion takes a sampling approach to the criteria listed in the assessment specification below. When sampling these criteria assessors must frame the discussion using open questions which allow the learner to cover all criteria possible, a minimum of 50% of criteria within each section of the discussion must be evidenced by each individual learner. Assessors must ensure that over time, across and within cohorts the full range of criteria are assessed – the same narrow band of criteria **must not** be focussed on for assessment within and across cohorts, evidence that the full range of criteria has been met over time must be available for review as part of quality assurance procedures.

The purpose of this internally assessed and timed Guided Discussion assessment is to assess the learner's knowledge, skills and understanding. This will be drawn-through their reflections of completion of their Practical Project, the dependencies of their practice on those in other trades and the quality of their outcomes.

Learners are permitted to bring their Practical Project evidence into the Guided Discussion to support their responses.

The assessor must be mindful of supporting a discussion that is learner-led and that provides linkages between the two areas identified for exploration. In advance of the discussion, the assessor must consider and prepare a series of questions that will help to structure and support the Guided Discussion. These questions should focus on:

- The learner's **planning, evaluation and reflection** of their activities, e.g.
  - What happened?
  - What did they expect to happen?
  - What things surprised them, or didn't go fully as intended?
  - What would they do differently next time?
  - What have they learned about how they work and their practice in relation to the activities conducted?
  - How would they effectively communicate plans, challenges and outcomes in the context of their chosen trade?
- The knowledge and understanding that they have gained that will support them in their **self-employment and wider career development**, e.g.
  - What are the characteristics of being self-employed, and why are these important to consider?
  - What are the advantages and disadvantages of being self-employed?
  - What trade bodies and organisations exist within the chosen trade and how they would interact with them if self-employed?
  - What responsibilities they would have being self-employed?
  - What support is available when self-employed in their ongoing career journey when working in building services engineering?
  - What is their duty of care as a self-employed person?
  -

The Guided Discussion will be marked against the marking criteria provided within this Assessment Pack.

The assessment will also contribute to the learning cycle; reinforcing experiential learning through the learner's own reflection and evaluations to facilitate development in their trade and wider skills.

Assessment specification

Knowledge, Skills and Understanding of:	Unit & Learning Outcome
Core content (assessment criteria)	
1 Discussion area: Planning and evaluation	
3.1 The importance of effective and appropriate communication with others 3.2 The importance of emotional intelligence in effective communication. 3.3 How to plan and manage one's own time. 3.4 How to set targets and success criteria. 3.5 The importance of reflective practice. 4.1 Recognise problems that may occur within building services projects. 4.2 How to identify solutions to problems. 4.3 How to test and evaluate solutions.	201 (LO3, LO4)
1.1 The main techniques used for estimating jobs/projects in building services engineering 1.2 How to identify resource requirements 1.3 How to estimate time requirements 2.1 Identify resources required to complete the task 2.2 Plan the activities and the ordering/phasing of work to complete the task 2.3 Identify success criteria for the task 3.1 Evaluate completed work against the task brief and success criteria	204 (LO1, LO2, LO3)
2 Discussion area: Self-employment	
1.1 The trade bodies and organisations within the building services engineering sector 1.2 The role of trade bodies and organisations within the building services engineering sector 2.1 The characteristics of self-employment 2.2 The advantages and disadvantages of self-employment 2.3 The responsibilities of being self-employed 2.4 Patterns in employment and rises and falls in demand 2.5 The duty of care in ensuring products and work are safe for end users	201 (LO1, LO2)

Preparation and planning for the Guided Discussion

Prior to the assessment, the learner shall be given suitable notice of their discussion date, of not less than **5 working days**, to allow preparation time. The assessor must plan the Guided Discussion and review the project evidence, prior to the assessment taking place.

The Guided Discussion will be carried out on a one-to-one basis between the assessor and the learner only. Additional personnel may be present for circumstances such as internal/external quality assurance, reasonable adjustments or translation, but this will be agreed in advance in line with the Consortium's reasonable adjustments policy. Learners need to be fully aware of the assessment arrangements for the qualification from the outset.

Guidance: *It is strongly recommended that learners are familiarised with being recorded on-going (e.g. as part of formative assessment) so they become accustomed to it. This will help ease the learner's nerves in this assessment and it enables learner preparation.*

Questions and discussion points

The Guided Discussion will consist of structured questions which will be developed by centres using guidance provided in the appendix. Questions must be overall sufficiently engaging for the learner and promote and sustain their interest.

Space on the recording forms has been provided for the discussion points to map to the qualification units. This can be recorded at unit level to enable the discussion to be manageable for both parties, both in preparation and delivery.

The assessor must consider the types of questions that would support the discussion in advance of the assessment. In many cases, the assessor's opening questions will not fully explore the learner's knowledge and understanding. Follow-up questions may be necessary to probe for further evidence. However, the questions must not lead the learner or be presented in a way that structures the discussion too rigidly around pre-set questions. The assessor must allow the discussion to naturally progress and use their prepared questions appropriately as the discussion progresses.

How the project informs the discussion

The project evidence provides the context for part 1 of the Guided Discussion; therefore, the project evidence must be prepared appropriately by the assessor and made available during the assessment so the learner can locate any specific evidence.

Although the Practical Projects form the basis of the Guided Discussion, this assessment is graded standalone - therefore the assessor must not (where applicable) double penalise the learner's project work through the Guided Discussion assessment. Instead, the Guided Discussion provides the opportunity for the learner to demonstrate distance measured from the submission of the Practical Project, evaluate strengths and weaknesses, and provide a context for the discussion points.

Materials

For this Guided Discussion assessment, the learner's project plan and evaluation documents will be required. A device to accurately record the discussion will also be required.

Assessment parameters: Introducing the Guided Discussion

The assessor must:

- ensure the learner has been fully briefed on the purpose of the discussion, specifically the content that will be addressed, and on the type of information the assessor will require and how it is graded,
- ensure the learner has any relevant documentation to hand before commencing the Guided Discussion,
- ensure any additional requirements highlighted by the centre are taken into consideration in line with the Reasonable Adjustments policy,
- make consistent and unbiased assessment decisions, by using planned discussion points and the qualification criteria
- try to put the learner at ease, explaining the format, timings, and the purpose of the recording forms and devices.

Assessment parameters: During the Guided Discussion

The assessor must:

- ideally first address points where the learner is likely to be confident in answering, before moving to more challenging areas. This will give a progressive approach and assist in assigning a mark and gauging the learner's ability.
- use open questions with 'why', 'what', 'how', 'where' and 'when' to provide opportunities for all learners to demonstrate attainment.
- use follow-up questions, giving the learner the opportunity to explore the discussion point fully. The questions should be thoughtful, relevant and pitched at the appropriate level.
- discuss the learner's activities with them, looking for evidence of specific knowledge, procedures and processes, and decision making, together with their skills. Questioning should provide a gradual 'handing over' to the learner. You would expect the learner to be taking the lead in the discussion after the initial opening questions/brief.
- identify topic areas in responses which can be further explored later in the discussion.

The discussion must always be related to the relevant topic area. As soon as such a judgement is possible, the discussion should move on to the next topic. When all discussion points have been addressed, it should be ended. If the learner's responses are wandering off topic, the learner should be steered back on track. Keep an accurate record of the start time and duration of the Guided Discussion. The discussion focuses on two areas – and the time within the discussion must reflect the amount of content assessed within each of the 2 assessed areas.

What to avoid during the Guided Discussion:

- using one question type throughout,
- answering the question yourself instead of expanding on it to get a response,
- overloading the learner with too many questions, allowing them no time to think or to answer fully,
- disregarding answers,
- spending too long on one area of discussion, reducing the time available for other areas,
- asking complex questions too early in the discussion
- asking closed questions unless a 'yes' or 'no' answer is specifically required. Closed questions can cause learners to 'freeze' or 'block', and this would be more likely under the pressure of examination conditions.

Time allowed

This Guided Discussion assessment has an allocated time of **40 minutes,** up to 5 minutes can be added to allow the learner to complete their final answer.

Where the assessment requires a reasonable adjustment (for learners with a particular requirement/s) or translation, the additional time variation will be agreed and notified in advance of the assessment in line with the Consortium's reasonable adjustments policy.

Evidence requirements

Provision of an audit trail

The Guided Discussion needs to be recorded (not visual). The centre must ensure the discussion is captured and stored in a secure and GDPR compliant way. These arrangements must be set up in advance with the centre, assessor and learner.

All records i.e. forms and recordings, must be properly and securely stored. The learner must also sign and date the recording forms as a sign of declaration and authentication. Completed recording forms will need to be made available for review and sampling as part of external quality assurance activities.

Recording forms have been provided for the assessor to summarise the answers given, provide feedback and allocate a provisional assessment outcome. Notification of this provisional outcome must be given to the learner within one week of completion of the assessment, with guidance given on the provisional nature of the outcome. Provisional results will be subject to both internal and external quality assurance. Results will be submitted to EAL and the final assessment outcome aggregated with the other assessment methods to award an overall qualification grade, which will be issued by EAL.

Re-sit/resubmission

If the learner fails to successfully achieve the assessment, they are permitted to re-sit.

When re-sitting learners can achieve the full range of marks and grades available.

When re-sitting the Guided Discussion learners must re-sit the both the Planning & Evaluation and Self-employment sections.

If a learner does not meet the required marking criteria the centre must work with the learner to address criteria failed and provide opportunities for improvement to help prepare the learner to reach the standard required.

If learners are unhappy with their assessment outcomes, they must be informed of their right to appeal.

Centres must record any actions taken and/or any additional support given to the learner.

Marking and grading

This assessment is graded.

Marks within the first section of the Guided Discussion, linked to reflection on the project, are to be multiplied by 3 to create the total marks for this section of the discussion. Detail on the criteria that this is relevant to and how it must be applied is provided in the marking grid for this assessment.

The assessment grade is determined by totalling the assessment marks awarded and converting this into an overall grade for this assessment using the table below:

Total Mark	Grade	Points
12	D3	7
11	D2	6
10	D1	5
8	M2	4
7	M1	3
5	P2	2
4*	P1*	1
0-3	Fail	0

*3 marks must come from the Planning and Evaluation descriptors and 1 mark must come from the Self-employment descriptors.

Marking grid – Guided Discussion

Learner name:	
Assessment date:	

Planning and Evaluation - Mark descriptors	**Marks achieved**
The learner provided: • A **basic** level of evaluation on the tasks undertaken. The learner demonstrates some **brief** reflections on calculating costs, determining resources and time allocation and also on how they executed the tasks, both through their planning and performing elements – with some areas of personal strength and challenge **briefly stated**. The learner **identifies the importance of communication** with others in the context of work. The learner makes **limited** connections with completion of the task(s) and their future ways of working; if connections are identified – they lack detail and do not provide confidence in the transferability of the learner's skills to a range of situations. The learner **states** several problems that arose; with **limited** connections with possible solutions to mitigate these. or The learner provided: • a **considered** level of evaluation on the tasks undertaken. The learner demonstrates **focused** reflections on calculating costs, determining resources and time allocation and also on how they executed the tasks, both through their planning and performing elements – with areas of personal strength and challenge **noted**, and an **attempt made** to connect these areas with quality outcomes experienced. The learner **identifies methods of communication appropriate to the context** of the trade and tasks undertaken. The learner **connects** completion of the task(s) and consideration of future ways of working. Connections identified **contain detail and show a considered response** from the learner to transfer what they have learnt through their tasks to improve future working. The learner **describes how they** identified problems that arose and describes the solutions they identified. or	**1** **2**

The learner provided: a **comprehensive** level of evaluation on the tasks undertaken. The learner demonstrates a **coherent and well-rounded** level of reflection on calculating costs, determining resources and time allocation and also on how they executed the tasks, both through their planning and doing elements – with a range of personal strengths and challenges **evaluated and clear synergies identified** between these and the final quality outcomes of the task(s). The learner demonstrates an understanding of **emotional intelligence** and its role in effective communication. The learner **succinctly outlines** how completion of the task(s) has influenced their own skills and ways of working. These connections are **provided in detail and explain clearly** how they have been considered and the reasons why they will actively develop future ways of working. The leaner describes how they **anticipated** problems and **describes** solutions identified and how they were incorporated during the activity.	**3**
Total = mark achieved x 3	**/9**

Self-employment - Mark descriptors	**Mark achieved**
The learner provided: • a **basic** outline of the characteristics of self-employment. The learner **states** a number of self-employment advantages and disadvantages and responsibilities. A **brief connection** in employment patterns are provided, but with **limited** linkages made to rise and fall in demand. The learner identifies trade bodies/organisations relevant to their trade. The learner has shows **some consideration** for the duty of care in ensuring products and work are safe for end users, but these are mostly provided as generic statements that provide little consideration from the learner's own perspective.	**1**
or The learner provided: • a **detailed overview** of the characteristics of self-employment and work-related considerations. The learner **details** a number of self-employment advantages and disadvantages and responsibilities, with **succinct details** noted. A **range** of employment patterns are provided, with **clear links** made to rise and fall in demand. The learner identifies trade bodies/organisations relevant to their trade and the role they play within the sector. The learner has shows **consideration** for the duty of care in ensuring products and work are safe for end users, providing a **coherent approach** that shows how the learner will attempt to manage these areas as they develop further their career in the sector.	**2**
or	

The learner provided: • a **comprehensive account** of the characteristics of self-employment and work-related considerations. The learner **coherently explores a range** of different self-employment advantages and disadvantages and responsibilities and opportunities, with a **developed understanding** shown as to their importance. The learner identifies trade bodies/organisations relevant to their chosen trade, and the role they play within the sector and how they would interact with them if self-employed. A **broad range** of employment patterns are explored, with a **developed understanding** provided by the learner of the rise and fall in demand and the importance of this. The learner shows a **pronounced understanding** of the factors that influence the duty of care in ensuring products and work are safe for end users. They provide a **structured and considered approach** that illustrates how they will manage these areas as they develop their career further in the sector.	**3**
Total	**/3**
Overall mark	**/12**

6. Grade aggregation

This qualification is graded **Pass, Merit, Distinction.** If a learner fails, they will not receive a certificate.

The grade aggregation process is completed by EAL. The information below explains how this process works and is to support understanding of how the overall qualification grade is calculated.

The overall qualification grade is based on an aggregation of the learner's achievement in the mandatory graded assessments (the On-screen assessment, Practical Project and Guided Discussion).
All assessments must be achieved at a minimum of a P1 grade for the qualification to be awarded. Candidates who fail to reach the minimum standard for a P1 grade for an assessment(s) will not have a qualification grade awarded and will not receive a qualification certificate.

Assessment method grade scale % contribution

The following table shows the % contribution of each assessment to the overall qualification grade.

On-screen assessment	20%
Practical Project	60%
Guided Discussion	20%

Calculating points values for assessments

The mark a candidate achieves in each assessment is converted into points. These points correspond to a grade on a 7-point scale within that assessment. For the purposes of aggregation, the points are then multiplied by the overall weighting assigned to that assessment. The weighted points are then added together and converted to a qualification grade.

A range of points within the Pass, Merit and Distinction boundaries are accessible to candidates to reflect performance within the grade boundary. The points available for each assessment and their reflective grade are outlined under the individual assessment sections.

Example

The following outlines an example of how the aggregation model works in practice.

A learner achieves the following in each of the assessment components:

	Marks in the assessment	Assessment Grade	Overall points
On-screen assessment	33	P2	2
Practical Project	230	D1	5
Guided Discussion	8	M2	4

Assessment marking and grading

Using the table below we can overlay the grades the candidate achieved for each assessment and get weighted points which will be used for the overall grade.

Assessment Grade	Weighted Points		
	On-Screen assessment	Practical Project	Guided Discussion
D3	1.4	4.2	1.4
D2	1.2	3.6	1.2
D1	1.0	3.0	1.0
M2	0.8	2.4	0.8
M1	0.6	1.8	0.6
P2	0.4	1.2	0.4
P1	0.2	0.6	0.2
Fail	0	0	0

- On-screen assessment = 0.4
- Practical Project = 3.0
- Guided Discussion = 0.8

Overall qualification grade

Weighted points from each assessment are then combined to provide a total weighted points score for the qualification, this table identifies how this then translates into an overall qualification grade:

Total weighted points score 0.4 + 3.0 +0.8 = **4.2**

Total Weighted Points	Grade
7	Distinction
6	Distinction
5	Distinction
4	Merit
3	Merit
2	Pass
1	Pass

The overall qualification grade using the grade scale shown above would be awarded as a **Merit.**

Results submission and grade calculation

The learner is required to achieve a pass in all assessments to achieve an overall pass grade for the qualification. Grades for the Practical Project and Guided Discussion must be submitted to the EAL Online Services.

The table below identifies what needs to be achieved for each assessment, and how the submission of results will be undertaken.

Assessment	What needs to be done for achievement	Submission of result
On-screen assessment	Learner completes the On-screen assessment using EAL Secure Assess platform. Assessments are automatically marked, and a grade will be provided.	Assessment auto-marked with result issued by EAL
Practical Project	Centre award marks for planning, practical and evaluation sections of the Practical Project using the marking criteria to assess performance across the project. Centre uses overall project mark to identify grade achieved using "Determining overall grade" table.	Pass grade confirmed and submitted to EAL Online Services by the centre
Guided Discussion	Centre award marks using the marking criteria to assess performance in the Guided Discussion. Mark translated into a grade using the grading table provided within the Guided Discussion section of this document. Successful completion of all parts of the Guided Discussion in line with the minimum number of marks required in sections 1 & 2 of the Guided Discussion.	Pass grade confirmed and submitted to Smarter Touch by the centre.

EAL will carry out grade aggregation and award the overall final grade for the qualification.

Notification of the final learner result will be provided following completion of external quality assurance activities and will occur within eight weeks of final centre submission of both results for the Practical Project and Guided Discussion (and successful completion of the On-screen assessment) to EAL.

Appendices

1. On-screen assessment
2. Guided Discussion recording forms

1. On-screen assessment

1.1 Plumbing and Heating

Test 1P Setting Specification		
Assessment type: Multiple choice Number of questions: 50 Time: 75 minutes Closed book, non-programmable calculator permitted		
Unit title	**Learning outcome**	**Number of marks**
201: Employment and Employability in the Building Services Engineering Sector	1. Know the relevant trade bodies and organisations within the building services engineering sector	1
202: Changing Practices Over Time	1. Understand connected practice in construction and building services engineering	9
	2. Know the changing construction and built environment sector	
	3. Know the changes in building services engineering materials, tools, and techniques over time	
	4. Understand the relationship between trades and the environment	
205PH: Understand Scientific Principles	1. Understand the units of measurement used in the plumbing and heating industry	11
	2. Understand the properties of materials	
	3. Understand the relationship between energy, heat and power	
	4. Understand the principles of force and pressure and their application in the plumbing and heating industry	
	5. Understand the mechanical principles in the plumbing and heating industry	
	6. Understand the principles of electricity in the plumbing and heating industry	
206PH: Understand Core Plumbing and Heating Systems	1. Understand the appropriate industry standards and regulations relevant to; decommissioning, installing and testing, of plumbing and heating systems	8
	2. Understand how to verify that job information and documentation is current and relevant and that the plant, instruments, access equipment and tools are fit for purpose	
	3. Understand how to produce a risk assessment and method statement for the work to be carried out, including the identification and use of personal protective equipment, in accordance with: the plumbing and heating	

	system's design, the conditions of the working environment, organisational procedures	
	4. Understand the organisational procedures for confirming, before work starts, that the work location and work area can be accessed safely and has been checked for the risk to other personnel on the site, and for taking appropriate action if a risk is present	
	5. Understand the methods for the safe transport and/or disposal of waste materials, substances and liquids in accordance with suppliers' and manufacturers' instructions	
	6. Understand the methods for determining that the appliances, components and accessories are fit for purpose in accordance with industry recognised organisational procedures	
	7. Understand the methods and techniques for inspecting and pre-commissioning the plumbing and heating system in accordance with: the plumbing and heating system's design, the working environment, manufacturers' instructions, the appropriate testing procedures for confirming the systems' integrity	
	8. Understand how to complete relevant documentation in accordance with organisational procedures	
	9. Understand the methods and techniques for decommissioning the plumbing, and heating systems in accordance with: the plumbing and heating system's design, the working environment, manufacturers' instructions	
	10. Understand the methods and techniques to ensure the plumbing and heating system cannot be accidentally reactivated or become dangerous	
	11. Understand how to complete relevant documentation in accordance with organisational procedures	
207PH: Understand Cold water systems	1. Understand The applications, advantages and limitations of cold water systems	5
	2. Understand the applications, advantages and limitations of appliances, components and accessories in relation to the working environment	
	3. Understand the methods and techniques for fitting, fixing and connecting the selected appliances, components and accessories in accordance with: the plumbing and heating system's design, the working environment, manufacturers' instructions	
	4. Understand the appropriate testing procedures for confirming the systems' integrity	
208PH: Understand Hot water systems	1. Understand the applications, advantages and limitations of hot water systems	5
	2. Understand the applications, advantages and limitations of appliances, components and accessories in relation to the working environment	
	3. Understand the methods and techniques for fitting, fixing and connecting the selected appliances, components and accessories in accordance with: the plumbing and heating	

	system's design, the working environment, manufacturers' instructions	
	4. Understand the appropriate testing procedures for confirming the systems' integrity	
209PH: Understand Central heating systems	1. Understand the applications, advantages and limitations of central heating systems	4
	2. Understand the applications, advantages and limitations of appliances, components and accessories in relation to the working environment	
	3. Understand the methods and techniques for fitting, fixing and connecting the selected appliances, components and accessories in accordance with: the plumbing and heating system's design, the working environment, manufacturers' instructions	
	4. Understand the appropriate testing procedures for confirming the systems' integrity	
210PH: Understand Rainwater systems	1. Understand the applications, advantages and limitations of rainwater systems	2
	2. Understand the applications, advantages and limitations of appliances, components and accessories in relation to the working environment	
211PH: Understand Sanitation Systems	1. Understand the applications, advantages and limitations of sanitary appliances and pipework systems	5
	2. Understand the applications, advantages and limitations of appliances, components and accessories in relation to the working environment	
	3. Understand the methods and techniques for fitting, fixing and connecting the selected appliances, components and accessories in accordance with: the plumbing and heating system's design, the working environment, manufacturers' instructions	
	4. Understand the appropriate testing procedures for confirming the systems' integrity	
	Total	**50**

1.2 Electrotechnical Systems and Equipment Installation

Test 1 Setting Specification		
Assessment type: Multiple choice Number of questions: 50 Time: 75 minutes Closed book, non-programmable calculator permitted		
Unit title	**Learning outcome**	**Number of marks**
201: Employment and Employability in the Building Services Engineering Sector	1. Know the relevant trade bodies and organisations within the building services engineering sector	1
202: Changing Practices Over Time	1. Understand connected practice in construction and building services engineering	9
	2. Know the changing construction and built environment sector	
	3. Know the changes in building services engineering materials, tools, and techniques over time	
	4. Understand the relationship between trades and the environment	
204E: Understand How to Install Enclosures for Electrical Cables, Conductors and Wiring Systems	1. Understand the operation, applications, advantages, and limitations of different electrical systems. Electrical systems	11
	2. Understand the appropriate industry standards, regulations and requirements relevant to installing enclosures	
	3. Understand the applications, advantages, and limitations of types of enclosures	
205E: Understand How to Install and Connect Electrical Cables, Conductors, Wiring Systems and Equipment	1. Understand the applications, advantages and limitations of types of electrical cables, conductors, wiring systems, associated equipment, accessories and components	8
	2. Understand the industry recognised methods for determining the type, size and rating of electrical cables, conductors, wiring systems, associated equipment, accessories, and components in relation to the electrical system's design	
	3. Understand how to install and connect types of electrical cables, conductors, wiring systems, associated equipment, accessories, and components	

206E: Understand How to Inspect and Test De-Energised Electrical Circuits	1. Understand how to select the instruments to be used for carrying our relevant tests	6
	2. Understand the methods and procedures for conducting a visual inspection on the enclosures cables, conductors and wiring systems	
	3. Understand the correct procedure for safe isolation	
	4. Understand the methods and processes to carry out correctly the tests that ensure safe and efficient operation of the electrical system	
	5. Understand methods for providing clear and accurate information to relevant people	
207E: Understand Intermediate Electrical Science and Principles	1. Understand fundamental mathematical principles which are appropriate to electrical installation work	15
	2. Understand standard units of measurement used in electrical installation and design work	
	3. Understand basic mechanics and the relationship between force, work, energy and power	
	4. Understand the fundamental relationship between resistance, resistivity, voltage, current and power	
	5. Understand fundamental principles which underpin the relationship between magnetism, electricity, generation, and supply systems	
	Total	**50**

2. Guided Discussion recording forms

Guided Discussion - Part 1: Learner reflection on the Practical Projects.
(Some example questions have been inserted)

Learner Name:	
Assessor Name:	
Assessment Date:	

1 Planning & Evaluation

Discussion to cover:

Unit 201

3.1 The importance of effective and appropriate communication with others
3.2 The importance of emotional intelligence in effective communication.
3.3 How to plan and manage one's own time.
3.4 How to set targets and success criteria.
3.5 The importance of reflective practice.
4.1 Recognise problems that may occur within building services projects.
4.2 How to identify solutions to problems.
4.3 How to test and evaluate solutions.

Unit 204

1.1 The main techniques used for estimating jobs/projects in building services engineering
1.2 How to identify resource requirements
1.3 How to estimate time requirements

2.1 Identify resources required to complete the task
2.2 Plan the activities and the ordering/phasing of work to complete the task
2.3 Identify success criteria for the task

3.2 Evaluate completed work against the task brief and success criteria.

Please list the criteria sampled as part of this Guided Discussion (a minimum of 50% of criteria must be sampled in each part of the discussion):

Example questions:

What techniques did you identify for estimating the completion of the tasks? Explain why you chose these techniques and how they impacted on your overall approach to the tasks.

What were the types of drawings/plans you created in the planning stage of the project? Explain how you used them in the practical tasks.

What were the key work activities involved in your work plan? Explain how you estimated the time required in each of the practical tasks.

How did you keep on track with time and pace of the work within your projects? What were your own set objectives/success criteria/milestones? Did you meet them?

What resources did you identify for use in completing the tasks? Explain where you sourced them and how this impacted on your overall approach to completing the tasks.

What practical techniques did you use when completing the tasks? Explain why you chose these techniques and how they impacted on your overall approach to the tasks.

Did your approach work? What went well? What did not go well? What would you do differently/ what will you do next time/what did you learn about your approach?

What were the success criteria you set yourself for this project? Explain to what extent you met your success criteria.

What were the strengths and weaknesses of your Practical Projects? How did you overcome problems?

What was the most difficult part of the installation work for you? What problems arose? How did you deal with them? What improvements will you make next time?

How have you improved your work in the projects? (What were the things that have improved; how did they improve)

Timestamp:	**Mark /9**

2 Self-employment

Discussion to cover:

1.1 The trade bodies and organisations within the building services engineering sector
1.2 The role of trade bodies and organisations within the building services engineering sector

2.1 The characteristics of self-employment
2.2 The advantages and disadvantages of self-employment
2.3 The responsibilities of being self-employed
2.4 Patterns in employment and rises and falls in demand
2.5 The duty of care in ensuring products and work are safe for end users.

Please list the criteria sampled as part of this Guided Discussion (a minimum of 50% of criteria must be sampled in each part of the discussion):

Example questions:

What are the main differences between being employed and self-employed?

What are the advantages and disadvantages of self-employed people?

What are the responsibilities of being self-employed? (for example, in contrast to being employed)

Which trade bodies exist within your chosen trade and how would you interact with them if you were self-employed?

What professional bodies or organisations can help self-employed people in your trade? What impact would these have on you?

How do you see the working life of a self-employed person being? How would rises and falls in demand affect this working life?

If you were working on your own contract (as a self-employed person), how would you ensure the completed work is safe for the customer and users?

To ensure safety and compliance of the end-product/work; what regulations apply to your chosen trade area, and how do they apply (main features)? How would you confirm compliance?

Timestamp:	**Mark** **/3**
Total Mark Achieved	**/12**

Feedback from the assessment:

To achieve this assessment Learners must pass both Parts 1 and 2 of this assessment.

Assessor signature: _____ Date: _____

Learner signature: _____ Date: _____

Location: _____

Start Time: _____

Duration (Min): _____