Unit 204: Planning and evaluating work in the Building Services Engineering sector in Wales

# Delivery guide

Unit information

This unit provides the learner with the knowledge of how to plan and evaluate work. Learners will be able to read and interpret plans and documentation required in performing a wide range of tasks in the trade area. Learners will be able to plan the completion of a wide range of tasks in the trade area, using the required literacy and numeracy skills and set their own performance criteria for given tasks.

Learners will evaluate their own performance in carrying out a wide range of tasks in this trade area both in relation to the set requirements and their own success criteria.

Learners may be introduced to this unit by asking themselves questions such as:

* What is meant by a resource?
* Why is planning important?
* What is likely to happen if a new task is not properly planned?
* What is evaluation, and why is it important?

**Guidance**: Where relevant this unit can be delivered in conjunction with the trade units being delivered and learning outcome 3 and 4 of the Employment and Employability in the Building Services Engineering Sector. The skills in this outcome will be important to enable the learner to plan, perform, and evaluate their work in the Practical Project assessment.

Learning outcomes

1. Know how to calculate costs and determine resource requirements
2. Plan the work required to complete the task(s)
3. Evaluate completed work

Suggested resources

Websites

* [Designing Buildings Wiki | Typical tender process for construction projects](https://www.designingbuildings.co.uk/wiki/Typical_tender_process_for_construction_projects)
* [MSL | RAMS Risk Assessment Method Statement](https://msl-ltd.co.uk/job-right-rams-risk-assessment-method-statement/)
* [University of Cambridge Subject Libraries | What is reflective practice? Reflective Practice Toolkit](https://libguides.cam.ac.uk/reflectivepracticetoolkit/whatisreflectivepractice)

Textbooks

* Redfern, S., Jones, S. (2021) *The City & Guilds Textbook: Site Carpentry & Joinery for the Level 1 Diploma (6706)* London: Hodder Education. ISBN 978-1-39831-937-0
* Maskrey, M. (2019) *The City & Guilds Textbook: Plumbing Book 1 for the Level 3 Apprenticeship (9189), Level 2 Technical Certificate (8202) & Level 2 Diploma (6035)*. London: Hodder Education

ISBN 978-1-51041-648-2

* Tanner, P. (2018) *The City & Guilds Textbook: Book 1 Electrical Installations for the Level 3 Apprenticeship (5357), Level 2 Technical Certificate (8202) & Level 2 Diploma (2365).* London: Hodder Education. ISBN 978-1-51043-224-6

78-1-51043-224-6

| **Learning outcomes** | **Criteria** | **Delivery guidance** |
| --- | --- | --- |
| 1. Know how to calculate costs and determine resource requirements | * 1. The main techniques used for estimating jobs/projects in building services engineering | * Learners to research what a Bill of Quantity (BOQ) is and how it is needed to calculate costs of projects. * Learners to understand how to use documents such as drawings, schedules and specifications in the process of calculating costs of projects. * Learners to be able to provide examples of drawings and specifications. * Learners to research material suppliers for costs. * Learners to know the difference between an estimate and a quotation. |
| * 1. How to identify resource requirements | * Learners to have a knowledge of identifying resources so that, to be competitive on cost of projects, there is no overload of or shortfall in resources to be in a position of possible loss. * Learners to recognise the need for labour and plant when factoring in costs. * Learners to know consumable resource (replenishable) costs, such as materials and money and re-useable resource costs, such as plant, equipment and people. * Learners to be able to produce actual material lists. |
| * 1. How to estimate time requirements | * Learners to undertake small tasks to incorporate design, planning, preparation, installation and managing projects to gain knowledge for timely completions of projects to enable profitability. * Learners to provide an example of the typical duration of a task, e.g. removing and installing a new basin. |
| 1. Plan the work required to complete the task(s) | * 1. Identify resources required to complete the task | * Learners to carry out simple planning and estimation tasks of small building services engineering jobs, such as replacing a bathroom suite, upgrading a central heating system, rewiring a property, adding an additional circuit to an electrical system, etc. * Learners to reinforce their knowledge on Risk Assessment Method Statements (RAMS) and complete the necessary documentation to attach to the above jobs. * Learners to find the necessary information to complete these tasks from associated documents tailored to the tasks, e.g. schedules, bill of quantities, drawings, etc. * Learners to research pricing up of a large contract. |
| * 1. Plan the activities and the ordering/phasing of work to complete the task | * Learners to understand the importance of resource lists when costing projects and planning the ordering/phasing of work. * Learners to provide examples of documentation used when planning activities, e.g. work programmes. * Learners to understand the importance of a schedule of work when costing projects and phasing work. * Learners to be familiar with work programmes when costing projects and phasing work to help identify activities and milestones. |
| * 1. Identify success criteria for the task | * Learners to be able to identify any challenges within the planning and costing of projects to facilitate competitive costs. * Learners to recognise key activities, specified materials, quality of finishes and named milestones within the tender document. |
| 1. Evaluate completed work | * 1. Evaluate completed work against the task brief and success criteria | * Learners to be set reflection tasks to identify any areas for improvement in producing comprehensive documents for the costing of projects. * Learners to reflect particularly on alternative approaches if identified, the effectiveness of their costing of projects, any identified strengths or weaknesses and lessons to be learned in the process of costing projects. |