

SQA Advanced Unit specification

General information for centres

Unit title: Contracting Industry Project Management: Practical Issues

Unit code: HV28 47

Unit purpose: This unit enables candidates to gain practical experience of the issues involved in managing projects within the contracting industry. The unit requires candidates to work with a project which has already been devised and for which there will already be an outline plan. Consequently, this unit shall consider the day-to-day issues of project management from the operational planning stage through to measuring the success of the project. It includes the practical procedural issues, as well as the issues relating to people, that may be encountered through the project.

On completion of the unit the candidate should be able to:

- 1 explain procedures and documentation for a project start-up
- 2 explain project team requirements for the contracting industry
- 3 explain and apply project planning and resource scheduling techniques
- 4 explain measures for the operational control of a project
- 5 evaluate the implementation of a contracting industry project

Credit points and level: 2 SQA Credits at SCQF level 7: (16 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from National 1 to Doctorates.*

Recommended prior knowledge and skills: Access is at the discretion of the centre. However, it is recommended that candidates undertaking this unit have skills in communication, problem solving and numeracy together with a basic knowledge and understanding of project management within contracting industries.

Core Skills: There are opportunities to develop the Core Skills of *Problem Solving, Communication, Working with Others, Information Technology* and the Using Numbers component of the Core Skill *Numeracy* all at SCQF level 6 in this unit, although there is no automatic certification of Core Skills or Core Skills components.

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Context for delivery: If this unit is delivered as part of a group award, it is recommended that it should be taught and assessed within the subject area of the group award to which it contributes.

Assessment: This unit could be assessed by production of reports for each outcome.

Outcome 1 could be assessed by a report outlining the background, procedures and applications of the subject matters to the candidate's own organisation, or an organisation with which they are familiar, together with production of a project support file.

Outcomes 2, 3 and 4 could be assessed by short reports outlining the background, procedures and applications of the subject matters to a live contracting industry project. The candidate should draw conclusions and provide recommendations for initiatives and/or improvements to the areas discussed.

Outcome 5 could be assessed by a report of 750 words or equivalent outlining background, procedures and applications of the subject matters to a live or recently completed contracting industry project. The candidate should draw conclusions from the evaluation and provide recommendations for future projects.

SQA Advanced Unit specification: statement of standards

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The sections of the unit stating the outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Where evidence for outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Explain procedures and documentation for a project start-up

Knowledge and/or Skills

- ◆ Project start-up procedures
- ◆ Project start-up documentation
- ◆ Site project file

Evidence requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ explain the use of effective procedures and supporting start-up documentation from the award of the contract through to a project start-up for a contracting organisation. The explanation must include procedures and documentation relating to pre-contract meetings, project management team selection, Health and Safety requirements, information relating to quality, cost and time as well as an explanation of why the procedures and documentation will make for an effective procedure.
- ◆ prepare a site project file for a start-up project in a contracting organisation which contains material in a suitable form for the successful monitoring and control of the project. This must include the pre-project start-up procedures and required documentation in a well-managed project to include: forms and registers relating to quality, Health and Safety, main and sub-contract programmes, drawings, requests for information (RFI), technical queries (TQs), production control sheets and material requests.

Assessment guidelines

This outcome could be assessed by a report of no more than 1,000 words or equivalent that provides an overview of a chosen contracting organisation's procedures and documentation from award of contract through to project start-up. The candidate should also compile a portfolio in the form of a site project file. The site project file should contain documentation required for successful monitoring and control of the project and should include forms and registers relating to quality, Health and Safety, main and sub-contract programmes, drawings, requests for information (RFI), technical queries (TQs), production control sheets and material requests.

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Outcome 2

Explain project team requirements for the contracting industry

Knowledge and/or skills

- ◆ Team roles and responsibilities
- ◆ Attitudes and skills of the project management team

Evidence requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can, in the context of the contracting industry:

- ◆ explain project team roles and responsibilities. The explanation must include formal and informal roles and reasons why the team roles and responsibilities are suitable for the successful completion of the project.
- ◆ explain the desirable attitudes and skills required by the project management team for the successful completion of the project.

Assessment guidelines

The candidate could provide a brief description of a project with which they are familiar and discuss the project team roles, responsibilities, attitudes and skills in relation to that project.

Outcome 3

Explain and apply project planning and resource scheduling techniques

Knowledge and/or skills

- ◆ Project planning stages
- ◆ Resource scheduling techniques

Evidence requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can in the context of the contracting industry:

- ◆ explain the stages within the project planning process. The explanation must include, with reasons, the requirements to:
 - identify activities or tasks
 - estimate times and resources
 - identify relationships and dependencies
 - identify schedule constraints
 - adjust schedule
- ◆ explain resource scheduling techniques used in project planning. The explanation must include: Work Breakdown Structure (WBS), Gantt chart, Critical Path Method (CPM) and Programme Evaluation and Review Technique (PERT) and the uses of each technique
- ◆ practically apply at least one of the resource scheduling techniques given above

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Assessment guidelines

It is recommended that this outcome is delivered with a practical emphasis and that candidates' responses, where possible, focus on a live contracting industry project. Candidates could be required to explain how specific, real project elements or outcomes will be achieved by allocating resources to those elements or outcomes.

Candidates could provide evidence in the form of a report of planning and scheduling from a live contracting industry project. Reports should detail the various stages within the project planning process, explain resource scheduling techniques and show by application the use of one scheduling technique, from Work Breakdown Structure (WBS), Gantt chart, Critical Path Method (CPM) and Programme Evaluation and Review Technique (PERT).

Outcome 4

Explain measures for the operational control of a project

Knowledge and/or skills

- ◆ Project Control
- ◆ Performance of key resources
- ◆ Intervention

Evidence requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can, in the context of the contracting industry:

- ◆ explain at least four measures that can be used for project control
- ◆ explain the importance to control sub-contractors
- ◆ explain the use of techniques to assess the performance of key resources. The explanation must include, with reasons, the measurement of the main and of sub-contract programmes, the use of production control figures and the application of S-curve and earned-value techniques
- ◆ explain the effects of intervention. The explanation must include the nature of interventions, time and resources required by the intervention, any changes to plan and any impact on other contractors working on the project

Where calculations are produced, candidates must provide a satisfactory response to the assessment questions. This must include:

- ◆ applying appropriate formula
- ◆ applying the principles of the calculation
- ◆ showing all working through the calculation
- ◆ providing reasonable answers to the questions asked. The answer should derive from the application of the formula and correct application of the principles of the calculation

Assessment guidelines

The candidate could provide evidence of project control within a live project situation by explaining the need to provide measures for the achievements against project objectives and milestones. This could be provided in the form of a report explaining the rationale for the choice of measures to be monitored and identify and show by application the use of S-Curve and Earned-Value to assess performance. Alternatively, the outcome could be assessed by the use of stimulus materials or an investigatory report.

Outcome 5

Evaluate the implementation of a contracting industry project

Knowledge and/or skills

- ◆ Evaluation of project outcomes
- ◆ Recommendations

Evidence requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ evaluate the outcome of the implementation of a contracting industry project
- ◆ make recommendations for the implementation of future projects

Where calculations are produced, candidates must provide a satisfactory response to the assessment questions. This must include:

- ◆ applying appropriate formula
- ◆ applying the principles of the calculation
- ◆ showing all working through the calculation
- ◆ providing reasonable answers to the questions asked. The answer should derive from the application of the formula and correct application of the principles of the calculation

Assessment guidelines

The candidate could be provided with stimulus material and asked to provide evidence in the form of a report. The report would evaluate the outcome of a completed project against original objectives with regards to quality, cost and time. The report could include comparisons against estimated costs including costs of any variations, timescales, interim payments, cashflow and client satisfaction. Comparison with the project initiation document and the actual outcomes recorded against the project, could be made. Recommendations should be made for improvement in future projects and could be based upon the results of the above noted comparative study.

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Administrative information

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Unit title:	Contracting Industry Project Management: Practical Issues
Superclass category:	AG
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History of changes:

Version	Description of change	Date

Source: SQA

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Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 279 1000. Alternatively, complete our [Centre Feedback Form](#).

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SQA Advanced Unit specification: support notes

Unit title: Contracting Industry Project Management: Practical Issues

This part of the unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this unit is at the discretion of the centre, the notional design length is 80 hours.

Guidance on the content and context for this unit

This unit is a mandatory unit within the Contracting Management SQA Advanced Certificate, which is designed for candidates employed within the contracting sector who wish to develop contracting management skills to progress within their industry. While the unit is part of a group award, it is also available on a standalone basis.

The unit enables candidates to gain skills in dealing with the practical issues involved in managing projects within the contracting industry. The unit highlights the practical issues at site level and the role that efficient management can play in delivering a successful project within the contracting industry.

This unit considers the practical issues relating to project management within the contracting industries and identifies processes, procedures and best practice from award of contract through to project completion. The following gives some guidance on suitable content. This is neither exhaustive nor prescriptive.

Outcome 1

This outcome highlights the benefits of efficient and effective procedures and documentation at hand over from award of contract to project start-up. A site project file with procedures and supporting documentation required for successful monitoring and control of the project could be used. Candidates could be encouraged to investigate project files within their own workplace, or in an organisation with which they are familiar. The portfolio of evidence could provide examples of good practice, containing candidates' suggestions for improvements to documents currently used in the workplace.

Outcome 2

This outcome looks at the roles and responsibilities of the project management team. An ability to show understanding of the attitudes and skills required for an effective contracting industry project management team is beneficial to the understanding of the process. Consideration of Belbin's team role or a similar approach could be useful in discussing both formal and informal roles.

Candidates could be asked to review the importance of maintaining a positive attitude toward the work involved in the project and its outcome. The importance that the project team comprises a membership with a suitable skill mix and blend may be reviewed within this outcome. Again, candidates could be encouraged to look at real-life examples within a workplace.

Desirable attitudes could include an experienced meaningfulness of the work involved in the project and experienced responsibility for outcomes of the project's work. Desirable skills may include building skills, such as electrical wiring, cladding, decorating and those from a generic management background, such as financial, people etc.

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Outcome 3

Candidates must understand key techniques for planning and scheduling within a contracting industry project and how these may be used. The use of real examples from workplaces to highlight the complexities that may arise in large complex projects, could be useful.

Evidence could be provided in the form of a report detailing the various stages within the project planning process, an understanding of techniques and application of one scheduling technique, from; Work Breakdown Structure (WBS), Gantt chart, Critical Path Method (CPM) and Programme Evaluation and Review Technique (PERT).

Outcome 4

The need to identify effective project control measures and the techniques available could be considered. It is important that candidates recognise that project control is the essential link between planning and doing. Candidates could provide details of monitoring measures, performance assessment and the need and consequences of any interventions.

Outcome 5

Candidates could be presented with stimulus material that requires candidates to apply project control techniques identified in the previous outcome to measure the success of a completed project by comparison against original objectives. Examples of real projects that include failure to meet timescales, budget overruns and unsatisfied clients could be presented to encourage evaluation and recommendations for improvement.

Guidance on the delivery and assessment of this unit

It is envisaged that the unit will be delivered through lecturer-mediated discussion, the provision of appropriate examples and case studies. To keep the unit relevant, examples and case studies should be appropriately selected to suit candidates' backgrounds, building on their existing knowledge.

Relating theory to practice should be encouraged at all times, review of projects familiar to candidates will allow easier understanding and allow them to form opinions and conclusions from this. This will develop candidates' analytical and critical-thinking skills.

The unit aims to develop candidates' skills in project management, with the focus being on the practical issues of managing projects within the contracting industry.

Summative assessment focuses on project start-up, the project management team, planning and scheduling, control and evaluation. Delivery of the unit should encourage candidates to reflect on their own background knowledge of contracting industry projects. Formative assessment in the form of ongoing self assessment questions as each topic is taught could be used throughout the unit.

Outcome 1 could be assessed by a report of 1,000 words or equivalent outlining the background, procedures and applications of the subject matters to the candidate's own organisation. The report should provide an overview of the procedures and documentation for project start-up within the candidate's organisation. The candidate should also be encouraged to draw conclusions and provide recommendations for initiatives and/or improvements to the areas discussed. In addition, the candidate is required to compile a portfolio in the form of a site project file containing documentation required for successful monitoring and control of a project.

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Outcomes 2, 3 and 4 could be assessed by short reports, with a combined length of 2,000 words or equivalent outlining the background, procedures and applications of the subject matters to a live contracting industry project. The candidate should draw conclusions and provide recommendations for initiatives and/or improvements to the areas discussed.

Outcome 5 could be assessed by a report of 750 words or equivalent outlining background, procedures and applications of the subject matters to a live or recently completed contracting industry project. The candidate should draw conclusions from the evaluation and provide recommendations for future projects.

Opportunities for developing Core Skills

There are opportunities to develop the Core Skills of *Problem Solving*, *Communication*, *Working with Others*, *Information Technology* and the component Using Number of the Core Skill of *Numeracy*, all at SCQF level 6 in this unit.

As they undertake the unit, candidates will be encouraged to analyse and seek solutions to a range of theoretical and practical problems and issues relating to contracting industry projects. Should candidates present written reports then there may be opportunities to develop the Written Communication component of the Core Skill of *Communication*, at SCQF level 6 as well as developing the Critical Thinking component of the Core Skill of *Problem Solving* at SCQF level 6.

Outcome 2 requires consideration of team roles and the importance of project teams in the management of any project. This may provide the opportunity to develop the Core Skill of *Working with Others* at SCQF level 6. The Core Skill of *Numeracy* at SCQF level 6 may also be developed when candidates are measuring the success of an existing project.

Candidates will have to produce materials in the form of reports, which would be acceptable within the contracting industry. Resources made available should include appropriate software packages for word processing and editing to support accuracy and effective presentation of information to the reader. This may provide the opportunity to develop the Core Skill of *Information Technology* at SCQF level 6.

Open learning

If this unit is delivered by open or distance-learning methods, additional resources will be required for candidate support, assessment and quality assurance.

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

General information for candidates

Unit title: Contracting Industry Project Management: Practical Issues

This unit has been written as a mandatory unit within the SQA Advanced Certificate in Contracting Management, but may also be undertaken on a standalone basis. It is designed for candidates employed within the contracting sector who wish to develop contracting management skills to progress within their industry.

This double-credit unit has five outcomes. The first outcome provides the ability to identify and explain effective procedures and documentation for project start-up. The second outcome explains team roles, responsibilities, attitudes and skills in contracting industry project management. The third outcome demonstrates skills in the use of effective planning and scheduling tools and techniques. The fourth outcome describes the use of control measures and in the fifth outcome you will evaluate the success of a contracting industry project.

The content of the unit will be kept relevant through the use of appropriate examples and by focusing on possible situations relevant to a live contracting industry project. This should provide you with the ability to relate theory to practice, allowing you to develop critical and reflective analysis.

For successful completion of this unit, you will be required to achieve a satisfactory level of performance on the assessed work. To do this, you will be expected to apply the theory you have learned during the unit and demonstrate your understanding through assessments including a project based assessment. Your tutor will advise the centre's approach to the assessments.

There are opportunities to develop Core Skills in *Problem Solving*, *Numeracy*, *Communication*, *Working with Others* and *Information Technology* at SCQF level 6 in this unit. You will be encouraged to analyse and seek solutions to a range of theoretical and practical problems and issues relating to contracting industry project management which will help you to develop *Problem Solving* skills. You will have to produce materials in the form of reports, which would be acceptable within the industry. If presented in a written format then there may be opportunities to develop the Written Communication component of the Core Skill of *Communication*. The selection of contractual arrangements requires you to consider cost and time and in doing so may provide opportunities for you to develop the Core Skill of *Numeracy*.