



Unit title	Management of Commercial Risk
Guided learning hours	60
Number of lessons	30
Duration of lessons	2 hours
Links to other units	
Unit 1: Construction Technology Unit 2: Construction Design Unit 11: Management of a Construction Project Unit 15: Measurement Techniques Unit 20: Quantity Surveying Unit 22: Economics and Finance in Construction	

Key to learning opportunities			
AW	Assignment writing	RS	Revision session
GS	Guest speaker	V	Visit
IS	Independent study	GW	Group work

Lesson	Topic	Lesson type	Suggested activities	Classroom resources
1	Learning aims A, B and C		<ul style="list-style-type: none"> • Teacher presentation: give an overview of the unit covering: <ul style="list-style-type: none"> ○ key topics of the unit content ○ nature of the learning aims ○ teaching and learning activities. • Type of assessment and the number of assignments that learners will be expected to complete. 	<ul style="list-style-type: none"> • Specification: learning aims, unit content and assessment criteria • Assignment brief examples in terms of task setting and expectations of



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				the quality of work
Learning aim A: Understand the risks associated with construction projects				
2	A1: Tender strategies	GW	<ul style="list-style-type: none"> • Lead in: introduce learners to the tendering process by showing the YouTube video. • YouTube: 'What Is Involved in the Construction Tendering Process?' by George Gregor • Tutor-led discussion: engage learners by asking questions about the various stages of the tendering process as an overview, summarising the key points and adding any detail as necessary. • Tutor presentation: explain the difference between a regular tender and a priority tender (fully committed). Discuss a typical tender decision programme (involving site visits, review of costs and programme as well as internal meetings) and resources to be allocated, such as estimating teams and supply chain arrangements. Engage learners through a Q&A session. • Small group activity: use a company profile and brief project details for the group activity. Learners to make a judgement as to whether to go for a tender or not, based on the organisational capacity to tender and justifying their reasoning. Learners to present their findings to their peers. Facilitate the discussion and add any detail where necessary. • Plenary: answer any questions learners may have and introduce the next topic. 	<ul style="list-style-type: none"> • Internet access • Task brief • ICT resources
3	A1: Tender strategies	GW	<ul style="list-style-type: none"> • Small group activity: use various scenarios to illustrate suitable tender strategies considering the following factors: 	<ul style="list-style-type: none"> • IT resources • Task brief



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			<ul style="list-style-type: none"> ○ the rationale to participate or not in the tendering process ○ tender decision programme ○ allocation of resources (e.g. tendering budget, availability of appropriate estimating team, supply chain tendering process etc.) ○ site location. <p>Ensure you also focus on the constraints that the supply chain could have on the tender preparation. Give learners with this information and ask them to analyse these scenarios before presenting to their peers. Facilitate a discussion and add any detail where necessary.</p> <ul style="list-style-type: none"> ● Plenary: draw upon the key points of the session, answering any questions that learners may have and introduce the next topic. 	
4	A2: Contractual arrangements	GW	<ul style="list-style-type: none"> ● Tutor presentation: introduce the concept of 'procurement' and describe how a project could be procured in several ways, such as a conventional lump sum form. Give suitable examples and a brief rationale for each type. Engage learners through a Q&A session. ● Small group activity: learners are to get into small groups to carry out research into an allocated procurement method. They are to give at least one example, including both advantages and disadvantages for each method. ● Class discussion: based on the result of the activity, initiate a class discussion on the suitability of procurement methods for various project types. ● Plenary: draw upon the key points of the session and answer any questions learners may have. 	<ul style="list-style-type: none"> ● IT resources ● Task brief



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5	A2: Contractual arrangements	GW	<ul style="list-style-type: none"> • Tutor presentation: introduce the concept of 'risk' and how it is managed using a variety of contractual arrangements. Engage learners through a Q&A session on risk management. • Tutor presentation: give an overview of the current forms of building contracts used within the public and private sector nationally, highlighting the key features of these contracts. Lead a class discussion on risks and returns. • Small group activity: learners to get into small groups to continue working on the previous project brief. They are to determine a suitable form of contract that would minimise the risk to the project. Learners are then to present their findings to their peers. • Plenary: draw upon the key points of the session and answer any questions learners may have. 	<ul style="list-style-type: none"> • IT resources • Task brief • A Blueprint for Risk Management in Construction <p>Article: FMI, Quarterly, June 2016, June 1, 2016</p>
6	A2: Contractual arrangements	GS	<ul style="list-style-type: none"> • Lead in: introduce the guest speaker and ask learners to prepare some questions. • Guest speaker: this could be a Quantity Surveyor, Project Manager, Contract Manager, Construction Solicitor or anyone dealing with contracts in industry. The guest speaker should be able to share some examples with learners on how procurement, contractual arrangements and risk management work together in practice. • Q & A: allow learners the opportunity to ask the guest speaker some questions that they have prepared. 	<ul style="list-style-type: none"> • Guest speaker • IT resources
7	A3: Supply chain	IS	<ul style="list-style-type: none"> • Tutor presentation: explain how the supply chain works in the construction industry. Lead a class discussion on the various players in the supply chain and introduce the relevant terminology, such as fixed or fluctuating prices, variant bids and incomplete quotations and prices (see specification). Use examples of some simple 	<ul style="list-style-type: none"> • 'Design Buildings Wiki' website – search for 'Supply chain management in



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			<p>quotations to reinforce learning.</p> <ul style="list-style-type: none"> • Tutor-led discussion: introduce the role of suppliers of materials, including: <ul style="list-style-type: none"> ○ the number of alternative suppliers ○ the capacity to supply ○ the named manufacturer or generic specification ○ any previous experience of supplier performance. • Tutor-led discussion: introduce the role of sub-contractors, including: <ul style="list-style-type: none"> ○ previous experience of working relationship ○ experience of similar projects ○ number of available subcontractors in the specialist area ○ geographical area of operations ○ supervision requirements ○ references ○ insurances ○ quality assurance (QA) registration ○ health and safety record ○ collateral warranties ○ considerate contractor policies. <p>Lead a class discussion regarding commercial risks due to the supply chain and consequent changes to the estimates. Summarise the key points and add any detail where necessary.</p>	<p>construction'</p> <ul style="list-style-type: none"> • IT resources • Task brief
8	A3: Supply chain	GW	<ul style="list-style-type: none"> • Tutor-led discussion: introduce the role of nominated suppliers 	<ul style="list-style-type: none"> • 'Design Buildings



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			<p>and nominated sub-contractors, including:</p> <ul style="list-style-type: none"> ○ appointment by third party ○ design elements that may be included in their package of works ○ appointment unknown at time of tender ● Prime Cost (PC) sums. <p>Lead a class discussion regarding commercial risks due to the supply chain and consequent changes to the estimates. Summarise the key points and add any detail where necessary.</p> <ul style="list-style-type: none"> ● Small group activity: use the same project brief as in previous sessions and ask learners to suggest the ways to minimise and manage any risks in the supply chain, which are related to suppliers, sub-contractors and those nominated by a third party. Facilitate a class discussion and add any detail where necessary. ● Plenary: answer any questions learners may have and introduce the next topic. 	<p>Wiki' website – search for 'Supply chain management in construction'</p> <ul style="list-style-type: none"> ● IT resources ● Task brief
9	A4: Commercial risk analysis	GW	<ul style="list-style-type: none"> ● Tutor-led discussion: give an overview of the factors to be considered while analysing commercial risk. Draw upon previous activities and lead a class discussion focusing on: <ul style="list-style-type: none"> ○ current workload and the need to maintain turnover ○ market conditions and economic climate ○ political stability of the country or region ○ currency value, fluctuations and exchange rate ○ project considerations ○ site and location factors ○ programme factors 	<ul style="list-style-type: none"> ● IT resources ● Task brief



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			<ul style="list-style-type: none"> ○ financial issues. ● Small group activity: give learners a detailed project brief in order to carry out a commercial risk analysis. Allocate a specific aspect to each group. For example, Group 1 could work on site factors while Group 2 will be given programme factors to consider. ● Each group is to present to their peers. Give support and add any detail as necessary. 	
Learning aim B: Review information used when making commercial tender decisions				
10	B1: Commercial intelligence	GW	<ul style="list-style-type: none"> ● Tutor presentation: introduce the need to be commercially aware of the competitors before deciding to bid for a project. Engage learners through Q&A about risk management. ● Small group activity: working in small groups, learners to work on the previous project brief which has details about the competitors to determine how this would help to make a bidding decision. Learners to share their findings with their peers. Give support and add any detail where necessary. ● Plenary: draw upon the key points and explain any questions learners have. 	<ul style="list-style-type: none"> ● IT resources ● Task brief
11	B1: Commercial intelligence	GW	<ul style="list-style-type: none"> ● Tutor presentation: introduce how commercial intelligence could be gathered. Include: <ul style="list-style-type: none"> ○ speaking to suppliers and subcontractors ○ networking ○ press releases ○ subscribing to intelligence services or journals that publish information. 	<ul style="list-style-type: none"> ● IT resources ● Task brief



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			<p>Engage learners through Q & A about risk management.</p> <ul style="list-style-type: none"> • Small group activity: working in small groups, learners to work on the previous project brief which has details about the competitors to determine suitable methods to gather market intelligence. Learners to share their findings with their peers. Give support and add any detail where necessary. • Plenary: draw upon the key points and explain any questions learners have. 	
12	B2: Company aspirations and needs	GW	<ul style="list-style-type: none"> • Tutor presentation: introduce how internal attitudes and long-term planning within a company has an impact upon tender decisions. Include: <ul style="list-style-type: none"> ○ attitude to risk ○ expansion plans ○ consolidation plans ○ preparation for business sale or share issue ○ potential acquisitions ○ diversity into new markets ○ change of focus of operation. <p>Engage learners through Q&A.</p> <ul style="list-style-type: none"> • Small group activity: working in small groups, learners to work on a detailed company profile including performance data and business plans. Each group to extract relevant information against the bulleted list above. • Tutor presentation: build upon the discussion so far and introduce skills and profit related factors including: 	<ul style="list-style-type: none"> • IT resources • Task brief



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			<ul style="list-style-type: none"> ○ contribution to head office overheads ○ profit needs or requirements ○ specialisation ○ increase in company skill base ○ retention of specialist staff or skilled works. <ul style="list-style-type: none"> ● Small group activity: learners to continue with the earlier activity. Give them more information about skills range, overheads and expected profits, if already not included within the task brief. Learners to participate in a class discussion to justify their findings. Give support and add any detail where necessary. ● Plenary: draw upon the key points and explain any questions learners have. 	
13-15	B3: Site visit report	V	<ul style="list-style-type: none"> ● Individual activity: give learners some case studies to read through that include a set of project documents where estimation is based upon the design drawings only. ● Class discussion: identify the areas where a site visit is required to ascertain the costs, such as site clearance and access requirements. ● Small group activity: arrange a visit to a site on campus. Working in small groups, learners are to make note of the key features of the site. This should include the following information: <ul style="list-style-type: none"> ○ assessment of structures requiring demolition ○ repairs and alterations required and their cost ○ site clearance requirements ○ identified security issues ○ site access restrictions 	<ul style="list-style-type: none"> ● Suitable PPE ● Task brief ● IT resources



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			<ul style="list-style-type: none"> ○ community issues assessment ○ available space for site establishment and circulation ○ appropriate methods for materials distribution on site. <ul style="list-style-type: none"> ● Class discussion: using the data gathered on site, lead a class discussion on how this information could impact upon pricing of preliminary items, repairs and alterations, and the assessment of commercial risk. 	
16	B4: Business analysis	GW	<ul style="list-style-type: none"> ● Lead-in: introduce learners to the range of different methods available to check the feasibility of projects. ● Small group activity: ask learners to work in small groups and to then select and research one of such methods/approaches such as PESTLE, SWOT, 5 Cs and Porter's 5 forces, cost benefit analysis and residual method of valuation. Learners to present their findings to the other groups. ● Plenary: facilitate the discussion among groups, summarise and add any detail where necessary. 	<ul style="list-style-type: none"> ● IT resources ● Task brief
17	B5: Market structure	GW	<ul style="list-style-type: none"> ● Tutor-led discussion: give an overview of the factors that influence supply of labour and materials and the demand for construction work and have an impact upon tender prices and cost of work. Introduce the concept of perfect competition, imperfect competition and monopoly. Make a reference to the teaching session in week 9. Draw upon previous activities and lead a class discussion focusing on: <ul style="list-style-type: none"> ○ competition and potential advantage arising out of it ○ how construction industry is structured ○ potential barriers to entry 	<p>IT resources Task brief</p>



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			<ul style="list-style-type: none"> ○ regional stability ○ political climate. ● Small group activity: use the same detailed project brief as in week 9. Allocate a specific aspect to each group. For example, Group 1 could work on structure of the industry while Group 2 will be given political climate to consider. Each group is to present to their peers. Give support and add any detail as necessary. 	
Learning aim C: Undertake commercial decisions to support the procurement process				
18	C1: Application of risk analysis to make commercial decisions	GW	<ul style="list-style-type: none"> ● Small group activity: give a detailed project brief to learners working in small groups. They are to carry out a risk analysis and determine any tender adjustments required, considering the following factors: <ul style="list-style-type: none"> ○ current workload and the need to maintain turnover ○ market conditions and economic climate ○ political stability of the country or region ○ currency value, fluctuations and exchange rate ○ financial issues. <p>Allocate a specific aspect to each group. For example, Group A could work on market conditions while Group B can focus on currency rates and fluctuations. Each group is to present to their peers. Give support and add any detail as necessary.</p>	Project brief Task brief
19	C1: Application of risk analysis to make commercial decisions	GW	<ul style="list-style-type: none"> ● Small group activity: learners to work on the same project brief and within the same groups. Add drawings and related technical and costing details to support them to complete activities. They are 	<ul style="list-style-type: none"> ● Project brief ● Task brief ● Drawings



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			to determine adjusted tender sums considering the following site-based factors: <ul style="list-style-type: none"> ○ ground contamination ○ soil types and ground conditions ○ security requirements ○ existing trees ○ labour arrangements ○ local climatic conditions impacting programme of works. <ul style="list-style-type: none"> ● Allocate a specific aspect to each group. For example, Group A could work on ground contamination while Group B can focus on existing trees. Each group is to present to their peers with justification of adjusted sums. Give support and add any detail as necessary. 	including plans, sections, bills and associated documents <ul style="list-style-type: none"> ● Cost data
20	C2: Analysis of the estimated project cost	GW	<ul style="list-style-type: none"> ● Tutor presentation: introduce the concept of 'unit rates' and how they are built up, including preliminaries, labour, plant and materials. ● Class discussion: lead a class discussion on what might be required to cost an item using examples (e.g. laying concrete in foundations). ● Small group activity: learners to work in small groups to give some examples of various parts of a unit rate. For example, one group could work on selecting material price to use while the other could work on subcontractors' quotations. Learners to share their findings with the class. 	<ul style="list-style-type: none"> ● IT resources ● Task brief



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21	C2: Analysis of the estimated project cost	GW	<ul style="list-style-type: none"> • Tutor presentation: introduce the concept of overheads, prime cost (PC), provisional sums (PS), contingencies and alternative tenders. • Class discussion: lead a class discussion on what contributes to each of the concepts introduced. For example, how a nominated sub-contractor contributes towards these 'probable' costs. • Small group activity: learners to work in small groups to give examples of an allocated topic out of what was discussed during the session. Learners to share their findings with the class. 	<ul style="list-style-type: none"> • IT resources • Task brief
22	C2: Analysis of the estimated project cost	IS	<ul style="list-style-type: none"> • Lead in: introduce the estimation and billing process focusing on recognised methods used by the local and national industry. Introduce the concept of 'key cost centres' and show learners some examples where they can work out how to identify such cost centres. • Individual activity: show learners an example of how all of the calculations could be summarised under various sections (or cost centres). Learners to carry forward the costs to the summary page of the bill. Give support as necessary. 	<ul style="list-style-type: none"> • Project brief • Drawings including plans, sections, bills and associated documents
23	C3: Use of commercial intelligence	GW	<ul style="list-style-type: none"> • Small group activity: learners are to work on the project brief which should include details on commercial intelligence and competitors, so that learners can determine how competitive tendering helps to inform a bidding decision. Learners are to share their findings with their peers. • Plenary: draw upon the key points of the session and answer any questions learners may have. 	<ul style="list-style-type: none"> • Project brief • Drawings including plans, sections, bills and associated documents



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24	C4: Tender adjudication and settlement meetings	GW	<ul style="list-style-type: none"> • Role play: using the adjusted sums from earlier sessions, learners to determine any adjustments required to the final sum considering the following: <ul style="list-style-type: none"> ○ company overheads and profit margins ○ current market conditions and economic climate ○ need to maintain workload and to retain skills and experience. • Assign learners an aspect to work on and to determine impact on the final sum in terms of adjustments to be made. Learners to simulate a board meeting and defend the suggested adjustments. Tutor to assign roles during the activity. • Plenary: discuss summary of the activity highlighting which of the factors resulted in adjustment and why, discounts and the Director's adjustment. The meeting should conclude with a firm bid. 	<ul style="list-style-type: none"> • Project brief • Drawings including plans, sections, bills and associated documents.



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25	C4: Tender adjudication and settlement meetings	GW	<ul style="list-style-type: none"> • Role play: using the adjusted sums from earlier sessions, learners to determine any adjustments required to the final sum considering the following: <ul style="list-style-type: none"> ○ discounts (for the main contractor of a subcontract or package tender) ○ conversion of the estimate into a firm bid (tender) ○ Director's adjustment company overheads and profit margins. • Assign learners an aspect to work on and to determine impact on the final sum in terms of adjustments to be made. Learners to simulate a board meeting and defend the suggested adjustments. Tutor to assign roles during the activity. The meeting should conclude with a firm bid. • Plenary: discuss summary of the activity highlighting which of the factors resulted in adjustment and why. • Make learners aware of the guest speaker next week and that the guest speaker will be sharing some documents relating to commercial decisions taken for a real-life project. Remind learners of their responsibilities relating to confidentiality. 	<ul style="list-style-type: none"> • Project brief • Drawings including plans, sections, bills and associated documents.



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26-27	Learning aims A, B and C	RS	<p>Preparation for Pearson Set Assignment</p> <ul style="list-style-type: none"> • Lead in: give an overview of learning across the unit. Engage learners through Questions and Answers (Q&A) and recap important topics such as market structure and conditions, tendering processes, market intelligence and commercial risk analysis. Summarise the key points and respond to any questions arising. • Mock assessment: give learners various scenarios such as those relating to company profile and market conditions. Working in groups, learners to carry out research and respond to the tasks by participating in a workshop style discussion. Give support and add any detail as necessary. • Tutor presentation: give guidelines to students about presenting their work in a suitable format and the standards expected. • Q&A: allow learners the opportunity to ask questions about the assessment process. 	<ul style="list-style-type: none"> • Mock scenario-based briefs
28-30	Learning aims A, B and C	AW	<p>Assessment controls</p> <ul style="list-style-type: none"> • Time: the assignment must be completed in the stated time (6 hours). • Invigilation: learners should be invigilated and on centre premises when completing the assignment. • Resources: resources and learner work should be kept securely in the centre between assessment periods. • Research: learners may need to research their local environment to collect data to support their response. If this is the case, they are permitted to take notes and bring them back to the centre. Research time will be accounted for in the time requirement for the assignment. 	<ul style="list-style-type: none"> • Pearson Set Assignment covering learning aims A, B and C



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