



**SUCCESSION
TRAINING**

BSB51415 Diploma of Project Management



Constraint Management

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ASSESSMENT WORKBOOK COVERSHEET

WORKBOOK:	Workbook 2
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Please read the Candidate Declaration below and if you agree to the terms of the declaration sign and date in the space provided.

By submitting this work, I declare that:

- I have been advised of the assessment requirements, have been made aware of my rights and responsibilities as an assessment candidate, and choose to be assessed at this time.
- I am aware that there is a limit to the number of submissions that I can make for each assessment and I am submitting all documents required to complete this Assessment Workbook.
- I have organised and named the files I am submitting according to the instructions provided and I am aware that my assessor will not assess work that cannot be clearly identified and may request the work be resubmitted according to the correct process.
- This work is my own and contains no material written by another person except where due reference is made. I am aware that a false declaration may lead to the withdrawal of a qualification or statement of attainment.
- I am aware that there is a policy of checking the validity of qualifications that I submit as evidence as well as the qualifications/evidence of parties who verify my performance or observable skills. I give my consent to contact these parties for verification purposes.

Name: Christine Marcek

Signature: 

Date: 11/8/20

WRITTEN QUESTIONS

Part 1 – Project Scope

1. Which of the following are project initiation documentation required at the start of the project?

Select all that apply.

☐	a. Communications log
☒	b. Project plan
☐	c. Work Breakdown Structure (WBS)
☐	d. Gantt Chart
☒	e. Project charter
☒	f. Risk management

2. Which of the following are components of a project scope-management plan?

Select all that apply.

☒	a. Project deliverables
☐	b. Project staff assignments
☒	c. Change request
☐	d. Project justification
☒	e. Product description
☐	f. Performance reports
☐	g. Project objectives
☐	h. Project funding requirements
☒	i. Quality metrics
☐	j. Budget forecasts

3. In your own words, discuss how project time and cost affect the project scope. Do not exceed 100 words.

Cost directly affects the specification level of a project, as well as possible design options. Budget constraints can affect quality of materials (and trades) and reduced design options e.g. in a bathroom renovation the best solution may require moving services, however cost constraints may not allow for this. Similarly, time (if an issue) can increase cost (additional trades, rush orders, reduced price negotiation capacity etc.) or impact what is able to be delivered e.g. with same scenario might have the budget to move bathroom services, however time may not permit. Time and cost are directly linked to quality.

4. Which of the following are events or problem areas relating to project scope that could trigger the need for a formal change request?

Select all that apply.

☒	a. The deliverables may not meet quality requirements.
☒	b. Grammatical and typo errors are found in the project initiation documents.
☒	c. The deliverables may not be what the client wanted, even though they were covered in the project plan.
☐	d. The stakeholder considers the change request and advises the project manager.
☒	e. Observance of non-working holidays affecting project time.
☒	f. Additional quality requirements (such as new legislation or changes in standards) will render the deliverables non-compliant.
☒	g. Failure of equipment needed to produce the deliverables.
☐	h. Missing documentations in the project's information system.
☒	i. Raw materials are no longer available.
☒	j. Supplier or contractor closing business.

5. Which of the following are procedures that typically must be followed under change control processes?

Select all that apply.

☐	a. Project manager seeks advice from supervisor regarding changes in cost.
☐	b. Project manager assigns a project team member to recalculate for the critical path.
☒	c. Project manager provides the change request to the appropriate stakeholder for approval.
☒	d. The stakeholder considers the change request and advises the project manager.
☒	e. The project manager updates the project plan and other documentation where required.
☐	f. Project manager drafts the change request.
☐	g. Project manager delegates the authority to the project team members in advising other stakeholders of the changes.
☒	h. The project manager advises relevant stakeholders (sponsor, team members, etc.) of the changes.
☐	i. Details of the proposed change to be communicated to the project manager.
☐	j. The project sponsor and owner may automatically terminate the project contract.

6. The following are methods of measuring work outcomes and progress against plans. Match each method to its correct description.

Write the letters that correspond to your answers in the spaces provided.

	Method	Description
c	Units completed	a. Also known as the 'steps' method, this is used for projects that involve subtasks that need to be completed in an orderly fashion.
a	Incremental milestones	b. In this method, tasks that are being calculated tend to occur over a longer duration time and include multiple subtasks, where subtasks can have different units of measurements.
d	Start / finish	c. This method is used when project tasks are done repeatedly. Assuming that each task is completed at the same amount of time, resources and effort, each task is counted and totaled.
b	Weighted or equivalent units	d. This method is used to determine the percentage of the work completed and the percentage of the work that is still yet to be completed.

7. Which of the following are activities involved in decomposition of the total work project?

Select all that apply.

☐	a. Summarise project tasks in the form of a written report.
☒	b. Identify and analyse the deliverables and related work.
☒	c. Structure and organise the work breakdown structure (WBS).
☐	d. Arrange the smallest project tasks to form an aggregate representation of the total project task
☒	e. Decompose the upper work breakdown structure (WBS) levels into lower level detailed components.
☐	f. Calculate duration and resource effort for each project task.
☒	g. Develop and assign identification codes to the WBS components.
☐	h. Inspect whether work and deliverables meet requirements and product acceptance criteria.
☐	i. List resources required for each project task.
☒	j. Verify that the degree of decomposition of the work is necessary and sufficient.

8. List three (3) ways in which the Work Breakdown Structure (WBS) can be created.

- a. By using phases of the project lifecycle as level one, then product & deliverables as level two.
- b. By using the major deliverables as level one.
- c. By using sub-projects which may be developed by organisations outside the project, such as the contracted work.

9. The following are some problem areas in scope management. In your own words, briefly discuss each problem area.

Do not exceed 100 words for each discussion.

Problem areas	Discussion
Scope creep	Scope creep can be dangerous, as it is the occurrence of small, minor changes that occur over time and may go unnoticed. However, either individually or especially when combined these small changes can have a significant adverse effect on the project. As scope creep can often go unnoticed, appropriate change management and planning adjustments are not made, undermining the project.
Sponsor / project owner approval	Conflict can arise between the project team and the Client where unexpected issues arise that require alteration to the scope to remedy, and there are differing opinions as to the best way to manage the scope change, for example, a discovery of large amounts of asbestos that requires removal and disposal. This significant cost, depending on the contract, may fall to either the Client or the Project. If the contract wording is not clear, this can lead to dispute over who should bear the cost or remediation. Developing strong working relationships is helpful in this kind of scenario.
Project team accountability	Each individual's performance contributes to the success (or failure) of project. Ensuring that expectations are clearly set from the beginning such as through Position Descriptions and Key Performance Indicators is important. Likewise, ongoing monitoring of performance e.g. weekly construction meetings where KPI performance is reviewed and any individuals not complying are held to account all serves to reinforce individual and team accountability.

10. In your own words, discuss the significance of scope management.

Do not exceed 150 words.

Scope management is essential for defining what a project will comprise of. It establishes an estimate for time and cost which forms the basis to determine / ensure a project remains on track. Project scope defines what is or is not included within a project, so all stakeholders are clear on the deliverables, and sets the protocols for change management when, invariably, things change along the way. Without a clear scope, a project is vulnerable to poor communication and misunderstandings regarding deliverables, scope creep and amendments and budget blowouts which ultimately results in an unhappy client and poor reputation, and poorly executed project.

11. The *PMBOK Guide* outlines the following processes in project scope management. List one (1) tool or technique used in each process.

Project Scope Management	Tool or technique
Collect requirements	Facilitated workshops
Define scope	Alternatives identification
Create WBS	Decomposition
Verify scope	Inspection
Control scope	Variance analysis

12. Consider the roles and responsibilities of the project manager in project planning. List five (5) roles of the project manager in project planning and list at least one responsibility for each of these roles.

Roles (list five (5))	Responsibilities (List at least one (1) for each role)
Understanding the project	Project purpose, stakeholder expectations, deliverables
Scope Management	Identify requirements and develop work packages
Time Management	Develop project schedule and schedule baseline
Cost Management	Determine the cost baseline
Quality Management	Define quality expectations and how to achieve

Part 2 – Project Time

- The following are estimation tools and techniques used in determining duration. Match each tool and technique to its correct description.

Write the letters that correspond to your answers in the spaces provided.

	Estimation tools and techniques	Description
b	Analogous estimating	a. This technique uses a statistical relationship between historical data and other variables to calculate an estimate for activity duration.
a	Parametric estimating	b. This uses parameters such as duration, budget size, weight, and complexity, from a previous, similar project, as the basis for estimating the same parameter to measure for a future project. This technique relies on the actual duration of previous, similar projects as the basis for estimating the duration of the current project.
e	Three-point estimating	c. This is guided by historical information. It provides duration estimate information or recommended maximum activity durations from prior similar projects. This can also be used to determine whether to combine methods of estimating and how to reconcile differences between them.
c	Expert judgement estimating	d. Contingencies are accounted for into the overall project schedule to account for schedule uncertainties.
d	Reserve analysis	e. This technique uses a mathematical formula to determine a weighted average of estimates. It uses the formula: $Te = \frac{To + 4 \times Tm + Tp}{6}$.

2. The following are estimation tools techniques used in determining activity resource. Match each to its correct description.

Write the letters that correspond to your answers in the spaces provided.

	Estimation tools and techniques	Description
d	Expert judgment	a. Several companies or organisations routinely distribute updated production rates and unit costs of resources for an extensive array of labour trades, material, and equipment for different countries and geographical locations within countries.
e	Alternative analysis	b. In this technique, when an activity cannot be estimated with a reasonable degree of confidence, the work within the activity is decomposed into more detail. The resource needs are estimated. These estimates are then aggregated into a total quantity for each of the activity's resources.
a	Published estimating data	c. This tool has the capability to help plan, organise, and manage resource pools and develop resource estimates.
b	Bottom-Up estimating	d. This technique is often required to assess the resource-related inputs to this process. Any group or person specialised with knowledge in resource planning and estimating can provide such expertise.
c	Project management software	e. These include using various levels of resource capability or skills, different, size or type of machines, different tools (hand versus automated), and make-or-buy regarding the resource.

3. In identifying the critical path, the following parameters need to be determined for each task. Discuss each parameter.

Do not exceed fifty (50) words for each discussion.

Parameter	Discussion
ES	Earliest Start time is the absolute quickest a task can be started. All tasks must be assessed to determine if there are any dependencies i.e. Task A requiring completion before Task B can commence and any constraints need to be identified.
EF	Earliest Finish Time is a combination of Earliest Start Time as well as the time it takes to complete the task. In this parameter, there is no allowance for slack.
LF	Latest Finish Time is the maximum limit that a finish time can be pushed out for completion without delaying the projects time schedule. If a task's LF time is the same as the EF time, then this is a critical task for the project.
LS	Latest Start Time is the latest time a task can be completed by minus the time required to complete the task. Similar to EF, there is no allowance for slack in this parameter.

4. Which of the following statements accurately explain the process of developing the project schedule, including the schedule baseline?

Select all that apply.

☒	a. Developing the schedule is the process of analysing activity sequences, durations, resource, requirements, and schedule constraints to create the project schedule.
☒	b. The project schedule and schedule baseline are developed or established using the activity lists, activity attributes, project scope statement as the bases.
☒	c. Entering the activities, durations, and resources into the scheduling tool generates the schedule baseline.
☐	d. Tools and techniques used in developing the project schedule and schedule baseline include decomposition of the total project work.
☐	e. Developing the schedule baseline starts and ends in the planning phase of the project.

5. Schedule control is the process of monitoring the status of the project to update project progress and manage changes to the schedule baseline.

Which of the following are processes that are involved in schedule control?

Select all that apply.

☒	a. Determining the current status of the project schedule.
☐	b. Defining activities or specific actions to be performed to produce project deliverables
☒	c. Influencing the factors that create schedule changes
☐	d. Decomposing total project work into its lowest levels.
☒	e. Determining that the project schedule has changed
☐	f. Estimating duration and resource effort for the project.
☒	g. Managing the actual changes as they occur.

6. Consider the methods used in project time management.
 - a. In your own words, discuss the application/use of the Gantt Chart. Do not exceed fifty (50) words.
 - b. List three (3) project data generated from the Gantt Chart.
 - c. List three (2) limitations of the Gantt Chart.

- a. The Gantt Chart is a chart that provides a visual representation of a projects schedule. It displays dates and tasks on an X&Y axis which assists the project manager (and team) to review the project duration, what resources are needed, plan task order as well as task dependency.
- b. Calculate key project milestones.
Allocate resources.
Communicate project progress.
- c. The area of the Gannt chart is very large and often difficult to print.
Task progress can be subjective, therefore progress can be exaggerated to make the chart look better.
The Gantt chart is only as useful and accurate as the information put into it.
Any incorrect data entry can cause issues, such as incorrect duration forecasts.

7. Consider the methods used in project time management.
- a. In your own words, discuss the application/use of the Critical Path Method. Do not exceed fifty (50) words.
 - b. List three (3) project data generated from the Critical Path Method.
 - c. Discuss the limitation of the Critical Path Method. Do not exceed fifty (50) words.

- a. The Critical Path Method uses data from earliest and latest possible start and finish times for project activities as well as estimating dependencies between activities to create a schedule that outlines critical activities and dates. This method aims to complete a project in the least amount of time possible.
- b. Parameters of each task (ES, EF, LS, LF)
Activities on the critical path
Critical elements in the project
- c. A key limitation of critical path is where incorrect estimations e.g. of start/finish dates result in an inaccurate critical path schedule. This method therefore may not be suitable for projects where task duration is either not known or is difficult to estimate.

8. The following are tools and techniques used in project scheduling. Match each tool and technique to its correct description.

Write the letters that correspond to your answers in the spaces provided.

	Project scheduling tools and techniques	Description
b	Schedule network analysis	a. This is the process of looking at all of the activities that must be completed, and calculating the 'best line' – or critical path – to take so that you'll complete the project in the minimum amount of time. The method calculates the earliest and latest possible start and finish times for project activities, and it estimates the dependencies among them to create a schedule of critical activities and dates.
a	Critical Path Analysis	b. This is a graphic representation of the project's activities, the time it takes to complete them, and the sequence in which they must be done. Project management software is typically used to create these analyses. Common formats for this include Gantt Charts and PERT Charts
d	Schedule compression	c. They expedite the scheduling process by generating start and finish dates based on the inputs of activities, network diagrams, resources, and activity durations.
c	Automated scheduling tools	d. This tool helps shorten the total duration of a project by decreasing the time allotted for certain activities. It's done so that you can meet time constraints, and still keep the original scope of the project.

9. Which of the following statements accurately explain the work breakdown structure (WBS) including its application in project schedules?

Select all that apply.

☒	a. Work breakdown structure (WBS) is the subdivision of project deliverables and project work into smaller, more manageable components.
☐	b. The work breakdown structure (WBS) identifies project personnel who are responsible for each project task.
☒	c. Work breakdown structure (WBS) helps define activities of the project which provide the basis for estimating, scheduling, executing, and monitoring and controlling the project work.
☐	d. The work breakdown structure (WBS) is used to represent the full project scope of the project.
☒	e. The work breakdown structure provides the relationships among all components of the project and the project deliverables.
☒	f. The work breakdown structure (WBS) is used as the basis for the scope baseline which is used in identifying activities or specific actions to be performed to produce of the project deliverables.
☐	g. Project work at lowest levels are not included in the work breakdown structure (WBS)

Part 3 – Project Cost

1. The following are processes involved in project cost management including budgeting the cost of the project. In your own words, discuss each.

Do not exceed fifty (50) words for each discussion.

Estimating costs	The process of assessing project deliverables and predicting the cost. This can be difficult e.g. if estimating a future project (e.g. a government tender commencing in 2yrs time). Factors like inflation and demand for product/services is all approximate. Alternate costings to complete the project must also be identified and considered.
Determine budget	To determine the project budget, the cost estimate for all activities within a project is combined and the baseline cost established. This baseline includes all authorised budgets but does not include management reserves.
Control cost	Throughout the duration of the project, as project status is monitored so to are costs. This includes making updates based on actual costs as the project progresses, as well as any changes to costs that occur i.e. via the change management process as well as updates to cost estimates.

2. The following are different tools and techniques used in cost management. Match each to its correct description.

Write the letters that correspond in the spaces provided.

	Strategy	Description
b	Analogous estimating	a. This is used to establish both the contingency reserves and the management reserves for the project with regards to cost.
c	Parametric estimating	b. This strategy uses the values of costings from a previous, similar project as the basis for estimating the same parameter or measure for a current project. This is used when the current project is similar to a previous one in terms of defined parameters.
e	Cost aggregation	c. This uses a statistical relationship between historical data and other variables to calculate and estimate for cost. This technique is used to produce higher levels of accuracy depending upon the sophistication and underlying data built into the model. Estimates made through this project can be applied to the whole project or to segments of a project.
a	Reserve analysis	d. These are used to develop mathematical models to predict total project costs.
d	Historical relationships	e. Cost estimates are combined by work packages in accordance with the Work Breakdown Structure. The work package cost estimates are then combined for the higher component levels of the WBS and ultimately for the entire project.
g	Earned value management	f. In this technique cost performance measurements are used to assess the magnitude of variation to the original cost baseline.

f	Variance analysis	g. This is commonly used as a performance measurement. It integrates project scope, cost, and schedule measure to help the project management team assess and measure project performance and progress.
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3. List four (4) processes which are followed in monitoring the project costs against outcomes to ensure that additional expenses are not incurred.

- | |
|---|
| <ul style="list-style-type: none"> a. Using an effective tool for managing the project finances i.e. spreadsheet or financial management software. b. Sending invoices on a regular basis e.g. monthly. c. Paying invoices promptly. d. Checking incoming invoices against contracts, quotes, agreements etc. |
|---|

4. You are appointed as one of the Project Managers of Bigger than Big Corporation. As one of the Project Managers, it is essential that you have a full understanding of the organisation's policies and procedures relevant managing projects within Bigger than Big.

Review Bigger than Big Corporation's [Project Management Policy and Procedures](#) (username: cstclearner password: CstcPty@123).

- a. In your own words, discuss the organisation's Project Management Policy, including its background, purpose, and its scope.
- b. In your own words, discuss the organisation's Project Management Procedures including their purpose and scope.
- c. In your own words, list and discuss the Project Phases prescribed in the organisation's Project Management Procedures.

Do not exceed 100 words for each discussion.

- a. The policy outlines the commitment to a standardised approach that is concise and utilises key elements to deliver project management that reflects the mission and values of the company. The policy aims to ensure an approach that is embedded company wide that is flexible to project size and complexity while still providing minimum requirements to effectively manage projects. The policy specifies that projects must adhere to company procedures.
- b. Bigger Than Big Project Management Procedures define the processes and responsibilities that occur within Bigger Than Big projects with the goal of enabling excellent project management. Bigger Than Big defines a project as having specific start and end dates and a program that has defined phases to which formal project management methodology is applied.
- c.
 1. Pre-initiate Phase – The groundwork. Assess the project, develop the structure and for large & medium projects, complete the business case.
 2. Initiate Phase – The how. Identify how the project objectives will be achieved i.e. work model, identify funding, consult with key stakeholders.
 3. Plan Phase – The details. All key details need to be hashed out and properly documented to enable accurate delivery e.g. project schedule, budget, risk assessments etc.
 4. Implement Phase – The Doing. Identifying how project objectives will be delivered i.e. everything necessary that must be completed to deliver the project outputs.
 5. Close Phase – The Finish. Formally closing the project by handing over and also analysing performance.

Part 4 – Project Quality

1. In your own words, discuss each of the following key concepts in Quality Management.

Do not exceed 100 words for each discussion.

Key Concepts in Quality Management	Discussion
Customer satisfaction	It is critical for project success to obtain customer satisfaction. This means not only meeting project requirements but also the customers' needs and expectations, as without customer approval a project cannot be deemed a success. Monitoring actions such as monthly or quarterly customer satisfaction surveys is a way of ensuring customer satisfaction throughout a project, as it is a way to identify any concerns and then either explain or rectify as required. Customer satisfaction can be related to the product produced or how the project was run.
Prevention over inspection	Prevention over inspection is around the cost of preventing failures and the cost of rectifying failures; otherwise known as conformance and nonconformance aka the Cost of Quality. For example, the cost of ensuring correct road base preparation and correct asphalt pour to produce a conforming section of road would be much less than not ensuring same, and having to rip up and re-prepare and lay that section of road. Recording cost of nonconformance is a good measure of project / team performance.
Continuous improvement	Related to prevention over inspection is Continuous Improvement, which is simply the continual effort over time to make refinements to products, services and process. Refinements may be small or significant. A key tool in this process is utilising lessons learnt on previous projects to modify the approach going forward. There are a number of methodologies used for managing Continuous Improvement such as Six Sigma (focused on process improvement via defect and variability identification), Lean Six Sigma (focused on waste reduction via a collaborative team effort) and Total Quality Management (focused on using continuous feedback for a comprehensive and structured approach).

2. In your own words, discuss the difference between Quality Assurance and Quality Control.

Do not exceed 100 words.

Quality Assurance is all about how you do things i.e. the process used to obtain the product. It is the way in which a business ensures quality requirements are being met by having a structured system in place that is verified such as through review, training and auditing. Quality Control by comparison is all about what is produced by the structured system in place i.e. the product. It involves identification of defects through testing and inspection, the results of which determine whether the product meets specified requirements, or not.

3. The following are standards that could apply in various projects. In your own words, discuss each standard. Do not exceed fifty (50) words for each discussion.

People standards	The requirements needed to be deemed sufficiently qualified/experienced to undertake a task on a project. For example, a Safety professional may require 10-15 years experience to qualify for a Safety Manager position, and a pipe welder would require a range of tickets and licenses such as confined space entry.
Process standards	The specified way a task is done, which can be audited to ensure compliance. E.g. a project might develop Process Method Statements to identify the how Material Delivery or Lot Management Functions are managed, or the frequency, identification and traceability required for inspection and testing frequency. Related to Quality Assurance.
Product / service standards	The set requirements required in the end product produced by the project. For example, a few requirements for a concrete pour may include compliance with AS 3600:2018 as well, Client specifications such as DTMR MRTS70 as well as WHS and Environmental legislation, which are usually written into an organisations procedures.

4. The following are quality assurance and control methods, techniques and tools. Match each to its correct description.

Write the letters that correspond to your answers in the spaces provided.

	Methods, tools, techniques	Description
h	Benchmarking standards	a. This is a distribution of dots comparing two variables. If the two variables are completely independent you would expect the dots to be evenly distributed randomly across the graph. If there is a strong relationship though, the graph will show a straight line or a mathematical curve going through it.
g	Brainstorming sessions	b. These are graphical representations showing a visual impression of the distribution of data. Usually it shows the frequency up the Y axis of the bar graph and the measuring variable along the X axis.
d	Control charts	c. It is a graph where the X axis is time dependent. This allows you to look for time-based cycles in processes.
f	Flowcharts	d. These are also known as Shewhart charts or process-behaviour charts. These charts are used to statistically measure the quality characteristics of a process are under control. This is based on a statistical analysis where a centre line is drawn for the mean of the output, then an upper control limit and a lower control limit is created either side of the centre line. The process is then measured over a period of time and the results plotted on the graph. Once the graph has been created, it can be analysed to test the stability of the process and also any cycles of errors.
b	Histograms	e. It is very similar to a histogram, but it includes a line over the graph indicating the cumulative distribution of the results.

e	Pareto charts	f. A diagram that represents a process. It shows the steps visually as a series of boxes with arrows in between them showing the workflow. Rectangular boxes represent tasks and diamond shaped boxes represent decision points, where the flow can split into two or more directions.
c	Run charts	g. It occurs when a group meets and is presented with a scenario where they creatively come up with a range of solutions.
a	Scatter grams	h. These may be dictated to by legislation through Federal, State or Local Government regulations, and may be dictated by industry bodies.

5. List five (5) responsibilities of the project manager in quality management.

- a. Determining quality standards for the project deliverables
- b. Documenting all required standards in the project plan
- c. Ensuring all organisational quality requirements are met for the delivery of the project
- d. Conducting or coordinating project audits
- e. Reporting quality outcomes to the project sponsor / stakeholders

6. The following are methods used in managing continuous improvement. In your own words, discuss each method.

Do not exceed fifty (50) words for each discussion.

Six Sigma	Six Sigma focuses on process improvement via defect and variability identification. Improvements are obtained to the end product quality through changes to related processes i.e. business / manufacturing etc.
Lean Six Sigma	Lean Six Sigma is focused on waste reduction and is achieved by the project team working together to eliminate the different kinds of waste i.e. time, inventory, motion, waiting, overproduction, over-processing, defects and skills.
Total Quality Management	Total Quality Management is a structured methodology that uses continuous feedback to improve product and service quality e.g. such as through undertaking regular client satisfaction or employee surveys.

CASE STUDY

Instructions to Student

These case studies are hypothetical situations which will not require you to have access to a workplace, although your past and present workplace experiences may help with the responses you provide. You will be expected to encounter similar situations to these in future as you work in a project team environment.

In the real world you are likely to encounter the situation where you enter a project, taking over from another project manager. The documentation that is handed over to you is not necessarily up to scratch, and there could be serious issues with the project. This assessment captures that real life scenario.

The case studies are the first part of dealing with “multiple complex projects” required in all the units of this subject. The other assessment covering this requirement is the practical assessment. When you have completed the case studies you will be able to commence the practical assessment which covers the generic skills needed to function as an effective project team member. This assessment on the other hand covers the application of the underpinning knowledge and background theory.

Introduction

You have been appointed as a project management consultant to the project team at Awesome Landscapes Pty Ltd. Specifically, you are required to provide independent advice on seeing their current project throughout its entire lifecycle.

You have already provided advice to Awesome Landscapes in the previous workbook.

Today is 24 July 20xx. The project will shortly progress into the implementation stage. You have now been provided with up-to-date project documentation below, including an updated Project Plan. The project steering committee have reviewed the Project Plan, but they wish to have you conduct an independent evaluation of the project prior to signing it off.

As part of your consultancy services, you will be assisting the team in addressing issues around project constraints by answering the questions that follow this scenario.

The documents you need to complete the succeeding tasks can be accessed through the following links:

[Project Charter version 2 \(.pdf\)](#)

[Project Plan version 2 \(.pdf\)](#)

[Project Gantt Chart version 2 \(.mpp\)](#)

[Project Gantt Chart version 2 \(.pdf\)](#)

[Project Network Diagram version 2 \(.pdf\)](#)

(username: cstclearner password: CstcPty@123)

Note: These documents were generated in year 2016. For the purpose of this assessment, refer to '2016' as the current year and '2017' as the succeeding year.

1. List the three (3) project deliverables in Phase 1.

- a. Vegetation Removal
- b. Construct Access Roads
- c. Build Retaining Walls

2. Discuss the project constraints in terms of scope, time, cost, and quality.

Scope	It is noted that the landscaping work must work around the building construction. Careful planning is therefore required to ensure the landscape activities start/finish as required by the building work activities.
Time	Completion of all work is required within a nine month timeframe. The scope also identifies that some landscaping activities have are dependent upon the building works therefore the timing here is particularly constrained. Some tasks are seasonal dependent i.e. Phase 1 commences during winter – early spring due to being the optimal time to remove pants for temporary greenhouse storage.
Cost	This project has a fixed price contract; it will not change as a result of any project extensions, scope variation or cost increases. To ensure a sufficient profit margin is achieved, the project manager will have to keep a close watch and ensure cost is well managed e.g. through timely invoice issue / payment, as well as identifying any scope creep early to avoid blow outs.
Quality	There is a particular and strong focus on the natural environment within this project. The natural environment must be preserved in line with the strict Council requirements for environmentally sensitive areas; these requirements include preservation of removed vegetation, waste management standards and noxious weeds regulations. The project plan outlines key quality requirements to follow e.g. standards for people (horticulture/ landscaping qualification) and process (erosion control standard).

3. Review the project schedule as set out in the Project Plan and the Gantt Chart
Arrange the following tasks in the proper sequence as dictated in Phase 3 of the critical path.

Write 1 – 12 in the spaces provided; where 1 go first and 12 go last.

8	Remove weeds
11	Plant additional plants
2	Move gravel to car park
1	Expand car park
12	Remove greenhouses
9	Plant plants from greenhouses
3	Seal car park
6	Soil preparation
7	Add boulders
5	Construct stone paving pathway
10	Purchase additional plants
4	Landscape over old access roads

4. Review the Project Plan. The change request has outlined one change in the scope of the project.
 - a. What is the change in scope?
 - b. How does this change in scope impact the overall duration of the project?
 - c. How does this change in scope impact the quality aspect of the project?

- a. Addition of three new retaining walls and services to additional units as per updated site plan. Increase in cost of road gravel by \$6,500.
- b. The change request has resulted in an earlier start date of 27 July 2016, a week earlier than initially planned.
- c. There should be minimal impact to quality, at this time there is still contingency left for extra costs (\$87,847 per section 4.4) and the qualified personnel (Andre Lowe, John Zhuche and Susan King) who required to commence landscaping activities are all available per Appendix 17. Per Appendix 38, additional resources have been provided by JP Digging for retaining wall construction; as the required hours increase is only by 20hrs, with adequate supervision there should be minimal-nil impact to quality.

5. Why does the change request only list one change in project cost, yet when you look at the financial tables the costs seem to have increased in numerous parts of the project not even related to the item in the change request?

Do not exceed 100 words.

While only once cost increase is specified in the change request (6,500 for gravel) the change also specifies three new retaining walls and services to additional units. This impacts phase one as noted in Appendix 4, 5 & 6, e.g. construction of retaining walls, excavation of utilities and septic system, as well as increases to time required to project manage this change. What can appear to be an isolated task can actually have knock on effects such like increases in cost, or reduction in lag time e.g. task 34 ill channels & compact where lag reduced from 2 to 1.

6. Who is responsible for working out these impacts of what initially seemed to be such a simple change, and ensuring all affected stakeholders understand the impact of such a change?

The project manager holds the key role in the change management process as outlined in section 1.3. It is the project manager who needs to populate the change request (and therefore understand the connections and implications of each), and once approved is responsible for ensuring implementation of the changes, as well as communication to relevant stakeholders.

7. Access and review the Gantt Chart version 2.
 - a. What important tasks are not included in the project Gantt Chart?
 - b. Discuss why these tasks must be included in the Gantt Chart? Keep your discussion within 100 – 200 words in length.

- a. I have reviewed the Project Plan, specifically section 2 Scope Management and was unable to identify important tasks missing in the project Gantt Chart.
- b.

8. List the three (3) personnel who signed off on the change request.

- a. Susan Wills (Program Manager – Massive Eco-Development Corporation)
- b. Stephen Lyons (Planning Manager - Cascade Peak Shire Council)
- c. Kim Nguyen (Director – Awesome Landscapes Pty Ltd)

9. What is the total increase in cost of the project as a result of this change request?

The cost has increased from \$444,253 to \$462,153; a total of \$17,900.

10. List five (5) exclusions under Stage 2 – Building Support of the Scope Management Plan.

- a. Monitoring and maintaining the main road .
- b. Any building, decorating or furnishing of the chalets.
- c. Provision or delivery of utility raw materials or installation equipment.
- d. Installation of pipes and tanks.
- e. Removal of additional plants or weeds from the building sites.

11. Review the Project Plan. Does it follow the change management procedure? Explain your reasoning.

Do not exceed 50 words.

Yes and No. Changes have been highlighted in yellow per section 1.3. However, Appendix 8 and the plan itself have not been signed by the required parties, despite the plan status being ticked as approved. Therefore, in its current state the plan is not fully approved for implementation on site.

12. Access and review the Gantt Chart version 2. It shows double bars for each task.
- What do the coloured bars  represent?
 - What do the grey bars  represent?
 - Why do the grey and coloured bars do not match up in the Gantt chart?

- Progress and Manual Progress
- Summary / Manual Summary
- The bands don't match where the estimated and actual time taken differ

13. Assuming the project runs on schedule, list two (2) tasks that should be in progress if Sam was to visit the site on Monday 22 August.

Do not include the task 'Project Management'.

- Move plants to glasshouse and dispose of weeds
- Delivery of granite boulders

14. If Sam was to visit the site on Thursday, 22 September, he will see that two (2) tasks are in progress, namely:
- Construction of retaining walls.
 - Install and compact soil behind walls.

According to the procedure documents, these two activities cannot happen at the same time. The retaining wall has to be built first. Once construction is completed, the soil needs to be added behind. Why are these two tasks in progress on the same day?

Because the change requiring additional retaining walls has not been accommodated for.

15. According to the Gantt Chart, if there is a delay in the completion of Task 57 'Construct stone paving walkway',
- Which tasks, if any, are immediately delayed?
 - Will this delay push out the completion of the project? Why or why not?
 - Discuss how this could affect the resourcing of the project.
 - List one (1) risk that could arise from this issue.

- Task 59 & 62
- This does have the potential to push out the completion of the project, as this would have a knock on effect with tasks 60 & 63 & so on.
- Per Appendix 7 of the project plan, all personnel have availability so there should be minimal effect.
- Other commitments such as maintenance contracts may be impacted if the landscapers are held up on this project.

16. What is the total budget for the project expenditure?

\$462,153 with a contingency of \$87,847.

17. Sam is very concerned about the cash flow of the project.
- What is the problem?
 - What would you suggest be done to rectify the cash flow issue?

- | |
|--|
| <ol style="list-style-type: none">Weeks beginning 30/7, 6/8 & 27/8 cause the cumulative expenses to exceed the baseline.Inject additional funds from the contingency pool to finance the works. |
|--|

18. Discuss whether Awesome Landscapes should seek increased funding from Massive Eco-development Corporation to absorb some or all of these cost increases.

Your discussion must be 200 – 300 words in length.

Guidance:

The change requests have incurred extra expense, yet the funding to be paid by Massive Eco-development Corporation has not changed.

If you believe Awesome Landscapes should seek increase funding from Massive Eco-development Corporation, provide a strong argument for your case. If not, explain your reasoning.

It is clearly documented in the project plan section 4.5 that the contract is fixed price and therefore there will be nil additional payments made regardless of increases/changes to scope, labor, procurement or purchases. Awesome Landscapes have a contingency and need to manage costs very closely to not exceed maximum budget.

19. Complete the following Audit Template with the standards determined in the previous question (Case Study Question 18). This will be given to an internal auditor to audit the financial processes at various points along the project.

Guidance: Complete only the fields highlighted in yellow. Do not complete the 'Assessment' and 'Comment' fields under 'Audit of Management of Project'.

Quality Audit Template

Project Name: *Cascade Peak Chalets Landscaping Project*

Prepared by: Christine Marcek

Date:

Project Manager: *Sam Ng, Awesome Landscapes*

Project Phase:	Overall Project Status:	
Audit Date:	Audit Number:	Audit Leader:
Audit Team:		
Goal(s) of This Specific Audit: To assess project financial implementation		
Audit of Management of Project:		
1.	Assessment:	Comment:
2.	Assessment:	Comment:
3.	Assessment:	Comment:
4.	Assessment:	Comment:
5.	Assessment:	Comment:
6.	Assessment:	Comment:
7.	Assessment:	Comment:
8.	Assessment:	Comment:
9.	Assessment:	Comment:
Overall Assessment of Management of Project:		
Recommended Action(s)/Lessons Learned Regarding Management of the Project:		
1.		
2.		
3.		

Additional Audit Comments:			
1.			
2.			
3.			
Have you attached additional material(s)?			☐ ye ☐ n
Name(s) of attachment(s):			
1.			
2.			
Audit Report Submitted To:			Date:

20. Sam has provided you with the following audit from a previous project (landscaping the new Cascade Peak Shopping Centre). Evaluate the audit report below and answer the following questions:
- What was the cause of the unsatisfactory results?
 - What action would you recommend to prevent the issue coming up again in this project?

- Tasks being communicated to the supervisor do not have the level of detail required by the site supervisor. In particular detailed plans are not provided with the task briefs. Some delays in commencing tasks have been experienced as the site supervisor has awaited clarification from the project manager. - In addition to Sam's recommendation of project manager to prepare task briefs in enough time to add the required level of detail and task briefs are to be supplied with all relevant attachments such as detailed plans, ensure weekly construction and 4WLA (four week look ahead) meetings are occurring to assist in ensuring task briefs are prepared in time and opportunity is provided for clear communication.

Quality Audit Template

Project Name: *Cascade Peak Chalets Landscaping Project*

Prepared by: *Sam Ng*

Date: *17 August 2015*

Project Manager: *Sam Ng, Awesome Landscapes*

Project Phase:

Implementation

Overall Project Status: *On schedule*

Audit Date: *17 August 2011*

Audit Number: *26*

Audit Leader: *Sam Ng*

Audit Team: *Sam Ng, John Cowley, Ann Deak.*

Goal(s) of This Specific Audit: *To evaluate the communication and reporting processes.*

Audit of Management of Project:

1. Are tasks being communicated to site supervisor in a reasonable amount of time?

Assessment:
Satisfactory.

Comment:

2. Are tasks being communicated to site supervisor of sufficient detail?

Assessment:
Not satisfactory.

Comment:
Tasks only being communicated as per Gantt chart. Site supervisor having to seek clarification regularly on requirements of tasks.

3. Are tasks being communicated by the site supervisor to the team members and contractors done in a reasonable amount of time?

Assessment:
Not satisfactory.

Comment: Timing of communication can be improved if there wasn't the need for clarification of the details of the tasks.

4. Are tasks being communicated by the site supervisor to the team members and contractors of sufficient detail?	Assessment: Satisfactory.	Comment:		
Overall Assessment of Management of Project: Tasks being communicated to the supervisor do not have the level of detail required by the site supervisor. In particular detailed plans are not provided with the task briefs. Some delays in commencing tasks have been experienced as the site supervisor has awaited clarification from the project manager.				
Recommended Action(s)/Lessons Learned Regarding Management of the Project: 1. Project manager to prepare task briefs in enough time to add the required level of detail. 2. Task briefs are to be supplied with all relevant attachments such as detailed plans.				
Additional Audit Comments: 1. 2. 3.				
Have you attached additional material(s)?				
<table border="1"> <tr> <td data-bbox="209 1346 1182 1467"> Audit Report Submitted To: Kim Nguyen </td> <td data-bbox="1182 1346 1447 1467"> Date: 24/08/2015 </td> </tr> </table>			Audit Report Submitted To: Kim Nguyen	Date: 24/08/2015
Audit Report Submitted To: Kim Nguyen	Date: 24/08/2015			

21. The quality plan is very weak on cost management. Write a Cost Management Plan (of 200 – 300 words) for managing the quality of the financial processes while the project is in progress.

Guidance: Your Cost Management Plan must cover the following quality objectives and criteria.

- a. Meeting with contractual requirements.
- b. Paying invoices on time.
- c. Ensure invoices are sent out in time.
- d. Ensuring financial reporting is done on time.
- e. Include a calendar of when payments are likely to be due.
- f. Comparison of actual cash flow against projected cash flow.

Cost Management Plan:

1. Management of costs must take into account contractual requirements. A pre-commencement meeting is to take place 1 month prior to the start date to ensure the contract is reviewed and all applicable clauses addressed within project schedule.
2. A target of 100% of invoices to be paid on time is set for the project. Financial planning meetings to take place fortnightly to ensure invoicing is reviewing and kept on track.
3. A target of 100% of invoices to be issued on time is set for the project. Financial planning meetings to take place fortnightly to ensure invoicing is reviewing and kept on track.
4. A target of 100% financial reporting to be actioned on time is set for the project. Financial planning meetings to take place fortnightly to ensure invoicing is reviewing and kept on track.
5. The Project Manager is to ensure a calendar identifying estimate payment due dates is created, maintained and updated throughout the duration of the project.
6. The Project Manager is to ensure actual cash flow is recorded, graphed and compared against projected cash flow on a monthly basis. Comparison is to be included within the monthly project report and any projected issues to be addressed.

WORKBOOK CHECKLIST

When you have completed this workbook, please ensure you have completed all parts of it:

- ☐ **Written Questions**
 - ☐ **Part 1 – Project Scope**
 - ☐ **Part 2 – Project Time**
 - ☐ **Part 3 – Project Cost**
 - ☐ **Part 4 – Project Quality**
- ☐ **Case Study**

IMPORTANT REMINDER

Students must achieve a satisfactory result to ALL assessment tasks to be awarded COMPETENT for the unit relevant to this subject.

To award the student competent in the units relevant to this subject, the student must successfully complete all the requirements listed above according to the prescribed benchmarks.

End of Document