



**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 : Ivan Sladojevic

Signature: *sladojevic* **Date:** 22.05.2020

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.

This refers to the actual time required to produce a deliverable. Which in this case, would be the end result of the project. Therefore the amount of time required to produce the deliverable will be directly related to the amount of requirements that are part of the end result (scope) along with the amount of resources allocated to the project (cost).

The project cost is the estimation of the amount of money that will be required to complete the project. Cost itself encompasses various things, such as: resources, labour rates for contractors, risk estimates, bills of materials. Therefore the project cost directly impacts the project scope

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. Using phases of the project lifecycle as the first level of decomposition
- b. Using major deliverables inserted at the second level
- c. Using subprojects which may be developed by organizations outside the project team 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	Issues with scope creep are when the team starts to work on unapproved sections of a project, which then turn into time being devoted to unauthorized changes. This work being done on the unauthorized section is completed during the original time and budget estimates leaving less time for the approved budget and scope. Therefore leaving differing end result than what was originally chartered. Or, it can mean that time and cost overruns to finish the authorized parts of the scope will occur
Sponsor / project owner approval	Issues with sponsor / project owner approval is that they will attempt to get the most out of the fixed price as possible. Sponsors potentially will ask for additional items to be added to the scope that over time can and will add up over time inevitably producing scope creep. To combat this you can clearly document the inclusions, exclusions and follow and change management process
Project team accountability	Issues with project team accountability is the dependencies and accountability resistance. The issues lie within the scope management by assigning responsibilities to the correct individual, making sure the expectations are appropriately outlined and communicated efficiently. The principal issue with the above mentioned is if the individuals are not made accountable from management when performance is analyzed.

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

Do not exceed 150 words.

Scope management is the process whereby outputs, outcomes and benefits are identified, defined and controlled. Scope management encompasses the entirety of the project outputs, outcomes and benefits that are required to produce them. The significance of scope management is that its main 5 (collect requirements, define scope, WBS, verify scope, control scope) areas work together to unionize, identify, define and control the scope of the project being undertaken. In turn it will help avoid challenges that a project might face such as scope creep. A scope management plan will clearly set out what is and what isn't included in the project, and controls what gets added or removed as the project is executed.

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	Questionnaires and Surveys
Define scope	Expert Judgement
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	Must fully Understand and know why the project is initiated
Scope Management	PM must ensure that they have taken down all of the requirements
Time Management	PM is responsible for scheduling the project
Cost Management	PM responsible for creating the cost baseline
Quality Management	PM is responsible for defining what good quality is

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 at which the task can start, given that any predecessor task must be completed first
EF	Earliest finish time is the earliest start time for the task plus the required to complete the task
LF	Latest finish time is the latest time at which the task can be completed without delaying the project
LS	Latest finish time is the latest the finish time minus the time required to complete the task

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. Gantt charts are widely used to describe and monitor all kinds of projects according to the rules of project management. Very good for planning and scheduling projects and assessing how long they will take.
- b. Relationships between tasks
End Date of a Project
Calculation of Key Milestones
- c. Limited Formats
Progress of each task is subjective to the project manager
The information produced by the Gantt chart is only as good as the information put in by the Project Manager

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 is a step by step method project management technique to identify activities on a critical path. This visually represents the sequence of tasks that are most sensitive to changes in time
- b. Parameters of Each Task
Critical Elements in the Project
Activities on the Critical Path
- c. The disadvantages of the critical path method is that the scheduling of personnel is not handled by the CPM. Additionally the CPM does not handle the scheduling of resource allocation

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	Estimating cost has 2 techniques that can be used. The first is analogous estimating. This the strategy where values of costings from a previous or similar project are used as the basis for the current costing. The other technique is parametric estimating where statistical relationships between historical data and other variables are used to calculate the estimate for the cost.
Determine budget	Determining budget has three techniques that can be used. These are; cost aggregation where the cost estimates are combined by work packages in accordance with the WBS. Reserve analysis where contingency reserves and management reserves establish the budget. And Historical relationships where mathematical models are used to project total project costs.
Control cost	Controlling cost has 2 techniques that are used. First one is earned value management where performance is measured. It integrates the project scope, cost, and schedule. And variance analysis where technique cost and performance are used to assess the project performance and progress

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. Effective tool management for the project finances b. Sending Invoices on a regular basis c. Paying Invoices promptly d. Checking incoming invoices against contracts , quotes, agreements |
|--|

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. Bigger than Big corporation project management policy outlines the minimum essential elements for a companywide approach to initiating, planning and closure of projects. It also describes the minimum requirements for the governance and management of project across the bigger than big corporation. The background of the policy was to adopt and develop and standard approach to project management that reflects the mission and values of the company
- b. Bigger than big corporation project management procedures articulates the project management policy and project management lifecycle by defining the process that are performed throughout the project. The policy applies to all projects or body or works with a distanced start and end date that progress through defined phases and adheres the formal project management methodology. Bigger than big breaks down the procedures into 5 procedures; Pre-Initiate phase, Initiate Phase, Plan Phase, Implement Phase, and Close Phase.
- c. Bigger than big corporation details 5 project phases. Pre-Initiate phase. The Pre-Initiate Phase builds the foundation of a project and is triggered when and a new problem develops, which needs to improved or a new service implemented. Next phase is Initiate phase, this phase begins the progress on how the project will be executed. Plan Phase Provides further detail on how the project will be executed and conducted. Implement phase focuses on determining how the project out puts will be delivered. And close phase is the formal closure of the project.

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	Customer satisfaction is a key measure and indicator of the projects quality. If the customer is not satisfied with the product produced by the project or it did not meet expectations or needs then the customer is likely they deem the project quality as poor. Therefore it is important to make sure that the project requirements are met.
Prevention over inspection	Prevention over inspection is the cost of quality money spent during the project to avoid failures and the money spend to during the project due to failures. It can be also be called cost or conformance / cost of non-conformance. It is also a key aspect prior to continuous improvements.
Continuous improvement	Continuous improvement is a concept that exists in all major quality management approaches such as Sigma Six where tools and techniques are used to improve process and remove defective processes. Continuous improvement is the ongoing effort to improve your products, services or process over time. These improvements can be small, incremental changes over time.

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

Do not exceed 100 words.

Quality Assurance is an activity defined to ensure that the project is providing the best possible product or service to the customer. Whereas quality control is a process used to ensure the quality of the project.

Quality assurance aims to prevent the defect, whereas Quality control aims to identify and fix the defects.

Quality assurance is a method to manage the quality verification while Quality control is a method to verify the quality validation.

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	Quality analysis of people standards covers the qualifications and experience of the people that are involved delivering the project. Such as projects for road construction, then the people involved will need to have to appropriate civil certification and tickets.
Process standards	Quality analysis of process is the standard for process and delivering the project. Involving the quality assurance for auditing. Process standards are useful to ensure everyone involved in the project are following the same process to ensure any integration is efficient
Product / service standards	Quality analysis of product standard looks at the product that is being delivered is that of, or better than the current accepted standard or code that is used.

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 work flow. 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 the quality standards for the project deliverables
- b. Determining the quality standards for the project process
- c. Documenting all the required standards for the project plan
- d. Ensuring all organizational quality requirements are met for the delivery of the project
- e. Leading, or at least coordinating the Project QA and QC

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	Sigma Six is a set techniques and tools for process improvement. It aims to improve the quality of the output of a process by identifying and removing the cause of the defect.
Lean Six Sigma	Lean Sigma Six is a methodology that relies on a collaborative project team effort to improve performance by systematically removing waste and combining lean manufacturing and sigma six techniques.
Total Quality Management	Total Quality management is a comprehensive and structured approach to project management that aims to improve the quality of products and services through ongoing refinements.

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 Road
- c. Build Retaining Wall

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

Scope	Constraints in the scope is making sure the changes don't deviate from the project is intended to deliver
Time	Time constraints will be associated with when the deliverables will be delivered with the change request
Cost	Constraints with the cost will be managed the cash flow versus the budget
Quality	Constraints will be surrounding meeting all council and environmental conditions

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.
- What is the change in scope?
 - How does this change in scope impact the overall duration of the project?
 - How does this change in scope impact the quality aspect of the project?

- Addition of 3 new retaining walls and services to additional units
- Number of hours required to construct the retaining walls has increased from 120 hours to 140 hours
- This scope change will not impact the quality as additional time has been allocated for the excavation of utilities

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.

The change request only lists one item because the addition of the retaining walls are the only product or system that has been altered. When looking at the summary costing per phase, the other cost change have occurred in the pre-construction phase; the changes in this phase of the project do not alter the product or the system of the project. Other cost increases would have occurred outside of awesome Landscapes budget such as the addition of the new chalets from the result of the additional retaining walls

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 will be responsible for the calculations of change in timeframe, quality, cost and relaying that information back to the affected 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. Important tasks that are not included in the Gantt chart are the exclusions listed in the scope
- b. The exclusion list should be included in the Gantt chart because the task all need to be completed. Even though Awesome landscapes might don't be engaged to completed the works, they will still need to track the progress of those task as they might be has constraints on them from the task that have been includes as part of Awesome landscapes scope of works. The tasks should be listed as external tasks with each given and predecessor or successor and a constraint. This will allow Sam to program his works to coincide with the external works and achieve the desired timeframe.

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

- a. Susan Willis
- b. Stephen Lyons
- c. Kim Nguyen

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

The total increase in cost due to the change request was \$17,900

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

- a. Onsite Security
- b. Testing of utilities
- c. Provision of delivery for raw material
- d. Construction of septic tank
- e. Installation of service points

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

Do not exceed 50 words.

The project plan does follow the change management process procedure because it covers of on the change of scope, the change in time, the change in cost and cost management, and any quality changes. It is also followed up by a detailed change request form. The Project Manager has also detailed, drafted and provided the change request to the appropriate stakeholders. This is following correct change management procedure.

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

- a. Progress and Manual Progress
- b. External Tasks
- c. Because they represent different task to complete within each phase

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'.

- a. Delivery of Granite Boulders
- b. Moving Plants to Glass House and Dispose

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?

They are both a predecessor of delivering boulders so they can both start when that activity is completed. Additionally according to the works diagram and Gantt chart the compaction of soil is due to start first. The two tasks can be in progress on the same day as there are multiple retaining walls to be built therefore the compaction of the soil can be progress on the same day 1 retaining wall behind what is currently being built. Stage 1.3 must also be completed by 21/09 before the building commences. Therefore if started after, the building would run into delays

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.

- Erection of Signs
- It will push out the completed because all the task succeed it
- In order to complete the works they might have to increase the number of resources to catch up the lost days
- Increase in labor cost and potential loss in quality

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

The total budget for the project is \$550,000

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?

- They are in deficit for a few month until the 50% Payment 1. They there expenses run to steep and run into deficit prior to P3
- Pull recourse of certain activates to alleviate the expenditure

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.

Massive eco developments should be responsible should be paying extra to awesome landscapes for the scope change.

The reason why awesome landscape solutions should be asking for increased funding is Massive Eco Development has asked for an extra over from the original scope of works, hence the change request. Although the additional three retaining walls in the expenditure will not exceed the budget, Massive Eco are receiving more product while J.P digging required to complete more works. The addition of three extra retaining walls has also resulted in additional time being allocated to the excavation of the incoming utilities and septic system.

J.P digging would be asking awesome landscapes for additional funding to cover the extra work. The additional funding would go to more resources from J.P Digging to prevent any timeline changes

As J.P Digging are a direct subcontractor to Awesome Landscape they would be asking Sam Ng for additional funds to complete works that was out the their scope and quote. Therefore Sam should go to Susan Wills and ask for additional funding to cover their cost incurred from J.P Digging.

Furthermore, the funding allocated to awesome landscape to complete works was for a set number of Chalets, the additional 3 retaining walls will create room for additional chalets, which when completed which generate a potential increase in revenue. Therefore an increase in chalets would be an increase in funds allocated.

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'.

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Quality Audit Template

Project Name: <i>Cascade Peak Chalets Landscaping Project</i>		
Prepared by: Ivan Sladojevic		
Date:		
Project Manager: <i>Sam Ng, Awesome Landscapes</i>		
Project Phase:	Overall Project Status:	
Audit Date:	Audit Number:	Audit Leader:
Audit Team:		
Goal(s) of This Specific Audit: To evaluate and communicate the change requests		
Audit of Management of Project:		
1. Are the task being conducted as the local standards and to design	Assessment:	Comment:
2. is the change request being communicated in to the relevant stakeholders with in a reasonable timeframe	Assessment:	Comment:
3. Has Management given adequate recourse for the job to be complete	Assessment:	Comment:
4. are all additional requirements being communicated to all trades involved	Assessment:	Comment:
5. is the change request dates achievable	Assessment:	Comment:
6. has the activity relationships and dependencies been adequately defined	Assessment:	Comment:

7. are funding resourcing estimates sufficiently detailed and documented	Assessment:	Comment:
8. has the funding allocation from all stakeholders been committed	Assessment:	Comment:
9. has the funding allocation for funding requests been communicated to all the stakeholders	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?

- The tasks not being communicated thoroughly and the timing of the communication was lacking
- Diversified the ways the task were being communicated such as toolboxes, and written confirmation. Set toolbox schedules would also help the timing of communication issue also

Quality Audit Template		
Project Name: <i>Cascade Peak Chalets Landscaping Project</i>		
Prepared by: <i>Sam Ng</i>		
Date: <i>17 August 2015</i>		
Project Manager: <i>Sam Ng, Awesome Landscapes</i>		
Project Phase: Implementation	Overall Project Status: <i>On schedule</i>	
Audit Date: <i>17 August 2011</i>	Audit Number: <i>26</i>	Audit Leader: <i>Sam Ng</i>
Audit Team: <i>Sam Ng, John Cowley, Ann Deak.</i>		
Goal(s) of This Specific Audit: <i>To evaluate the communication and reporting processes.</i>		
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)?		
	ye	x n

Audit Report Submitted To: Kim Nguyen	Date: 24/08/2015
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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.
-

The Project Manager will be responsible for managing and reporting on the project's cost throughout the duration of the project. During the monthly project status meeting, the Project Manager will meet with management to present and review the project's cost performance for the preceding month, the actual cash flow will be projected against the projected cash flow. Performance will be measured using earned value. Invoices due and invoices paid will be cross checked and ensured that all payments and invoices are being made. The Project Manager is responsible for accounting for cost deviations and presenting the Project Sponsor with options for getting the project back on budget. The Project Sponsor has the authority to make changes to the project to bring it back within budget.

Costs for this project will be managed by the project manager and the sponsor's representative. Control Accounts will be created at this level to accounts payable and accounts receivable. Earned Value calculations for the will measure and manage the financial performance of the project. Costs may be rounded to the nearest dollar and work hours rounded to the nearest whole hour.

Performance of the project will be measured using Earned Value Management. The following four Earned Value metrics will be used to measure to projects cost performance:

- Schedule Variance (SV)
- Cost Variance (CV)
- Schedule Performance Index (SPI)
- Cost Performance Index (CPI)

Expected Payment Date	Payment Ex GST	Proportion %	
1 st July 2016	Payment 1	50	\$275,000
29 th October 2016	Payment 2	30	\$165,000
1 st March 2017	Payment 3	10	\$55,000
29 th April 2017	Payment 4	10	\$55,000

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.

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