

AHCLSC307

Implement a retaining wall project

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ASSESSMENT FOR AHCLSC307

Student name Daniel Layne

Date of assessment submission

Trainer/Assessor's name

Date of assessment marking

Click here to enter a date.

Outcome for unit

- ☐ Competent
- ☐ Not Yet Competent

TASK INSTRUCTIONS

- As part of the assessment for this unit of competency, you are required to complete a series of activities.
 - Some of these activities will require you to provide a response within this document, others will require you to gather evidence to demonstrate your knowledge and skills.
 - At all times, the responses in your assessment must reference **Australian** (Queensland or Federal) documentation, including legislation, regulations, codes of practice, standards and guidance publications.

ACTIVITIES

- Draw a simple concept plan for a proposed landscape design which includes a retaining wall.

Response
attached drawing

Outcome for Activity 1

- ☐ Satisfactory
- ☐ Not satisfactory

Trainer/Assessor comments

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Identify/list the detail on the landscape plan shown.

Response

- Small rock retaining wall
- hand water pump with small under ground filter tank, clear access for kids
- rain garden to absorb over flow and run off
- mini water fall
- water flows fast enough for little boat racers
- splash pond/water play
-

plan not to scale

Outcome for Activity 2

- ☐ Satisfactory
- ☐ Not satisfactory

Trainer/Assessor comments

•

List the materials required to complete the retaining wall, by using the wall and water feature construction plan shown.

Response

Concrete

Sand

Gravel/crushed stone

Rocks/stones
Wood timbers Soil
Stone, brick
Bituminous paving
Fiter mat
Steel
Re-bar
Bolts
Rod
PVC pipe
Pipe joiners
Filter
Pump
Valve
Drain
mulch

Outcome for Activity 3

- ☐ Satisfactory
- ☐ Not satisfactory

Trainer/Assessor comments

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Identify the requirements of your local council with regards to retaining walls.

Response

Approval for a retaining wall is not required if total heigh of the wall does not exceed 1 metre above natural ground level. The wall must be no closer than 1.5 m from a building or existing retaining wall and must not form part of the fencing for a pool.

Approval is required when the site is subject to conservation, heritage and environmental restrictions. Or when the site is subject to natural hazards including bushfires, floods and coastal hazards. Subdivision, dwelling houses on small lots and sloped sites also require approval.

Outcome for Activity 4

- ☐ Satisfactory
- ☐ Not satisfactory

Trainer/Assessor comments

What strategies could you implement to address environmental impacts, including:

- Spillages

- Dust
- Site cleanliness
- Noise

Impact Strategy

- **Spillages**

Store chemicals in appropriate containers.

Use protective materials underneath workspace to reduce unwanted contaminants from entering natural environment.

Use silt barriers.

- **Dust**

Limit dry cutting of concrete and use wet cutting wherever possible.

Use dust filtration and extraction fittings when possible.

Dispose of hazardous dust in the correct procedure.

Clean as you go, maintaining a tidy work space.

- **Site cleanliness**

Set up site waste bins (organic, recyclable and landfill)

Clean as you go.

Keep tools tidy and clean.

- **Noise**

Limit power tools to appropriate hours.

Use the correct tools for the work being carried out.

Take care when handling materials and equipment to reduce noise pollution.

Keep voices to a respectable volume, taking into consideration people and environment around.

Turn off power tools and machinery when not in use.

Outcome for Activity 5

☐ Satisfactory

☐ Not satisfactory

Trainer/Assessor comments

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List the components for four (4) common surface drainage systems used in landscape construction.

System Components

- **Spoon**

Concrete at a thickness between 80-150mm
re bar

control joint/cracks

- **Channel and grate**

Long Channel made out of metal, concrete or plastics set at ground level with a slight fall for water to flow to exit. Grate style lid that allows water to spill into channel. Grate can be made of plastic or metals.

- **Pit**

a rectangular box with a drainage grate in the ground to collect water and discharge it through a drainage pipe to nearest council stormwater point.

- **Contour**

excavated channels or ridges across the contour of the land. mainly used on earth work sites.

Outcome for Activity 6

☐ Satisfactory

☐ Not satisfactory

Trainer/Assessor comments

•

List the advantages and disadvantages of drainage behind and through the built wall (as shown).

Drainage pipe behind the wall

Advantages

No holes are visible in the wall, improving visual appeal.

Allows additional water to move away from the wall instead of staying behind it.

Disadvantages

hard to address issues with the pipe if it becomes clogged or fails to work.

Drainage pipe through the wall

Advantages

removes water quicker due to the natural slope of the retain.

water is removed from behind wall before having a chance to soak in. offers less resistance to water escaping.

holes are unlikely to be clogged and can easily be un blocked.

Disadvantages

May not be as visually pleasing.

offered opportunity for pest to enter wall or possible damage to occur.

possibility for stains to be created from water.

Outcome for Activity 7

☐ Satisfactory

☐ Not satisfactory

Trainer/Assessor comments

Explain the following terms:

- Batter
- Angle of repose

Term

Definition

- **Batter**

To batter a wall is to angle the slope of the wall greater than 90 degrees. The slope is angled towards the material being retained.

- **Angle of repose**

The steepest angle of descent to which a material can be piled without slumping. This ranges from 0 to 90 degrees.

Outcome for Activity 8

☐ Satisfactory

☐ Not satisfactory

Trainer/Assessor comments

•

Describe what is happening in the sketched diagram and the photograph shown below.

Description

- **Sketched diagram**

The diagram shows the wall batter. the slope of the wall angles toward the material being retained

- **Photograph**

Checking levels of the corner post to the return post. Making sure post is at correct angle and height to allow sleepers to slide in.

Outcome for Activity 9

- ☐ Satisfactory
- ☐ Not satisfactory

Trainer/Assessor comments

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Have team members take photos and videos of your involvement with retaining wall projects.

Identify each photo / video with a letter label and describe each photo / video in the table below. Submit the photo / video files along with this workbook.

Advantages

- 1 - Set out site and mark position and length of wall
- 2 - spray and dig required holes to suit post width & depth
- 3 - Cut post and concrete in position using string to keep line water proof bottom post
- 4 - measure and cut treated pine sleepers to size and attach using batten screws
- 5 - attach coreflute to back of wall
- 6 - set up and install drained - geo fabric wrap - ag pipe - drainage gravel - back fill
- 7 inspect works and complete project

Outcome for Activity 10

- ☐ Satisfactory
- ☐ Not satisfactory

Trainer/Assessor comments