

AHC21024 Certificate II in Conservation and Ecosystem Management

Conservation and Ecosystem Management is an industry dealing with the management and restoration of land that has been degraded as a result of human activities. It involves working on natural areas that have been impacted or disturbed by people and bringing them back to a healthy condition. These sites are often weed infested, the soil has been eroded and the natural vegetation has been removed.



This course gives students the opportunity to learn about different ecosystems and how to perform land management tasks such as identifying plants and animals, planting trees, treating weeds, operating basic types of machinery and equipment and maintaining Indigenous cultural sites. This enables students to be able to complete further learning in this pathway e.g. Certificate III in Conservation and Ecosystem Management, or to gain employment in a number of associated areas.

Occupations in this industry range in skill level from Level 1 (school completion) to Level 4 (Bachelor Degree at university). Some of these occupations are listed below.

Occupations in the Conservation and Ecosystem Management Industry

Skill Level 1	Skill Level 2	Skill Level 3	Skill Level 4
<ul style="list-style-type: none"> • Completion of Year 10 • Completion of Year 12 • Certificate I and II • Some Apprenticeships 	<ul style="list-style-type: none"> • Certificate III • Certificate IV • 3 years' experience • Some Apprenticeships 	<ul style="list-style-type: none"> • Diploma • Advanced Diploma 	<ul style="list-style-type: none"> • Bachelor Degree
Landcare worker	Gardener, Landscaper	Landcare Manager	Landscape Architect
Farm Manager	Indigenous Ranger	Cartographer	Town Planner
Weed Controller	Recycler	Natural Resource Manager	Toxicologist
Plant Nursery Worker	Laboratory Worker	Aquaculture Technician	Environmental Scientist
Forest Worker	Fisheries Officer	Forest Technical Officer	Geologist
Animal Carer	Animal Technician	Natural Therapist	Botanist
Park Ranger	Survey Assistant	Surveying Technician	Mining Engineer

Delivery Model

The course is delivered through a flexible learning model. The course includes written theory components that can be completed indoors and practical components that are best undertaken alongside workers from organisations such as Natural Resource Management Groups, Indigenous Ranger groups, National Park Rangers, Plant Nurseries, Local Councils or local environmental or conservation groups.

Volume of Learning

The volume of learning of a Certificate II is typically 6 months – 1 year. The volume of learning is made up of all the work the learner is required to complete to meet the requirements of the training package. The duration of the course will be determined according to the current skills of the learner cohort and the time allocated to learning each week. The student's school or employer organisation must provide the Registered Training Organisation (RTO) with an indication of how the learning will fit in to the student's school or work program prior to enrolment to ensure it is sufficient and the course can be completed in a reasonable time frame.

Benefits to students

AHC21024 Certificate II in Conservation and Ecosystem Management provides students with:

- Four credits towards a Queensland Certificate of Education (QCE) which go towards QCE completed core requirements, provided the student has achieved 90% new learning (14 of the 15 Units)
- Transferable workplace skills and knowledge, particularly in conservation and ecosystem management industries
- An opportunity to build students' capability for workforce entry or further vocational training pathways.

Units of Competency

Students will complete **all** of the following 15 units of competency (2 Core Units and 13 Electives):

National Code	Competency Title	Core/Elective
AHCWHS202	Participate in workplace health and safety processes	Core
AHCWRK211	Participate in environmentally sustainable work practices	Core
AHCFAU202	Recognise fauna	Elective Group A
AHCOCM201	Maintain cultural sites	Elective Group A
AHCOCM202	Observe and report plants or animals	Elective Group A
AHCECR202	Maintain wildlife habitat refuges	Elective Group A
AHCPMG201	Treat weeds	Elective Group A
AHCPCM204	Recognise plants	Elective Group A
AHCPGD207	Plant trees and shrubs	Elective Group B
AHCLSC210	Install tree protection devices	Elective Group B
TLID0020	Shift materials safely using manual handling methods	Elective Group B
AHCMOM203	Operate basic machinery and equipment	Elective Group B
FSKRDG009	Read and respond to routine standard operating procedures	Imported unit
AHCOCM301	Provide information on Aboriginal and/or Torres Strait Islander Peoples' cultural practice	Imported unit
FSKLRG014	Manage strategies for career progression	Imported unit

Theory units that can be completed in a classroom environment

The following units of competency are to be completed at the student's own pace and in accordance with the time allocated by the school or workplace:

1. AHCWHS202 Participate in workplace health and safety processes
2. TLID0020 Shift materials safely using manual handling methods
3. FSKRDG009 Read and respond to routine safety operating procedures
4. AHCOCM301 Provide information on Aboriginal and/or Torres Strait Islander Peoples' cultural practice
5. FSKLRG014 Manage strategies for career progression.



Evidence of competency for these units is collected in three Assessment Task Booklets. Two Learner Guides provide the content information.

Practical units that are completed in the field

The following units of competency are to be completed in the field with an experienced supervisor:

1. AHCPGD207 Plant trees and shrubs
2. AHCLSC210 Install tree protection devices
3. AHCPMG201 Treat weeds
4. AHCMOM203 Operate basic machinery and equipment
5. AHCFAU202 Recognise fauna
6. AHCPCM204 Recognise plants
7. AHCOCM202 Observe and report plants or animals
8. AHCWRK211 Participate in environmentally sustainable work practices
9. AHCOCM201 Maintain cultural sites
10. AHCECR202 Maintain wildlife habitat refuges



Evidence of competency for these units is collected in the *Work Records and Log Book* and the *Field Guide*. A third Learner Guide provides the content information for these units.



Training and Assessment

Students will receive sufficient training to meet the requirements of the course and to gain the specified skills and knowledge. They will have many opportunities to apply their learning in a real work context.

The attached Learning Plan provides an overview of how the Units of Competency are integrated into three major project areas. The Learning Plan also includes suggestions on the types of organisations that could be used to enhance the learning by participating in real work contexts.

Students will be assessed using a number of different methods including direct observation, questioning, work records and log books. Assessment will be the responsibility of the Registered Training Organisation and coursework will be forwarded to Tallebudgera OEEC on completion. Students will receive feedback on their work and results will be reported to the Queensland Curriculum and Assessment Authority (QCAA) on completion of the course for inclusion of qualifications on the Queensland Certificate of Education.

Responsibilities of Tallebudgera OEEC's Registered Training Organisation (RTO)

The RTO has a responsibility to learners to:

- provide quality training and assessment materials in a timely manner
- assess learners' work fairly, objectively and consistently
- issue Certificates or Statements of Attainment within 30 days of all assessment being assessed as competent and fees paid. Please note there is no guarantee of completion of this course from participation alone. All assessment tasks must be completed to an appropriate standard before the qualification can be issued.
- be available to learners requiring extra assistance
- conduct site visits to ensure the learning program meets RTO expectations and standards.

Responsibilities of the School, alternative education facility or workplace

Schools or other facilitating organisations are required to provide adequate educational support for students so that they are able to meet the requirements of the course. This includes:

- being aware if the student is completing other VET courses that include the same Units of Competency as this may affect the number of QCE credits awarded
- ensuring the student is able to attend all training sessions
- monitoring student progress and ensuring they have access to resources
- liaising with local organisations to enhance field work opportunities
- providing the RTO with any requested information and informing the RTO of any changes related to student school/work attendance or enrolment.

Course costs and payments

Tallebudgera OEEC will invoice the school for the course costs once enrolments have been received. Course costs per student for the qualification are as follows:

AHC21024 Certificate II in Conservation and Ecosystem Management – includes learning materials, Supervisor's resources, assessment of tasks and issue of the qualification	\$350.00
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No VET in Schools (VETiS) Funding

This course delivered through Tallebudgera OEEC's RTO does **not** use VETiS funding. As we are a School RTO, we are not eligible for funding through the Career Ready program.

For more information, please contact your Student Support Officer:

Lia Howard

Tallebudgera Outdoor and Environmental Education Centre

Work Phone: 5520 9316, Email: rto@tallebudgeraoeec.eq.edu.au

This Learning Plan is divided into three main project areas:

1. Natural Area Restoration which focuses on ecosystem management processes
2. Maintaining cultural places which focuses on On Country Management practices and heritage protection
3. Maintaining wildlife habitat refuges which is a conservation project.

It would be beneficial for students to connect with industry organisations for each of these projects and to work with them in an authentic way. It is an ideal opportunity for students to become more aware of the conservation and land management projects being done in their own community. The Units of Competency that build practical skills such as planting trees, treating weeds, observing plants and animals and using machinery and equipment are all assessed while students complete the project work. This means students use these skills in a range of contexts over an extended period of time. These units are shown in blue.

The plan includes suggestions for small projects students can complete in the school or work environment to build skills and knowledge and larger projects they might be able to work on with industry partners.

Project One: Natural Area Restoration (Ecosystem Management)

Possible Industry Partners: Natural Resource Management Groups, Catchment Organisations, Local Council

Training Topics	Skilling activities at school/work	Project work with industry	Units of Competency
<p>Work health and safety (application):</p> <ul style="list-style-type: none"> • Hazards, Risk assessments, Control measures • Safety signs and symbols • Regulations and Codes of Practice • Personal Protective Equipment • Manual Handling • Safety Operating Procedures • Safety Data Sheets • Workplace procedures for responding to emergencies • Fire Safety • Basic First Aid • Incident reporting <p>Natural Area Restoration</p> <ul style="list-style-type: none"> • Reasons why restoration is needed e.g. erosion, weed infestation 	<ul style="list-style-type: none"> • Operating machinery with Pre-op safety checks as per SOP <ul style="list-style-type: none"> ○ mower, whipper snipper, power blower, hand tools etc. • Small garden project – restore a weed infested or degraded area <ul style="list-style-type: none"> ○ Planting trees ○ Identifying and treating weeds ○ Operating machines • Recognising plants and animals through a regeneration/bushcare lens (weeds and natives, restoring damaged land, habitats) • Filling in records and log books • Start environmental sustainability project – select something you can measure the change at the end e.g. 	<ul style="list-style-type: none"> • Revegetation or restoration project: <ul style="list-style-type: none"> ○ Planting trees ○ Tree protection devices ○ Weeding ○ Using equipment ○ Plant and animal identification • Waste management with Council <ul style="list-style-type: none"> ○ E.g. Recycling 	<p>AHCWHS202 Participate in workplace health and safety processes</p> <p>TLID0020 Shift materials safely using manual handling methods</p> <p>FSKRDG009 Read and respond to routine safety operating procedures</p> <p>AHCWRK211 Participate in environmentally sustainable work practices</p> <p>AHCPGD207 Plant trees and shrubs</p> <p>AHCLSC210 Install tree protection devices</p> <p>AHCFAU202 Recognise fauna</p> <p>AHCPCM204 Recognise plants</p> <p>AHCOCM202 Observe and report plants or animals</p>

<ul style="list-style-type: none"> Planting trees and installing protection devices Weed identification and treating weeds Operating machinery safely <p>Recognition of plants and animals</p> <ul style="list-style-type: none"> Reasons for, and meanings of, scientific names Species being planted and reasons why Weeds being eradicated and reasons <p>Sustainability</p> <ul style="list-style-type: none"> Current use of resources Implementing a plan for reduction of waste (e.g. recycling) <p>Working in the industry</p> <ul style="list-style-type: none"> Types of jobs in this industry Suitability for this type of work 	<p>reduction in waste</p>		<p>AHCMOM203 Operate basic machinery and equipment AHCPMG201 Treat weeds FSKLRG014 Manage strategies for career progression</p>
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Project Two: Maintaining cultural places (On Country Management) Possible Industry Partners: Indigenous Ranger Groups, Local Elders, Traditional Owners and Custodians			
Training Topics	Skilling activities at school	Project work with industry	Units of Competency
<p>Indigenous Land Management principles:</p> <ul style="list-style-type: none"> Heritage protection Fire management Connecting with Traditional Owners and Custodians Intellectual property and copyright Protocols and permission Native species, how and why feral species were introduced and their impact Weed identification and methods of 	<ul style="list-style-type: none"> Visiting significant cultural places in the local area looking at maintaining the site and sharing cultural knowledge: <ul style="list-style-type: none"> Connecting with Elders, Traditional Owners and Custodians How cultural knowledge is shared – Visitor’s Centre, Interpretive signs, artwork etc. Major maintenance issues e.g. graffiti, rubbish, impact of soil, 	<ul style="list-style-type: none"> Maintain cultural site: <ul style="list-style-type: none"> Planting trees Tree protection devices Weeding Using equipment Plant and animal identification Participate in Fire management activities Controlling feral animals 	<p>AHCOCM201 Maintain cultural sites AHCOCM302 Provide information on Aboriginal and/or Torres Strait Islander Peoples’ cultural practice AHCPCGD207 Plant trees and shrubs AHCLSC210 Install tree protection devices AHCPMG201 Treat weeds AHCMOM203 Operate basic machinery and equipment AHCFAU202 Recognise fauna AHCPCM204 Recognise plants</p>

<p>treating weeds, integrated pest management</p> <p>Recognition of plants and animals</p> <ul style="list-style-type: none"> • Traditional and contemporary uses of animals and plants • Indigenous names • Spiritual significance of plants and animals (totems) • Dreaming/Creation stories involving local animals and plants 	<p>accidental damage to plants</p> <ul style="list-style-type: none"> • Recognising plants and animals through an Indigenous lens • Planting Bush Tucker garden (Planting trees, weeding, using equipment) • Cooking with traditional foods 		
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Project Three: Maintaining wildlife habitat refuges (Conservation)

Possible Industry Partners: Conservation groups, Plant nurseries, Wildlife Rescue organisations, National Parks Rangers

Training Topics	Skilling activities at school	Project work with industry	Units of Competency
<p>Conserving animals and plants</p> <ul style="list-style-type: none"> • Roles in the ecosystem • Endangered, vulnerable species • Predators • Effects of habitat loss <p>Wildlife Habitat Refuges</p> <ul style="list-style-type: none"> • Providing animals with shelter, food <p>Investigating jobs</p> <ul style="list-style-type: none"> • Jobs in the industry • Jobs in other industries • Skills, qualifications and experience • How to apply for jobs <p>Sustainability</p> <ul style="list-style-type: none"> • Use of resources following improvement strategies • Analysing effect of sustainability initiative 	<ul style="list-style-type: none"> • Visiting significant conservation projects e.g. Wildlife rescue organisations, Landcare groups • Planting habitat garden e.g. bird garden, butterfly garden • Recognising plants and animals through a conservation lens 	<ul style="list-style-type: none"> • Assist in community conservation projects that focus on maintaining a wildlife habitat refuge which provides protection for native animals from invasive species and vertebrate pests. 	<p>AHCECR202 Maintain wildlife habitat refuges</p> <p>AHCPGD207 Plant trees and shrubs</p> <p>AHCLSC210 Install tree protection devices</p> <p>AHCPMG201 Treat weeds</p> <p>AHCMOM203 Operate basic machinery and equipment</p> <p>AHCFAU202 Recognise fauna</p> <p>AHCPCM204 Recognise plants</p> <p>FSKLRG014 Manage strategies for career progression - Review</p> <p>AHCWRK211 Participate in environmentally sustainable work practices</p>