

## **22331VIC Certificate IV in Landscape Design**

This course has been accredited under Parts 4.4 and 4.6 of the Education and Training Reform Act 2006.

**Accredited for the period: 1 July 2017 – 30 June 2023**



Modification History	
22 June 2021	Accreditation Period Extended to June 2023



© State of Victoria (Department of Education and Training) 2017.

Copyright of this material is reserved to the Crown in the right of the State of Victoria. This work is licensed under a Creative Commons Attribution-NoDerivs 3.0 Australia licence (<http://creativecommons.org/licenses/by-nd/3.0/au/>). You are free to use, copy and distribute to anyone in its original form as long as you attribute Department of Education and Training as the author, and you license any derivative work you make available under the same licence.

#### Disclaimer

In compiling the information contained in and accessed through this resource, the Department of Education and Training (DET) has used its best endeavours to ensure that the information is correct and current at the time of publication but takes no responsibility for any error, omission or defect therein.

To the extent permitted by law DET, its employees, agents and consultants exclude all liability for any loss or damage (including indirect, special or consequential loss or damage) arising from the use of, or reliance on the information contained herein, whether caused or not by any negligent act or omission. If any law prohibits the exclusion of such liability, DET limits its liability to the extent permitted by law, for the resupply of the information.

#### Third party sites

This resource may contain links to third party websites and resources. DET is not responsible for the condition or content of these sites or resources as they are not under its control.

Third party material linked from this resource is subject to the copyright conditions of the third party. Users will need to consult the copyright notice of the third party sites for conditions of usage.

Section A: Copyright and course classification information .....	1
1. Copyright owner of the course.....	1
2. Address.....	1
3. Type of submission .....	1
4. Copyright acknowledgement .....	1
5. Licensing and franchise.....	2
6. Course accrediting body.....	2
7. AVETMISS information.....	2
8. Period of accreditation.....	2
Section B: Course information.....	3
1. Nomenclature.....	3
1.1 Name of the qualification .....	3
1.2 Nominal duration of the course.....	3
2. Vocational or educational outcomes .....	3
2.1 Purpose of the course .....	3
3. Development of the course.....	3
3.1 Industry / enterprise/ community needs .....	3
3.2 Review for re- accreditation.....	4
4. Course outcomes .....	6
4.1 Qualification level .....	6
4.2 Employability skills .....	7
4.3 Recognition given to the course (if applicable) .....	8
4.4 Licensing/ regulatory requirements (if applicable).....	8
5. Course rules.....	8
5.1 Course structure.....	8
5.2 Entry requirements .....	10
6. Assessment.....	10
6.1 Assessment strategy .....	10
6.2 Assessor competencies.....	11
7. Delivery .....	12
7.1 Delivery modes .....	12
7.2 Resources .....	12
8. Pathways and articulation.....	12
9. Ongoing monitoring and evaluation .....	12
Section C: Units of Competency .....	14
VU21969 Develop landscape designs.....	15
VU21970 Prepare simple landscape drawings.....	22
VU21967 Apply construction techniques to landscape design .....	27
VU21968 Apply the principles of sustainability to landscape design.....	34
VU21971 Produce 2-D architectural landscape drawings using CAD.....	40

## Section A: Copyright and course classification information

<b>1. Copyright owner of the course</b>	Department of Education and Training, Victoria © State of Victoria
<b>2. Address</b>	<p>Executive Director Industry Engagement and VET Systems Higher Education and Skills Group Department of Education and Training (DET) GPO Box 4367 Melbourne Vic 3001</p> <p><b>Organisational Contact:</b> Manager Training Products Higher Education and Skills Group Telephone: (03) 9637 3092 Email: <a href="mailto:course.enquiry@edumail.vic.gov.au">course.enquiry@edumail.vic.gov.au</a></p> <p><b>Day to Day Contact</b> Primary Industries Curriculum Maintenance Manager (PICMM) Melbourne Polytechnic Epping Campus, Victoria 3076 Email <a href="mailto:annewiltshire@melbournepolytechnic.edu.au">annewiltshire@melbournepolytechnic.edu.au</a> Telephone: (03) 9269 1063</p>
<b>3. Type of submission</b>	This course is submitted for reaccreditation.
<b>4. Copyright acknowledgement</b>	<p>Copyright of the following units of competency from nationally endorsed training packages is administered by the Commonwealth of Australia and can be accessed from Training.gov at <a href="http://www.training.gov.au">www.training.gov.au</a></p> <p>© Commonwealth of Australia</p> <ul style="list-style-type: none"> <li>• AHC Agriculture, Horticulture and Conservation and Land Management Training Package: <ul style="list-style-type: none"> <li>– AHPCPM401 Recommend plants and cultural practices</li> <li>– AHCWHS401 Maintain work health and safety processes</li> <li>– AHCLSC401 Supervise landscape project works</li> <li>– AHCBUS402 Cost a project</li> </ul> </li> <li>• BSB Business Services Training Package: <ul style="list-style-type: none"> <li>– BSBDES305 Source and apply information on the history and theory of design</li> <li>– BSBCRT402 Collaborate in a creative process</li> <li>– BSBREL402 Build client relationships and business networks</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- BSBINN301 Promote innovation in a team environment</li> <li>- BSBFLM309 Support continuous systems and processes</li> <li>- BSBSMB401 Establish legal and risk management requirements of small business</li> <li>- BSBSMB406 Manage small business finances</li> <li>- BSBSMB404 Undertake small business planning</li> <li>• CUA Creative Arts and Culture Training Package <ul style="list-style-type: none"> <li>- CUAACD302 Produce computer-aided drawings</li> </ul> </li> </ul>
<b>5. Licensing and franchise</b>	<p>Copyright of this material is reserved to the Crown in the right of the State of Victoria.  © State of Victoria (Department of Education and Training) 2017.</p> <p>This work is licensed under a Creative Commons Attribution-NoDerivs 3.0 Australia licence (<a href="http://creativecommons.org/licenses/by-nd/3.0/au/">http://creativecommons.org/licenses/by-nd/3.0/au/</a>). You are free to use, copy and distribute to anyone in its original form as long as you attribute Department of Education and Training as the author and you license any derivative work you make available under the same licence.</p> <p>Request for other use should be addressed to :</p> <p>Executive Director  Industry Engagement and VET Systems  Higher Education and Skills Group  Department of Education and Training (DET)  Email: <a href="mailto:course.enquiry@edumail.vic.gov.au">course.enquiry@edumail.vic.gov.au</a></p> <p>Copies of this publication can be downloaded free of charge from the DET website at  <a href="http://www.education.vic.gov.au/training/providers/rto/Pages/courses.aspx">www.education.vic.gov.au/training/providers/rto/Pages/courses.aspx</a></p>
<b>6. Course accrediting body</b>	<b>Victorian Registration and Qualifications Authority</b>
<b>7. AVETMISS information</b>	<p><b>ANZSCO Code:</b> 232312 Industrial Designer</p> <p><b>ASCED Code :</b> 0503 Horticulture and Viticulture</p> <p><b>National course code :</b> 22331VIC</p>
<b>8. Period of accreditation</b>	1 July 2017 – 30 June 2023



## Section B: Course information

1. Nomenclature		Standard 1 AQTF Standards for Accredited Courses
1.1 Name of the qualification	Certificate IV in Landscape Design	
1.2 Nominal duration of the course	695 – 795	
2. Vocational or educational outcomes		Standard 1 AQTF Standards for Accredited Courses
2.1 Purpose of the course	The Certificate IV in Landscape Design supports the development of the skills and knowledge to work as a landscape designer.	
3. Development of the course		Standards 1 and 2 AQTF Standards for Accredited Courses
3.1 Industry / enterprise/ community needs	<p>The Landscape Design Industry is characterised by small, medium and large businesses that provide services for residential, commercial or public open spaces. Large landscape design businesses employ a number of specialist staff and provide design, construction and maintenance services. Medium and small businesses can offer either design and construction services or design services only.</p> <p>A number of activities were undertaken to establish the current and projected need for the course and included:</p> <ul style="list-style-type: none"> <li>• preliminary mapping of the Certificate IV in Landscape Design against qualifications from the endorsed AHC Agriculture, Horticulture and Conservation and Land Management Training Package to identify potential duplication</li> <li>• consultation with the peak industry body, Landscaping Victoria</li> <li>• consultation with the sole provider of the course</li> <li>• review of the currency of imported endorsed training package units</li> <li>• review of enrolment data for the period 2013 to 2016</li> <li>• review of a survey of stakeholders to identify skills and knowledge outcomes</li> <li>• survey of existing students.</li> </ul> <p>The AHC Agriculture, Horticulture and Conservation and Land Management Training Package includes qualifications from AQF levels 3 to 5 in landscape construction and design. The focus of the training package qualifications is on construction at AQF level 3, supervision at AQF level 4 and project management at AQF level 5.</p> <p>The Victorian landscape design industry, while supporting the Diploma qualification, has identified an ongoing need for the Certificate IV in Landscape Design that includes design principles, graphic communication and the selection of appropriate products and plants.</p> <p>Consultations with the sole provider indicated an ongoing need for the qualification with minor changes needed to address duplicated outcomes in the core units.</p>	

	<p>Feedback from existing students indicated strong support for the course, with the majority of respondents indicating that they wished to establish their own landscape design small business.</p> <p>The qualification has previously attracted a diverse cohort including those working in the broader landscaping industry in construction and plant nurseries and those new to the industry and seeking a career change.</p> <p>The following table provides an overview of enrolments for the past 4 years. While enrolments are not high, they have remained relatively stable over the past 4 years and are anticipated to continue at the same level. (Source: Victorian Department of Education and Training)</p> <table><tr><th rowspan="2">Code</th><th rowspan="2">Title</th><th colspan="4">Reporting Year</th></tr><tr><th>2013</th><th>2014</th><th>2015</th><th>2016</th></tr><tr><td>22198VIC</td><td>Certificate IV in Landscape Design</td><td>30</td><td>46</td><td>40</td><td>49</td></tr></table> <p>The reaccreditation was guided by a Project Steering Committee who also provided advice on, and validation, of a skills and knowledge profile. The PSC consisted of the following members:</p> <table><tr><td>Don Thomson (Chair)</td><td>Gardenridge</td></tr><tr><td>Ruth Czermak</td><td>Botanical Traditions</td></tr><tr><td>Steve Taylor</td><td>COS Design</td></tr><tr><td>Stephen Read</td><td>Stephen Read Landscape Design</td></tr><tr><td>Georgia Harper</td><td>Georgia Harper Landscape Designer</td></tr><tr><td>Sally Tulloch</td><td>Holmesglen TAFE</td></tr><tr><td>Tim Wilson</td><td>Melbourne Polytechnic</td></tr><tr><td>Ian Barker</td><td>Ian Barker Gardens</td></tr></table> <p>In Attendance:</p> <p>Megan Flower, Landscaping Victoria</p> <p>Kate Bryce, Primary Industries Curriculum Maintenance Manager</p> <p>Cheryl Bartolo, Course Developer</p> <p>The 22331VIC Certificate IV in Landscape Design does not duplicate by title or coverage the outcomes of an endorsed training package qualification or skill set.</p>	Code	Title	Reporting Year				2013	2014	2015	2016	22198VIC	Certificate IV in Landscape Design	30	46	40	49	Don Thomson (Chair)	Gardenridge	Ruth Czermak	Botanical Traditions	Steve Taylor	COS Design	Stephen Read	Stephen Read Landscape Design	Georgia Harper	Georgia Harper Landscape Designer	Sally Tulloch	Holmesglen TAFE	Tim Wilson	Melbourne Polytechnic	Ian Barker	Ian Barker Gardens
Code	Title			Reporting Year																													
		2013	2014	2015	2016																												
22198VIC	Certificate IV in Landscape Design	30	46	40	49																												
Don Thomson (Chair)	Gardenridge																																
Ruth Czermak	Botanical Traditions																																
Steve Taylor	COS Design																																
Stephen Read	Stephen Read Landscape Design																																
Georgia Harper	Georgia Harper Landscape Designer																																
Sally Tulloch	Holmesglen TAFE																																
Tim Wilson	Melbourne Polytechnic																																
Ian Barker	Ian Barker Gardens																																
3.2 Review for re-accreditation	<p>A mid cycle review was conducted by the Primary Industries CMM to monitor the implementation of the qualification and identify any required modifications.</p> <p>Respondents indicated that the course provided for outcomes that were appropriate for industry work requirements. It was recommended to review the unit <i>VU20837 Design sustainable landscapes</i> to reflect current industry requirements and to remove the unit <i>BSBDES401A Generate design solutions</i>. Respondents were unsure of the value of the unit <i>BSBCMM401A Make a presentation</i>.</p>																																

	<p>The reaccreditation process confirmed the need to review the outcomes of <i>BSBDES401A Generate design solutions</i> for duplication with <i>VU20837 Design sustainable landscapes</i>.</p> <p>The 22331VIC Certificate IV in Landscape Design replaces and is equivalent to the 22198VIC Certificate IV in Landscape Design.</p> <p>The following table identifies the relationship between the current and previous units.</p>
--	---

Units from 22198VIC	Units from 22331VIC	Relationship
VU20835 Develop a landscape design	VU21969 Develop landscape designs	Not Equivalent Incorporates some additional unduplicated outcomes from BSBDES401A
BSBDES401A Generate design solutions	N/A	Unit deleted
VU20838 Prepare simple landscape sketches and drawing	VU21970 Prepare simple landscape drawings	Equivalent
VU20836 Apply construction principles and techniques to landscape design	VU21967 Apply construction principles and techniques to landscape design	Equivalent
VU20837 Design sustainable landscapes	VU21968 Apply the principles of sustainability to landscape design	Equivalent
CPCPCM4003A Produce 2-D architectural drawings using CAD software	VU21971 Produce 2-D architectural landscape drawings using CAD	Equivalent
BSBDES305A Source and apply information on the history and theory of design	BSBDES305 Source and apply information on the history and theory of design	Equivalent
CUVACD302A Produce computer-aided drawings	CUAACD302 Produce computer-aided drawings	Equivalent
AHCPCM401A Recommend plants and cultural practices	AHCPCM401 Recommend plants and cultural practices	Equivalent
AHCOHS401A Maintain occupational health and safety (OHS) processes	AHCWHS401 Maintain work health and safety processes	Equivalent
AHCLSC401A Supervise landscape project works	AHCLSC401 Supervise landscape project works	Equivalent
AHCBUS402A Cost a project	AHCBUS402 Cost a project	Equivalent



Units from 22198VIC	Units from 22331VIC	Relationship
BSBCRT402A Collaborate in a creative process	BSBCRT402 Collaborate in a creative process	Equivalent
BSBREL402A Build client relationships and business networks	BSBREL402 Build client relationships and business networks	Equivalent
BSBINN301A Promote innovation in a team environment	BSBINN301 Promote innovation in a team environment	Equivalent
BSBFLM309C Support continuous systems and processes	BSBFLM309 Support continuous systems and processes	Equivalent
N/A	BSBSMB401 Establish legal and risk management requirements of small business	Newly imported unit
N/A	BSBSMB406 Manage small business finances	Newly imported unit
N/A	BSBSMB404 Undertake small business planning	Newly imported unit

4. Course outcomes	Standards 1, 2, 3 and 4 AQTF Standards for Accredited Courses
<b>4.1 Qualification level</b>	<p><i>Standards 1, 2 and 3 AQTF Standards for Accredited Courses</i></p> <p>The Certificate IV in Landscape Design is consistent with AQF level 4 as defined in the AQF Implementation Handbook (<a href="#">AQF Second Edition 2013</a>).</p> <p>The outcomes of the Certificate IV require the application of a broad range of specialised knowledge and skills in varied contexts to undertake skilled work and as a pathway for further learning in the field of landscape design.</p> <p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Graduates will have broad factual, technical and theoretical knowledge in the specialised field of work and learning for landscape design.</li> </ul> <p><b>Skills</b></p> <p>Graduates will have:</p> <ul style="list-style-type: none"> <li>• cognitive skills to identify, analyse, compare and act on information from a range of sources such as in researching design information</li> <li>• cognitive, technical and communications skills to apply and communicate technical solutions of a non-routine or contingency nature to a defined range of predictable and unpredictable problems such as collaborating with colleagues on a project</li> <li>• specialist technical skills to complete routine and non-routine tasks and functions such as using computer aided design tools</li> </ul>

	<ul style="list-style-type: none"> <li>communication skills to guide activities and provide technical advice in the area of work and learning such as working with a client to develop a design concept.</li> </ul> <p><b>Application of knowledge and skills</b></p> <p>Graduates will demonstrate the application of knowledge and skills:</p> <ul style="list-style-type: none"> <li>to complete specialised tasks or functions in known or changing contexts such as responding to changing client requirements and applying regulatory requirements</li> <li>with responsibility for own functions and outputs, and may have limited responsibility for organisation of others such as in the development of a landscape work program</li> <li>with limited responsibility for the quantity and quality of the output of others in a team within limited parameters as in the sourcing of specialist expertise.</li> </ul> <p><b>Volume of Learning</b></p> <p>The volume of learning for this qualification is typically between 0.5 and 2 years and incorporates structured training delivery and learning activities such as:</p> <ul style="list-style-type: none"> <li>structured training activities to develop design and drawing skills and knowledge of industry expectations and regulatory requirements</li> <li>development of a landscape design portfolio over time.</li> </ul>
<p><b>4.2 Employability skills</b></p>	<p><i>Standard 4 AQTF Standards for Accredited Courses</i></p> <p>Communication skills to:</p> <ul style="list-style-type: none"> <li>consult with clients to develop and advise on landscape designs and respond</li> <li>negotiate with clients and contractors</li> <li>read and interpret written information and diagrams</li> <li>produce written and diagrammatic information</li> </ul> <p>Problem-solving skills to:</p> <ul style="list-style-type: none"> <li>interpret client requirements</li> <li>analyse physical elements and features of sites to inform appropriate designs</li> <li>develop landscape designs that meet specified requirements</li> <li>select plants appropriate to the design and the conditions</li> </ul> <p>Teamwork skills to:</p> <ul style="list-style-type: none"> <li>work with diverse individuals and groups</li> <li>share ideas with others</li> <li>cooperate with others in areas of shared responsibility</li> </ul> <p>Initiative and enterprise skills to:</p> <ul style="list-style-type: none"> <li>generate alternative solutions to address contingencies</li> </ul>

	<ul style="list-style-type: none"> <li>recognise and operate within own expertise, responsibilities and authorities</li> </ul> <p>Numeracy skills to:</p> <ul style="list-style-type: none"> <li>develop designs within identified budgetary constraints</li> <li>develop budgets and timelines</li> <li>take measurements and prepare scale plans</li> </ul> <p>Self – management skills to:</p> <ul style="list-style-type: none"> <li>recognise limits of own expertise and refer to appropriate service providers</li> <li>process documentation according to organisational and legislative requirements</li> <li>take responsibility for planning and implementing tasks required to achieve outcomes</li> </ul> <p>Learning skills to:</p> <ul style="list-style-type: none"> <li>source information that supports the development of work related knowledge and skills</li> </ul> <p>Technology Skills to:</p> <ul style="list-style-type: none"> <li>select and use computer-aided design and drafting hardware and software</li> <li>access electronic media to research information</li> <li>file documentation according to organisational requirements</li> </ul>
<b>4.3 Recognition given to the course (if applicable)</b>	<p><i>Standard 5 AQTF Standards for Accredited Courses</i></p> <p>Not Applicable</p>
<b>4.4 Licensing/ regulatory requirements (if applicable)</b>	<p><i>Standard 5 AQTF Standards for Accredited Courses</i></p> <p>Not Applicable</p>
<b>5. Course rules</b>	Standards 2, 6,7 and 9 AQTF Standards for Accredited Courses
<p><b>5.1 Course structure</b></p> <p>To be eligible for the award of 2231VIC Certificate IV in Landscape Design learners must successfully complete a total of 12 units comprising:</p> <ul style="list-style-type: none"> <li>8 core units</li> <li>4 elective units which may be selected from: <ul style="list-style-type: none"> <li>elective units listed below and / or</li> <li>units from any other endorsed training package or accredited curriculum.</li> </ul> </li> </ul> <p>Note: units imported from endorsed training packages or other accredited curriculum must:</p> <ul style="list-style-type: none"> <li>reflect the needs of the learner</li> <li>support the integrity of the AQF level of this qualification</li> </ul>	

- support the intent of this qualification.

Where the qualification is not completed, a Statement of Attainment will be issued for any completed units.

Unit of competency/ module code	Field of Education code (six-digit)	Unit of competency/module title	Pre-requisite	Nominal hours
<b>Core units</b>				
VU21969	050301	Develop landscape designs	Nil	130
VU21970	050301	Prepare simple landscape drawings	Nil	50
VU21967	050301	Apply construction techniques to landscape design	Nil	50
VU21968	050301	Apply the principles of sustainability to landscape design	Nil	60
BSBDES305	N/A	Source and apply information on the history and theory of design	Nil	65
CUAACD302	N/A	Produce computer-aided drawings	Nil	50
VU21971	050301	Produce 2-D architectural landscape drawings using CAD	Nil	40
AHCPCM401	N/A	Recommend plants and cultural practices	Nil	80
Total Core				<b>525</b>
<b>Elective units</b>				
AHCWHS401	N/A	Maintain work health and safety processes	Nil	70
AHCLSC401	N/A	Supervise landscape project works	Nil	80
AHCBUS402	N/A	Cost a project	Nil	50
BSBCRT402	N/A	Collaborate in a creative process	Nil	40
BSBREL402	N/A	Build client relationships and business networks	Nil	50

BSBINN301	N/A	Promote innovation in a team environment	Nil	40
BSBFLM309	N/A	Support continuous systems and processes	Nil	40
BSBSMB401	N/A	Establish legal and risk management requirements of small business	Nil	60
BSBSMB406	N/A	Manage small business finances	Nil	60
BSBSMB404	N/A	Undertake small business planning	Nil	50
<b>Total nominal hours</b>			<b>695 – 795</b>	

<b>5.2 Entry requirements</b>	<p><i>Standard 9 AQTF Standards for Accredited Courses</i></p> <p>There are no entry requirements for the Certificate IV in Landscape Design.</p> <p>The following is a general guide to entry in relation to the language, literacy and numeracy skills of learners.</p> <p>Learners are best equipped to undertake the qualification if they have minimum language, literacy and numeracy skills that align to Level 3 of the Australian Core Skills Framework, details of which can be accessed from <a href="https://www.education.gov.au/download-acsf">https://www.education.gov.au/download-acsf</a></p> <p>Learners with language, literacy and numeracy skills at lower levels than those suggested may require additional support to successfully undertake the qualification.</p> <p>It is also recommended that learners have basic skills in using a personal computer.</p>
<b>6. Assessment</b> Standards 10 and 12 AQTF Standards for Accredited Courses	
<b>6.1 Assessment strategy</b>	<p><i>Standard 10 AQTF Standards for Accredited Courses</i></p> <p>All assessment will be consistent with the AQTF Essential Conditions and Standards for Initial/Continuing Registration Standards 1.2/1.5.</p> <p>or</p> <p>Standard 1: Clauses 1.1 and 1.8 of the Standards for Registered Training Organisations (SRTOs) 2015</p> <p>See <a href="http://www.asqa.gov.au/about/australias-vet-sector/standards-forregistered-training-organisations-(rtos)-2015.html">http://www.asqa.gov.au/about/australias-vet-sector/standards-forregistered-training-organisations-(rtos)-2015.html</a></p> <p>Consistent with Standard 1, Element 5 of the Australian Quality Training Framework Essential Conditions and Standards for Continuing (or Initial) Registration, RTOs must ensure that</p>

	<p>Recognition of Prior Learning (RPL) is offered to all applicants in determining competency for Credit.</p> <p>Assessment strategies for the courses should:</p> <ul style="list-style-type: none"> <li>• incorporate feedback of individual progress toward, and achievement of competencies</li> <li>• address skill and knowledge which underpin performance</li> <li>• gather sufficient evidence to judge achievement of progress towards determining competence</li> <li>• utilise a variety of different processes/sources, such as written, oral, observation, projects appropriate to assess knowledge and performance</li> <li>• recognise achievement of elements/competencies regardless of where the enabling learning took place</li> <li>• foster a collaborative and co-operative relationship between the learner and assessor</li> <li>• be flexible in regard to the range and type of evidence provided by the learner</li> <li>• provide opportunity for the learner to challenge assessment provisions and participate in reassessment</li> <li>• be equitable and fair to all learners</li> <li>• not unnecessarily restrict the progress of a learner through the course</li> <li>• comprise a clear statement of both the criteria and assessment process</li> <li>• use assessment tools to suit the needs of learners.</li> </ul> <p>A variety of assessment methods and evidence gathering techniques may be used with the overriding consideration being that the combined assessment must stress demonstrable performance by the student. Assessment tools must take into account the requirements of the unit in terms of skills, knowledge and performance. The Evidence Guide of each unit provides information specific to the outcomes of each unit.</p> <p>Assessment of units of competency from accredited courses and nationally endorsed training packages must comply with the assessment requirements detailed in the relevant Training Package or Accredited Course Documentation.</p>
<p><b>6.2 Assessor competencies</b></p>	<p><i>Standard 12 AQTF Standards for Accredited Courses</i></p> <p>Assessor competencies are consistent with the Australian Quality Training Framework Essential Conditions and Standards for Continuing (or Initial) Registration, Standard 1.4 states the requirements for the competence of persons assessing the course. See AQTF User guides to the Essential Conditions and Standards for Continuing (or Initial) Registration:  <a href="http://www.vrqa.vic.gov.au/registration/Pages/vetqualitydef.aspx">http://www.vrqa.vic.gov.au/registration/Pages/vetqualitydef.aspx</a>  or</p>

	<p>Standard 1: Clauses 1.13, 1.14, 1.15, 1.16 and 1.17 of the Standards for Registered Training Organisations (SRTOs) 2015</p> <p>Assessors of the imported units of competency must meet the guidelines of the relevant Training Package or accredited Course Documentation.</p>
<b>7. Delivery</b>	<b>Standards 11 and 12 AQTF Standards for Accredited Courses</b>
<b>7.1 Delivery modes</b>	<p><i>Standard 11 AQTF Standards for Accredited Courses</i></p> <p>All units of competency in the course may be delivered in a variety of modes.</p> <p>Some areas of content may be common to more than one unit and therefore integrated delivery may be appropriate. Delivery strategies should actively involve the learner and learning should be experiential, relevant and contextualised to reflect the landscape design industry.</p>
<b>7.2 Resources</b>	<p><i>Standard 12 AQTF Standards for Accredited Courses</i></p> <p>Resources include teachers/trainers who meet the Australian Quality Training Framework Essential Conditions and Standards for Continuing (or Initial) Registration Standard 1.4. See AQTF User guides to the Essential Conditions and Standards for Continuing (or Initial) Registration:  <a href="http://www.vrqa.vic.gov.au/registration/Pages/vetqualitydef.aspx">http://www.vrqa.vic.gov.au/registration/Pages/vetqualitydef.aspx</a>  or  Standard 1: Clauses 1.13, 1.14, 1.15, 1.16 and 1.17 of the Standards for Registered Training Organisations (SRTOs) 2015</p> <p>Delivery of units of competency from accredited courses and nationally endorsed training packages must comply with any requirements for teacher/trainers detailed in the relevant training package or accredited course.</p>
<b>8. Pathways and articulation</b>	<b>Standard 8 AQTF Standards for Accredited Courses</b>
	<p>There are no formal articulation arrangements in place at the time of accreditation.</p> <p>Completion of this qualification provides a potential pathway into the AHC50616 Diploma of Landscape Design from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package.</p> <p>Completion of imported units of competency provides credit into a range of vocational qualifications from nationally endorsed training packages.</p>
<b>9. Ongoing monitoring and evaluation</b>	<b>Standard 13 AQTF Standards for Accredited Courses</b>
	<p>The Primary Industries Curriculum Maintenance Manager has responsibility for the ongoing monitoring and maintenance of the qualification.</p>

	<p>A formal review will take place once during the period of accreditation and will be informed by feedback from users of the curriculum and will consider at a minimum:</p> <ul style="list-style-type: none"> <li>• any changes required to meet emerging or developing needs</li> <li>• changes to any units of competency from nationally endorsed training packages or accredited curricula.</li> </ul> <p>Any significant changes to the courses will be notified to the VRQA.</p>
--	--



## Section C: Units of Competency

<b>Unit Code</b>	<b>VU21969</b>
<b>Unit Title</b>	<b>Develop landscape designs</b>
<b>Unit Descriptor</b>	<p>This unit describes the skills and knowledge to consult with clients to develop landscape designs.</p> <p>No licensing, legislation, regulatory or certification requirements apply to this unit at the time of publication.</p>
<b>Employability Skills</b>	This unit contains employability skills.
<b>Application of the Unit</b>	This unit applies to those who generate and prepare simple landscape designs for projects on residential, commercial or public open spaces.
<b>Element</b>	<b>Performance Criteria</b>
Elements describe the essential outcomes of a unit of competency. Elements describe actions or outcomes that are demonstrable and assessable.	Performance criteria describe the required performance needed to demonstrate achievement of the element – they identify the standard for the element. Where bold/italicised text is used, further information or explanation is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
1 Develop a design brief	<p>1.1 Consult with the <b>client</b> to establish their <b>requirements</b> for the landscape design</p> <p>1.2 Clarify constraints of the site</p> <p>1.3 Determine budget parameters</p> <p>1.4 Advise clients of the process to finalise the project and anticipated timelines</p>
2 Analyse the site	<p>2.1 Identify any <b>OHS / WHS requirements</b> related to site inspection</p> <p>2.2 Inspect the site to identify and record the <b>physical elements and features</b></p> <p>2.3 Analyse and record soil conditions, topography, aspect, existing vegetation, neighbouring elements, levels and climatic factors that may impact the design</p> <p>2.4 Analyse the impact of <b>regulations</b> on the design</p> <p>2.5 Assess and record any <b>additional relevant information</b> which will impact the design</p>
3 Develop a design concept	<p>3.1 Source information and ideas that may assist in generating design</p>

- |   |     |  |
|---|-----|--|
|   | 3.2 | Refine design ideas to develop a concept that meets the brief  |
|   | 3.3 | Analyse the design concept for its aesthetic integrity and the effective use of <b>design principles</b>                       |
|   | 3.4 | Consult the client to agree any required changes or modifications  |
|   | 3.5 | Confirm the design concept with the client   |
| 4 |     | Incorporate the use of lighting into a design  |
|   | 4.1 | Determine the need for supplementary <b>lighting</b> in the landscape  |
|   | 4.2 | Identify lighting effects to support the design  |
|   | 4.3 | Review the use of lighting to ensure it is consistent with the design concept, timelines and budget                            |
| 5 |     | Prepare the final landscape design   |
|   | 5.1 | Complete the design concept to illustrate final location and layout of <b>landscape elements</b> according to the design brief |
|   | 5.2 | Prepare a planting plan according to the landscape design  |
|   | 5.3 | Incorporate clear and precise <b>notes</b> on the design to assist in interpretation   |
|   | 5.4 | Review the final design to ensure all requirements have been addressed   |

## Required Knowledge and Skills

This describes the essential skills and knowledge and their level required for this unit.

**Required Knowledge:**

- regulations relevant to the development and construction of landscape designs such as:
  - insurances
  - registration requirements
  - statutory regulations
  - overlays
- OHS / WHS requirements related to site inspection
- design principles applicable to landscape design such as:
  - unity
  - simplicity
  - balance
  - colour
  - transition
  - line
  - proportion
  - repetition
  - form
  - function
- available materials and their applications and restrictions relevant to the design
- conventional drafting symbols and notations used on landscape designs

**Required Skills:**

- Communication skills to
  - consult with clients to determine their requirements and to advise on and confirm design concepts
  - negotiate any modifications or changes with the client
  - represent designs visually and in writing
- Problem solving skills to:
  - evaluate different options and ideas to develop landscape designs that meet client and site requirements
  - analyse the impact of soils, topography, aspect, existing vegetation, neighbouring elements, levels and climatic factors on individual landscape designs
  - select plants that meet the brief and are appropriate for the site conditions
  - develop designs that meet client, regulatory and site requirements
- Self management skills to:
  - source information and ideas that can assist in developing the design
  - explore and experiment with different ideas
  - develop materials palettes
- Numeracy skills to:
  - take measurements

- calculate quantities
- draw to scale
- take levels
- develop designs within identified budgetary constraints
- determine timelines for the design process

## Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold / italicised wording in the Performance Criteria is detailed below.

***Client*** may include:

- private individuals
- organisations
- public bodies
- community groups

***Requirements*** may include:

- intended use of the site
- required features
- preferred landscape style

***OHS / WHS requirements***  
may include:

- use of Personal Protective Equipment
- site access
- permissions / authorisations
- location and potential hazards of services such as gas or water mains and electrical supplies, including clearance during construction activities
- need for restrictions to site during construction or other activities
- advice on potential health issues relating to choice of plant materials such as plants that are potentially poisonous to humans/pets

***Physical elements and features*** may include:

- proposed or existing structures
- buildings
- watercourses
- irrigation and/or drainage systems
- differing levels
- roads and paths
- existing vegetation
- topographic features
- site dimensions
- views and outlooks
- climate and weather conditions
- soil characteristics
- access to site
- existing site use

***Regulations*** may include:

- building regulations
- state and local council regulations and by-laws

***Additional relevant information*** may include:

- heritage overlays
- building covenants
- easements
- tree and vegetation preservation orders
- significant landscape overlay
- flood / fire overlay

***Design principles*** may include:

- unity
- simplicity
- balance
- colour
- transition
- line
- proportion
- repetition
- form
- function

**Lighting** may include:

- up lighting
- down lighting
- step lighting

**Landscape elements** may include:

- plants
- paths
- retaining walls
- planters
- pools / ponds
- decks / verandas
- shelters
- pergolas
- steps
- fences
- seats

**Notes** may include:

- legend
- plant schedule
- concept design legend
- materials to be used

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Elements, Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment section in Section B of the Accreditation Submission.

### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- consult with clients to determine and clarify needs, negotiate changes and confirm design concept
- develop design concepts that meet client requirements, site constraints and any applicable regulatory requirements
- prepare finalised landscape designs using illustrations and notations

### Context of and specific resources for assessment

Assessment must ensure access to:

- a range of client briefs
- an appropriate site for inspection

**Method(s) of assessment**

The following suggested assessment methods are suitable for this unit:

- portfolio of landscape designs which show evidence of the development of a concept plan according to the design brief
- oral and / or written questioning to confirm knowledge of design principles, regulations and by-laws relevant to the development of landscape designs



<b>Unit Code</b>	<b>VU21970</b>
<b>Unit Title</b>	<b>Prepare simple landscape drawings</b>
<b>Unit Descriptor</b>	<p>This unit describes the skills and knowledge to produce simple drawings that communicate landscape design ideas, options or concepts to clients.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
<b>Employability Skills</b>	This unit contains employability skills.
<b>Application of the Unit</b>	This unit applies to those who generate and prepare simple landscape designs for projects on residential, commercial or public open spaces.
<b>Element</b>	<b>Performance Criteria</b>
Elements describe the essential outcomes of a unit of competency. Elements describe actions or outcomes that are demonstrable and assessable.	Performance criteria describe the required performance needed to demonstrate achievement of the element – they identify the standard for the element. Where bold/italicised text is used, further information or explanation is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
1 Determine requirements	<p>1.1 Identify the <b>type of drawing</b> required to fully describe the design according to the scope and complexity of the job being undertaken</p> <p>1.2 Identify <b>key features</b> to be recorded</p> <p>1.3 Identify and assemble required <b>tools and equipment</b></p> <p>1.4 Identify and interpret site surveys, architectural drawings and statutory requirements relevant to the site</p> <p>1.5 Identify where support calculations / drawings may be required by <b>others</b></p>
2 Produce simple sketches and drawings	<p>2.1 Determine any <b>OHS / WHS requirements</b> applicable to the <b>worksite</b></p> <p>2.2 Inspect the relevant area as required to take and record measurements</p> <p>2.3 Select the appropriate scale for the drawing</p> <p>2.4 Create simple two and three-dimensional drawings using <b>standard drawing conventions</b> and incorporating relevant codes and standards</p>

- |   |                             |   |
|---|-----------------------------|---|
|   | 2.5                         | Create sectional drawings of simple elements using standard drawing conventions   |
|   | 2.6                         | Create elevation drawings of simple structural elements using standard drawing conventions  |
| 3 | Notate and process drawings | 3.1 Record essential information on the drawing with symbols and abbreviations according to standard drawing conventions.<br><br>3.2 Label, date and process drawings according to <b><i>organisational administration and quality procedures</i></b> |

## Required Knowledge and Skills

This describes the essential skills and knowledge and their level required for this unit.

### Required Knowledge:

- features of different types of drawings including:
  - three-dimensional drawings
  - schematic drawings
  - sectional views
  - elevations
- current Australian Standard for technical drawing relevant to the production of drawings for landscape design
- OHS / WHS requirements for maintaining own and others safety when undertaking work

### Required Skills:

- communication skills to represent required information visually and in writing
- planning and organising skills to assemble required tools and equipment
- problem solving skills to identify where support calculations / drawings may be required by others
- self management skills to:
  - organise required activities
  - process drawings according to organisational procedures
- numeracy skills to:
  - take and record measurements accurately
  - select and apply an appropriate scale
  - transfer level measurements from site to plan
  - identify and interpret site surveys, architectural drawings and other relevant materials prepared by others

## Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold / italicised wording in the Performance Criteria is detailed below.

***Type of drawing*** may include:

- orthographic drawings
- schematic drawings
- sectional views
- plan view
- front elevation
- side elevation

***Key features*** may include:

- levels and variations
- gates
- lighting, power and water supplies
- services
- walls
- existing vegetation
- existing structures
- footings

***Tools and equipment*** may include:

- computer
- digital camera
- pen and paper
- digital drawing tools
- automatic levels
- digital or manual measuring equipment

***Others*** may include:

- engineers
- surveyors

**OHS / WHS requirements** may include:

- those related to the use of the screen equipment, computing equipment and peripherals, ergonomic work stations
- detailing power supplies
- details of services
- identifying hazards located in the area
- use of personal protective equipment
- site access
- permissions / authorisations

**Worksite** may include:

- design site
- office environment

**Standard drawing conventions** include:

- standard design symbols common to the landscape industry

**Organisational administration and quality procedures** may include:

- version control
- filing and storage

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Elements, Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment section in Section B of the Accreditation Submission.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Assessment must confirm the ability to:

- produce two and three-dimensional and sectional drawings appropriate to the job being undertaken
- apply standard drawing conventions to produce clear and accurate drawings
- process completed drawings according to organisational requirements

**Context of and specific resources for assessment**

Assessment must ensure:

- access to tools and equipment required to produce drawings

**Method(s) of assessment**

The following suggested assessment methods are suitable for this unit:

- portfolio of completed two and three-dimensional and sectional drawings
- oral and / or written questioning to assess knowledge of standard drawing conventions, relevant codes and standards, OHS / WHS requirements and relevant organisational procedures

<b>Unit Code</b>	<b>VU21967</b>
<b>Unit Title</b>	<b>Apply construction techniques to landscape design</b>
<b>Unit Descriptor</b>	<p>This unit describes the skills and knowledge to incorporate constructed elements into landscape designs, within site and budgetary requirements. It includes the skills and knowledge required to determine when and how to access specialist expertise and technical services.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
<b>Employability Skills</b>	This unit contains employability skills.
<b>Application of the Unit</b>	This unit applies to those who generate and prepare simple landscape designs for projects on residential, commercial or public open spaces.
<b>Element</b>	<b>Performance Criteria</b>
Elements describe the essential outcomes of a unit of competency. Elements describe actions or outcomes that are demonstrable and assessable.	Performance criteria describe the required performance needed to demonstrate achievement of the element – they identify the standard for the element. Where bold/italicised text is used, further information or explanation is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
1 Incorporate structures and features into a landscape design	<p>1.1 Review the design of <b>structures and features</b> for consistency with the use of the space</p> <p>1.2 Identify and source any required preliminary <b>specialist expertise</b></p> <p>1.3 Select fit for purpose <b>materials</b> that reflect the style and aesthetic of the overall design concept</p> <p>1.4 Assess the suitability of constructed elements in relation to the <b>physical properties</b> of soils on the site</p> <p>1.5 Assess the <b>effects</b> of surface and subsurface water and <b>drainage patterns</b> on constructed elements</p> <p>1.6 Assess drainage requirements to ensure integrity of constructed elements in the design</p>
2 Determine construction requirements	<p>2.1 Evaluate <b>factors</b> that <b>impact</b> on the selection and construction of elements in the design</p> <p>2.2 Select materials according to their <b>properties</b> and application within the design</p>

- |   |   |   |
|---|---|---|
|   | 2.3   | Determine <b>construction techniques</b> that support the design, fit timelines and meet budget requirements  |
|   | 2.4   | Identify surface <b>treatments</b> appropriate for the selected materials and the design  |
| 3 | Assess the need for supplementary water in a landscape design | <p>3.1 Identify any available water in the landscape</p> <p>3.2 Determine the feasibility of using available water in the landscape</p> <p>3.3 Identify appropriate <b>irrigation methods</b> that will support the design</p> <p>3.4 Incorporate irrigation requirements into the design</p> |
| 4 | Source technical services and expertise                       | <p>4.1 Determine any construction requirements beyond the <b>scope of own expertise</b></p> <p>4.2 Source providers of <b>technical services</b> and specialised expertise as required</p>  |

## Required Knowledge and Skills

This describes the essential skills and knowledge and their level required for this unit.

**Required Knowledge:**

- landscape features and elements commonly used in landscape design projects
- construction techniques commonly required for landscape design projects
- properties of construction materials commonly used in landscape design projects
- physical soil properties and their impact on constructed features
- natural drainage patterns and modification methods
- movement of water through soil
- purpose and application of drainage systems
- plant water requirements
- different methods of irrigation
- specialist and technical services commonly involved in the construction of landscape design projects

**Required Skills:**

- problem solving skills to:
  - select appropriate construction methods for structures and features to suit site specific soil properties
  - identify and modify natural drainage patterns
  - determine appropriate drainage systems for a design
  - maximise the use of available water in the landscape
  - select an appropriate irrigation system for a design
  - identify when and what specialist and / or technical expertise is required
- communication skills to source providers of technical and specialist expertise as required
- numeracy skills to:
  - work within project budgets
  - calculate quantities
  - take measurements

**Range Statement**

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold / italicised wording in the Performance Criteria is detailed below.



**Structures and features** may include:

- paths
- retaining walls
- planters
- pools/ponds
- decks
- verandas
- shelters
- pergolas
- steps
- fences
- seats

**Specialist expertise** may include:

- engineers:
  - structural
  - soil
- architects
- arborists
- lighting designers

**Materials** may include:

- concrete
- brick
- timber
- metal
- recycled materials
- modified timber products

**Physical properties** may include:

- soil structure
- soil texture
- reactivity to the varying amounts of water present in a soil
- soil strength
- soil consistency
- soil permeability

**Effects** may include:

- loss of overall integrity of constructed elements
- foundation movement in constructed features
- cracking in masonry features
- degradation of constructed elements due to contact with poorly drained soils

**Drainage patterns** may include:

- natural flow of surface water
- infiltration rates
- water movement through soil profile

**Factors** may include:

- expected use
- load bearing requirements
- type of soil
- drainage characteristics of site
- cost
- durability / sustainability

**Impact** may include:

- habit
- form
- texture

**Properties** may include:

- strength
- shrinkage
- defects
- availability
- size/shape
- porosity
- evenness
- durability
- colour
- surface texture
- thermal expansion/contraction
- quality classes/grades
- sustainability

**Construction techniques** may include:

- the need for footings
- retaining wall systems
- flexible and rigid paving options
- pool/water feature design

**Treatments** may include:

- sealants
- preservatives
- coatings
- abrasives
- paint/stains
- powder coating
- stamping
- rendering
- cladding

**Irrigation methods** may include:

- mains pressure or low pressure reticulation
- below and/or above ground systems
- gear driven and spray systems
- dripper, soaker and capillary systems

**Scope of own expertise** includes:

- the point at which the scope and/or complexity of a given job requires outsourcing of components to a practitioner who is more expert in that particular area

**Technical services** may include:

- plumbers
- electricians
- irrigation installers

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Elements, Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment section in Section B of the Accreditation Submission.

**Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Assessment must confirm the ability to:

- incorporate into a landscape design constructed elements and drainage that meet the aesthetic and physical requirements of the site
- recognise limits of own expertise and source providers of specialised expertise and technical services when required

**Context of and specific resources for assessment**

Assessment must ensure:

- access to design concepts that include all required information to enable candidates to demonstrate competency

**Method(s) of assessment**

The following suggested assessment methods are suitable for this unit:

- portfolio of landscape designs that include the incorporation of constructed elements and drainage
- oral and / or written questioning to confirm knowledge of the factors impacting on constructed elements
- costings that demonstrate how constructed elements meet budgetary constraints'

<b>Unit Code</b>	<b>VU21968</b>
<b>Unit Title</b>	<b>Apply the principles of sustainability to landscape design</b>
<b>Unit Descriptor</b>	<p>This unit describes the skills and knowledge to analyse landscape designs for the application of the principles of sustainability and make recommendations for improving sustainability.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
<b>Employability Skills</b>	This unit contains employability skills.
<b>Application of the Unit</b>	This unit applies to those who generate and prepare simple landscape designs for projects on residential, commercial or public open spaces.
<b>Element</b>	<b>Performance Criteria</b>
Elements describe the essential outcomes of a unit of competency. Elements describe actions or outcomes that are demonstrable and assessable.	Performance criteria describe the required performance needed to demonstrate achievement of the element – they identify the standard for the element. Where bold/italicised text is used, further information or explanation is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
1 Research the application of sustainability in landscape design	<p>1.1 Research the <b><i>principles of sustainability</i></b> and their application to landscape design</p> <p>1.2 Identify the <b><i>materials</i></b> used in landscape design</p> <p>1.3 Analyse the impacts of materials on <b><i>environmental, ecological, economic</i></b> and <b><i>social resources</i></b></p> <p>1.4 Determine the <b><i>sustainability criteria</i></b> used to assess the materials</p> <p>1.5 Analyse the impact of <b><i>legislation, standards, policies and procedures</i></b> on sustainable landscape design</p> <p>1.6 Identify the ways in which <b><i>alternative design strategies</i></b> support the environment</p>
2 Evaluate landscape designs for sustainability	<p>2.1 Apply <b><i>systems based thinking</i></b> to assess the overall design of a landscape</p> <p>2.2 Use sustainability criteria to assess sustainable outcomes</p>

- |   |     |  |
|---|-----|--|
|   | 2.3 | Apply alternative design strategies to improve sustainability outcomes   |
|   | 2.4 | Undertake a cost benefit analysis for alternative design strategies  |
| 3 | 3.1 | Review the outcomes of the landscape evaluation to determine <b><i>potential sustainability improvements</i></b> |
|   | 3.2 | Document recommended improvements and present findings to <b><i>relevant stakeholders</i></b>                    |
|   | 3.3 | Review and respond to feedback from relevant stakeholders  |
|   | 3.4 | Incorporate agreed changes into final landscape design   |

## Required Knowledge and Skills

This describes the essential skills and knowledge and their level required for this unit.

### Required Knowledge:

- principles of sustainability and their application to landscape design
- environmental, ecological, economic and social resources commonly related to sustainable design
- legislation, standards, policies and procedures that commonly impact on sustainable landscape design
- sustainable use of resources in the landscape
- materials commonly used in landscape design
- systems based thinking
- alternative design strategies
- features and processes of simple cost benefit analysis

### Required Skills:

- literacy skills to document evaluation outcomes
- communication skills to respond to feedback from relevant stakeholders
- problem solving skills to:
  - analyse the application of the principles of sustainability to landscape design
  - evaluate landscape designs and make recommendations for improvements
  - determine appropriate alternative design strategies to minimise impacts and improve efficiencies to the landscape design
  - analyse feedback from relevant stakeholders
- numeracy skills to undertake a cost benefit analysis

## Range Statement

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold / italicised wording in the Performance Criteria is detailed below.

***Principles of sustainability*** may include:

- Hannover Principles
- Three Pillars of Sustainability

***Materials*** may include:

- soil, rocks and mulches
- timber for construction and timber products
- sand, gravel, pebbles, screenings and cement
- bricks, pavers and tiles
- plants
- recycled materials

***Environmental resources*** may include:

- consumption of natural resources
- impact of human actions on the environment
- energy and water strategies
- the life-cycle performance of materials
- atmospheric pollution
- the generation and management of waste

***Ecological resources*** may include:

- the use of the site with regard to the biodiversity of natural systems
- responding to microclimates and natural energy flows
- the provision of habitat and wildlife corridors
- impacts on plants, animals and humans

***Economic resources*** may include:

- budget parameters
- developing a cost effective design
- durability of design and materials
- the long-term maintenance requirements and on-going costs of the landscape
-

- Social resources** may include:
- business ethics
  - fair trading
  - human and animal rights
  - the human relationship with nature
  - effective protection of the environment
  - considered use of natural resources
  - enhancement of natural systems
  - responsibilities in meeting current needs without compromising future generations
  - the involvement of local community and professionals from different sectors

- Sustainability criteria** may include:
- Sustainability Indexes:
  - Global Compact
  - Global Reporting Index
  - audit tools and techniques:
    - carbon accounting
    - locally produced or available on-site
    - level of processing
    - remanufactured, reusable or recycled
    - presence or emission of toxic substances
    - biodegradability
    - renewable/non-renewable materials
  - Life-cycle assessment (LCA)
    - material composition
    - toxicity
    - durability and potential for environmental impact, reuse or recycling
  - embodied energy usage



**Legislation, standards, policies and procedures** may include:

- State Environment Protection Policies
- Commonwealth, State and Local Government Acts, Regulations and Codes of Practice
- Environmental Management Systems
- ISO 14000 Standards from International Organization for Standardization
- UN Local Agenda 21 - the Rio Declaration on Environment and Development
- Footprint Analysis – ecological, water, carbon
- Natural Capitalism

**Alternative design strategies** may include:

- reusing water from a source other than mains water:
  - grey water systems
  - storm water storage
- solar and wind energy sources
- recycled or plantation timbers
- composting

**Systems based thinking** may include:

- Hannover Principles
- the Cradle-to-Cradle philosophy
- waste free options and how materials and processes enter back into natural cycles to support the environment and make use of its processes

**Potential sustainability improvements** may include:

- use of new/improved products and materials which are more sustainable
- reviewing the use of resources
- adopting procedures for revisiting the landscape over time
- planning of maintenance programs to ensure the long term integrity of the landscape
- updating policies and procedures and complying with new legislation

**Relevant stakeholders** may include:

- clients
- colleagues
- local authorities

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Elements, Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment section in Section B of the Accreditation Submission.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Assessment must confirm the ability to:

- apply knowledge of the principles of sustainability in landscape design to evaluate designs and make recommendations on improving sustainability
- seek, analyse and apply feedback from relevant stakeholders on recommendations to improve sustainability

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- landscape designs
- relevant stakeholders to provide feedback on sustainability improvement recommendations

### **Method(s) of assessment**

The following suggested assessment methods are suitable for this unit:

- oral and / or written questioning to assess knowledge of sustainability principles, relevant legislation, standards, policies and procedures, features of sustainable resource use, systems based thinking and alternative design strategies
- portfolio of landscape designs that have been evaluated for sustainability and include evidence of responses to stakeholder feedback

<b>Unit Code</b>	<b>VU21971</b>
<b>Unit Title</b>	<b>Produce 2-D architectural landscape drawings using CAD</b>
<b>Unit Descriptor</b>	<p>This unit describes the skills and knowledge to use Computer aided drawing (CAD) software to produce two – dimensional (2-D) architectural drawings for landscape designs.</p> <p>The outcomes of this unit do not relate to the production of construction drawings.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
<b>Employability Skills</b>	This unit contains employability skills.
<b>Application of the Unit</b>	This unit applies to those who generate and prepare simple landscape designs for projects on residential, commercial or public open spaces.
<b>Element</b>	<b>Performance Criteria</b>
Elements describe the essential outcomes of a unit of competency. Elements describe actions or outcomes that are demonstrable and assessable.	Performance criteria describe the required performance needed to demonstrate achievement of the element – they identify the standard for the element. Where bold/italicised text is used, further information or explanation is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
1 Create a landscape drawing template file	1.1 Set up the drawing environment 1.2 Create a suitable layering strategy 1.3 Create an architectural/landscape library 1.4 Create appropriate text and dimension styles
2 Produce architectural/landscape drawings	2.1 Clarify <b>drawing requirements</b> 2.2 Produce drawings using appropriate layers 2.3 Add notations as required according to Australian Standards and <b>drawing protocols</b> 2.4 Apply appropriate scale according to Australian Standards and drawing protocols 2.5 Import symbols to represent landscape <b>features</b> 2.6 Apply essential status toggles

- |                                |   |
|--------------------------------|---|
| 3 Edit drawing components      | 3.1 Delete elements that are not required from an existing drawing        |
|                                | 3.2 Use editing commands to modify drawing elements and existing text     |
|                                | 3.3 Set up title blocks   |
| 4 Plot Computer Aided Drawings | 4.1 Set page layout for the drawing file to suit plotting requirements    |
|                                | 4.2 Set the print parameters for the plotter                              |
|                                | 4.3 Plot drawings on the correct media                                    |
|                                | 4.4 Apply basic palette editing and tool shortcuts                        |
| 5 Save and back up files       | 5.1 Create suitable file directories for the drawing project              |
|                                | 5.2 Save and back up drawing files to the specified drives or directories |
|                                | 5.3 Retrieve, rename and edit saved files as required                     |
| 6 Import files                 | 6.1 Insert drawing files into other software applications                 |
|                                | 6.2 Import text files into CAD drawings from other software               |
|                                | 6.3 Import blocks into files / drawings                                   |

### **Required Knowledge and Skills**

This describes the essential skills and knowledge and their level required for this unit.

**Required Knowledge:**

- types and uses of drawings commonly required for landscape design
- drawing protocols applicable to the production of 2-D CAD for landscape design
- drawing commands and their application
- layering strategies and techniques
- basic palette editing and tool shortcuts
- OHS / WHS requirements for maintaining own and others safety when undertaking work

**Required Skills:**

- literacy skills to:
  - read and interpret plans, specifications and design briefs
  - clarify requirements
  - represent required information visually and in writing
- problem solving skills to:
  - create an appropriate layering strategy
  - identify and create an appropriate template file
- planning and organising skills to save, retrieve and back up files
- numeracy skills to add dimensions using an appropriate scale

**Range Statement**

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold / italicised wording in the Performance Criteria is detailed below.

***Drawing requirements*** may include:

- schematic drawings
- sectional views
- plan view
- front elevation
- side elevation

***Drawing protocols*** may include:

- abbreviations
- commonly used symbols
- legends
- lettering standards
- numbering
- paper size
- scale

**Features** may include:

- plants
- furniture
- water
- overhead structures / pergolas
- paving
- walls

## **Evidence Guide**

The evidence guide provides advice on assessment and must be read in conjunction with the Elements, Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment section in Section B of the Accreditation Submission.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Assessment must confirm the ability to:

- produce and edit two – dimensional architectural drawings for landscape designs using CAD software
- print, save and retrieve drawings according to organisational requirements

### **Context of and specific resources for assessment**

Assessment must ensure access to:

- a computer
- CAD software

### **Method(s) of assessment**

The following assessment methods are suitable for this unit:

- portfolio of two – dimensional drawings produced using CAD software
- demonstration of plotting computer aided drawings
- demonstration of saving, backing up and retrieving files.