

Viticulture Project

Summary of Feedback, Responses and Actions



8 February 2019

This project involves the development of *AHC51519 Diploma of Viticulture* to supersede *AHC51516 Diploma of Viticulture*. It also involves the review of 10 units of competency, including the redesign of 9 of these units and the development of 1 new unit. Below is a list of the new, reviewed and redesigned units developed for this draft phase.

The major alterations to the Diploma of Viticulture are:

- Changes to the core units list
- Consolidation of biosecurity measures, especially in the core units list of the qualification
- The removal of *AHCBER502 Manage the implementation of an emergency disease of plant pest control program* from the qualification (though not deleted as it will be made available in upcoming qualifications)
- The creation of the new unit *AHCPHT5XX Evaluate grapes for production*.

These changes were made based on the extensive feedback received across Australia from stakeholders. Skills Impact would like to thank all who donated their time to provide feedback for this report.

The list of new, reviewed and redesigned units:

- *AHCBAC505 Plan and manage long-term weed, pest or disease control in crops* (which supersedes *AHCBAC505 Plan and manage long-term weed, pest or disease control in crops*)
- *AHCBER501 Manage active operational emergency disease or plant pest sites* (which supersedes *AHCBER501 Manage active operational emergency disease or plant pest sites*, minor changes)
- *AHCORG5XX Develop an organic or biodynamic management plan* (which supersedes *AHCORG501 Develop an organic management plan*)
- *AHCORG5XX Prepare the enterprise for organic or biodynamic certification* (which supersedes *AHCORG502 Prepare the enterprise for organic certification*)
- *AHCPHT504 Develop a grape production plan* (which supersedes *AHCPHT504 Develop a grape production plan*)
- *AHCPHT505 Evaluate wine* (which supersedes *AHCPHT505 Evaluate wine*)
- *AHCPHT506 Manage a wine making process* (which supersedes *AHCPHT506 Manage a wine making process*)
- *AHCPHT5XX Evaluate grapes for production* (new unit)
- *AHCSOL501 Monitor and manage soils for production projects* (which supersedes *AHCSOL501 Monitor and manage soils for production projects*)
- *AHCWAT502 Manage water systems* (which supersedes *AHCWAT502 Manage water systems*)

- AHCWRK501 Plan, implement and review a quality assurance program (which supersedes *AHCWRK501 Plan, implement and review a quality assurance program*)

The draft qualification, including the new and redesigned units, were available for broader stakeholder consultation and feedback between 15 November and 16 December 2018. A total of 68 responses were received, representing 4 training providers (NSW, SA, VIC and WA), one Curriculum Maintenance Manager (VIC), 17 industry (NSW and SA), 6 associations (National and NSW), one union, and 2 government departments (VIC and WA).

Below is a summary of the issues raised and how these issues have been dealt with. This involves a consideration of the information provided, views of industry stakeholders where known, and views provided by the people who are part of the Subject Matter Expert Working Group process. Resolutions are constructed to take into account the needs and views of stakeholders as far as possible, and to comply with the *Standards for Training Packages 2012*. The resolutions may represent a compromise on one or more stakeholder views with the aim of a workable outcome for industry, State and Territory Training Authorities (STAs) and training providers.

The units and qualifications are now available to view and validate on the [Skills Impact website](#) until 22 February 2019

Stakeholders Comments and Identified Issues	Consideration and Proposed Resolution	
<p>AHC51519 Diploma of Viticulture</p> <p>The majority of feedback received for the Diploma of Viticulture was to re-structure the core units list, in order to be more in line with the tasks and responsibilities that every day viticulturists face. Most notably, this has included the removal of AHCMOM311 Manage machinery and equipment from the core into the elective units list, and the inclusion of AHCSOL501 Monitor and manage soils for production into the core units list.</p>		
<ul style="list-style-type: none"> Industry, SA 	<p>Move AHCSOL501 Monitor and manage soils for production projects to core units list and AHCWAT502 Manage water systems to elective units list.</p> <p>Retain AHCBER502 Manage the implementation of an emergency disease or plant pest control program in the qualification (probably should be core).</p>	<p>Feedback from the Subject matter expert working group was sought regarding the core units for the qualification. Their advice supported the following:</p> <p>Move AHCMOM501 to the electives unit list and AHCSOL501 to the core units list, and change the core units to:</p> <p>AHCBAC505 Plan and manage long-term weed, pest or disease control in crops</p> <p>AHCBIO305 Apply biosecurity measures</p> <p>AHCBUS501 Manage staff</p> <p>AHCPHT504 Develop a grape production plan</p> <p>AHCSOL501 Monitor and manage soils for production</p> <p>AHCWAT502 Manage water systems</p> <p>Further advice was sought regarding adding AHCPHT5XX Evaluate grapes for production, outcome – majority subject matter expert feedback indicated not to include in core units list.</p> <p>Targeted feedback from biosecurity stakeholders sought regarding deletion of AHCBER502 and AHCBER501. Biosecurity subject matter expert advice supported the following:</p> <p>AHCBER501 and AHCBER502 units are needed as it is intended that they be included in other courses to the Diploma of Viticulture. Currently they exist in the Diploma of Production Horticulture qualification, and AHCBER502 is available through the Diploma of Conservation and Land Management. These units will also be used in both the Certificate IV in Public Safety (Biosecurity Response Leadership) – AHCBER501 as an</p>

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
		<p>elective and the Diploma of Public Safety (Biosecurity Response Management) AHCBER502 as a core unit.</p> <p>AHCBER502 has been removed from the qualification but not deleted. It will become available in qualifications set for release in 2020.</p> <p>AHCBER501 has been added to the elective unit list in the qualification. The units will be retained in the training package and are recommended for broader review separately to this project.</p>
<ul style="list-style-type: none"> Industry, SA 	<p>Move AHCSOL501 Monitor and manage soils for production projects to core units list, Retain AHCWAT502 Manage water systems in core units list, Move AHCMOM501 Manage machinery and equipment to elective units list.</p> <p>Recommend a unit on sustainability in the qualification, and it would be good to have some "sexy" units on robotics and technology that are good for graduates to know as it could hook in new students.</p>	<p>AHCSOL501 added to the core units list Added AHCMOM311 Operate precision control technology to elective units list.</p> <p>Comment:</p> <p>There is a priority skill project listed in the Industry Skills Forecast - Agricultural skills in data capture and analysis - that is intended to address emerging technology such as satellite imagery technologies, apps, drones, etc. This project should result in new units that can, in the future, be included in the Diploma of Viticulture.</p>
<ul style="list-style-type: none"> Association, National 	<p>Move AHCSOL501 Monitor and manage soils for production projects to core units list, Retain AHCWAT502 Manage water systems in core units list, Move AHCMOM501 Manage machinery and equipment to elective units list.</p>	<p>AHCSOL501 added to the core units list AHCMOM311 Operate precision control technology added to elective units list. AHCWAT502 Manage water systems retained in core units list.</p>
<ul style="list-style-type: none"> Association, National 	<p>The soil unit should replace the mechanical unit in the core of the qualification. An understanding of soil is more vital in viticulture than an understanding of the machines used within viticulture. Medium and small vineyards just bring in the machines from a subcontractor, meaning they have no need to learn how to use or manage the machines themselves.</p> <p>Agreed with keeping the wine making units in the qualification is for the best, as viticulturists and wine makers should have an understanding of what the other does. AHCBER502 should</p>	<p>AHCSOL501 added to the core units list, AHCMOM311 moved to elective units list.</p> <p>AHCBER502 removed from qualification</p>

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
	be removed from qualification, as its important aspects are covered in other units within the qualification.	
<ul style="list-style-type: none"> RTO, WA 	The soil unit should replace the mechanical unit in the core. Also agreed with wine making units remaining in the qualification and that AHCBER502 be deleted from the qualification as the important aspects of this unit are covered in other units within the qualification.	AHCSOL501 added to the core units list AHCMOM311 moved to elective units list.
<ul style="list-style-type: none"> RTO, WA 	The soil unit should replace the mechanical unit in the core. Also agreed with the wine making units remaining in the qualification and the deletion from the qualification of AHCBER502. Suggested that maybe AHCBER501 remain as an elective.	AHCSOL501 added to the core units list AHCMOM311 moved to elective units list AHCBER501 retained as an elective AHCBER502 removed from the qualification but not deleted. It can be accessed through future qualifications. Explained to subject matter expert the difference between deletion and removal from qualification, subject matter expert just wants the unit removed from qualification
<ul style="list-style-type: none"> Association, National 	Concerned that the potential of AHCBER501 and AHCBER502 will take focus away from biosecurity. Agreed that deletion should be considered due to enrolment numbers, but if this were to be so, recommended including a stronger biosecurity focus in other units within the Diploma.	Stakeholder shown new core with two biosecurity related units, AHC BIO305 and AHCORG5XX. Stakeholder happy with this outcome. Stakeholder happy that AHCBER501 remains in qualification and that AHCBER502 is not being deleted.
<ul style="list-style-type: none"> Industry, NSW 	Recommend that AHCMOM501 should not be a core unit as there are more important units, soil management should be a core unit, as without it you cannot manage a vineyard. AHC BIO302 should not be a core unit, as the content is covered in other units, and having this in core is double handling. AHCCHM501 should be a core unit as the course content is invaluable.	AHCMOM311 moved to elective units list. AHCSOL501 added to the core units list. AHC BIO302 remains an elective. AHCCHM501 explored as an option for core unit. Majority of subject matter experts disagreed that unit was important to be retained. Unit added to elective units list, with local RTO to offer elective. Subject matter expert feels this outcome addresses original concern.

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
<ul style="list-style-type: none"> Association, NSW 	<p>A unit for managing staff and contractors required in the core of a management qualification like a diploma. Emphasis on the contractors, as many medium and smaller vineyards don't have many staff but do bring in a great deal of contractors.</p> <p>A biosecurity unit such as AHC BIO305 needs to be in the core as there has been a huge shift in biosecurity needs nationally in the last 12 months, and soil needs to go back in the core.</p> <p>Suggested an individual unit for viticultural pests and biosecurity.</p> <p>Ideal core-</p> <p>AHCBUS501- Manage Staff</p> <p>AHC BIO305- Apply biosecurity measures</p> <p>AHCPHT504- Develop a grape production plan</p> <p>AHCBAC505- Plan and manage long term weed, pest or disease control in crops</p> <p>AHCSOL501- Monitor and manage soils for production projects</p> <p>AHCWAT502- Manage water systems</p> <p>AHCBER501 should stay in electives for emergency reasons and was ok with deleting AHCBER502 from the qualification.</p> <p>Disagreed with the idea of amalgamating "Evaluate grapes for wine production" with "Evaluate wine", she felt the new unit "Evaluate grapes" was a good unit for viticulturist and significantly different from "Evaluate wine".</p>	<p>Evaluate wine and Evaluate grapes for wine production kept as separate units.</p> <p>AHCBUS501 Manage staff moved to core.</p> <p>AHC BIO305 included as core unit.</p> <p>AHCSOL501 added to the core units list.</p> <p>All suggested units for the core of the qualification have been included in the new core.</p>
<ul style="list-style-type: none"> Industry, NSW 	<p>Qualification does not need major updates. It's basically fine as it is. Agreed that soil needs to go back in the core, soil should be swapped with mechanical, which should be an elective.</p>	<p>AHCSOL501 added to the core units list.</p> <p>Other subject matter experts spoke to this subject matter expert regarding current qualifications shortcomings. Subject matter expert agreed that more units to support biosecurity would be valuable.</p>

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
		AHC BIO305 moved into core of qualification
<ul style="list-style-type: none"> RTO, NSW 	Amalgamate Evaluate Grapes with Evaluate Wine as there is too much cross over between the units and it frees up the space in the core. Agreed that soil needs to go back in the core, and should be swapped with mechanical, which should be an elective.	Discussed with stakeholder the need for Evaluate Grapes to be relevant for table grape growers, who do not need the knowledge of wine in the unit. Stakeholder happy with this rationale, and agreed that Evaluate Wine and Evaluate Grapes for production be kept as separate units. AHCMOM311 moved to elective units list. AHCSOL501 added to the core units list.
<ul style="list-style-type: none"> Industry, NSW x 18 	Agreed that soil needs to go back in the core, and should be swapped with mechanical, which should be an elective.	AHCMOM311 moved to elective units list. AHCSOL501 added to the core units list.
<ul style="list-style-type: none"> Industry, NSW 	<p>Agreed that soil needs to go back in the core, and should be swapped with mechanical, which should be an elective. Diploma must be sufficiently flexible to ensure an appropriate course can be run in each institution to meet the following:</p> <ul style="list-style-type: none"> -The local industry's requirements, which will differ according to the region - The expectations of the potential students, if it does not attract sufficient student interest then it will not run! For example more than half of the Kurri TAFE Diploma graduates have ended up working most of their time in Hunter wineries, so it is imperative that the course running at Kurri has a significant wine component. -The teaching skills available at the institution - The resources available at the training institution. For example the Kurri Campus has possibly the best teaching winery in Australia and it is certainly superior to many overseas facilities. To not use it would be a great waste of resources <p>For the unit descriptions-</p> <ul style="list-style-type: none"> - They need to be made simpler with less overlap between similar units. E.g. develop a wine grape production plan etc. This is clearly true of the BER units. 	<p>AHCMOM311 moved to elective units list. AHCSOL501 added to the core units list.</p> <p>Feedback from subject matter experts nation-wide has shown that this is possible and that the new qualification does not prevent this.</p> <p>Units included in core and elective lists represent real life skills and knowledge that viticulturists require to work locally, nationally and internationally.</p> <p>Qualification allows for use of all appropriate facilities. Including potential full use of capabilities for superior facilities.</p> <p>Unit descriptors reviewed and simplified where possible</p>

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
	<p>- The comment that "too much flexibility can lead to selection of units which in total may reduce the rigour of the whole qualification" is a red herring as a competent training will structure the course to maximise the value to all parties.</p>	<p>Comment noted and used in broader application when discussing the flexibility of the qualification</p>
<ul style="list-style-type: none"> Association, NSW 	<p>The core needs to ensure that the student can manage the vineyard environment (soils, water, pests etc.), the labour inputs (staff/contractors) and have an overall plan and ensuring the site/crop is biosecure. Understanding the crop requirements is added via Grapes for wine production. If there can only be 6 core then this can be left out.</p> <p>Core units should be :</p> <p>AHCPHT504 (Grape Production Plan) AHCBAC505 (Weeds/pests/disease) AHCWAT502 (Water) AHCSOL501 (Soil) AHCBUS501 (staff or contractors same mindset) AHCBIO305 (Biosecurity) And a seventh AHCPHT5XX (Evaluate Grapes for Wine Production).</p> <p>AHCBIO305/AHCBIO302 should be reviewed to provide an overarching subject which covers the preparedness and prevention phases of biosecurity with some coverage on identifying and reporting biosecurity risks or possible risks.</p> <p>On the core units- the units above should provide the students with the capacity to plan and manage the vineyard environment (soils, water, vines and their associated pests, diseases and weeds), coupled with managing staff (and contractors – which are much the same from a personal and safety perspective) within a biosecure environment. It would also be nice for them to pick up Evaluate grapes for wine production as this provides some focus</p>	<p>Core list of qualification has units that cover all requirements as advised by subject matter expert</p> <p>AHCPHT504 (Develop a grape production plan) AHCBAC505 (Weeds/pests/disease) AHCWAT502 (Water) AHCSOL501 (Soil) AHCBUS501 (Staff or contractors same mindset) AHCBIO305 (Biosecurity)</p> <p>Discussed with subject matter experts AHCPHT5XX Evaluate grapes for production. Stakeholder later agreed that unit can remain as an elective as long as AHCPHT504 remains in the core.</p> <p>AHCBIO305 and AHCBIO302 have been scheduled for review and this has been passed onto subject matter expert. subject matter expert's concerns have been registered for future action</p> <p>All subject matter expert suggestions included in formation of the core units list. AHCPHT5XX included as an elective with many RTO's expressing interest in delivering this unit. Subject matter expert happy with this.</p>

Stakeholders Comments and Identified Issues	Consideration and Proposed Resolution
<p>on the end game, however it is less essential than those listed above.</p> <p>The only key component that may be missing is vine foliage and canopy management. So plant husbandry – it would include practices such as pruning, lifting the vine canopy, desuckering, trimming and maybe the use of other crop protection practices such as sunscreen to manage over exposed fruit as a result of poor canopy growth, loss of canopy due to wind or hail etc... Not sure if there is a subject that picks this up. With a changing climate managing all of this is becoming more complex and timing of activities is important for successful outcomes. Vintage compression is a very real issue. Would this be covered in the Cert 3 or 4 (sorry – I'm not across these)?</p> <p>Unit AHPCPM501 – would this (or similar) not be a prerequisite to AHCBAC505? Given the DOV is a MANAGEMENT Diploma (as opposed to a Cert 3 or 4) the AHCCBA505 is the most appropriate for inclusion.</p> <p>It is interesting to note that there is no mention of the evaluation and use of new technologies However these can be covered with the processes which are being covered.</p> <p>I've tried to take a holistic view of the diploma and have looked at it as a MANAGEMENT qualification as opposed to a Cert 3 or 4. I'm also conscious that we are working in changing times – new technology, new approaches to old problems, climate change and its impacts e.g. vintage compression, the changing agrochemical environment, increasing biosecurity challenges (both exotic and as a result of the changing climate and things creeping into areas they haven't been an issue before in) etc. Also the relationships in the value chain are increasingly important and the grower/vineyard manager needs to be aware of where their grapes end up and the specifications it needs to meet – these</p>	<p>Option to include protected horticulture unit to cover this was discussed. Option to include it in final draft still viable based on feedback.</p> <p>No current unit for this explicitly however biosecurity units address some aspects of climate change.</p> <p>Subject matter expert to investigate Certificate III and IV in Wine Operations and investigate further.</p> <p>Discussed pre-requisite units with the subject matter expert and they concluded that AHPCPM501 would not be necessary as a pre-requisite.</p> <p>Discussed existing options for new technologies, and units currently being created elsewhere addressing new technologies. subject matter expert and subject matter expert working group felt it appropriate to wait until next qualification review as more relevant new technologies units will be available then, and current ones will be superseded</p> <p>Included two biosecurity related units in the core unit list of qualification</p> <p>Included management unit in core units list of qualification</p> <p>Adopted recommendation through AHCPHT5XX Evaluate grapes for production</p>

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
	<p>may not just be a colour and sugar level, but also practices used, agrochemicals used or not used etc... So many of my comment reflect this landscape.</p> <p>e.g. AHCPHT504 – Develop a grape production plan</p> <p>Elements 1.1 and 4.1 would provide the opportunity for plant cell density mapping to be used to monitor vine vigour and to assess vineyard variability.</p> <p>Should AHCBER502 be deleted?-</p> <p>This is a very specialised area and implementation would be done hand in hand with regulatory authorities who would most likely fulfil the lead role. Happy with deletion, suggest that there be a conversation with the State DPI's/Biosecurity departments re this being a short course that can offered in the event of an outbreak for a region to have delivered on an as needs basis.</p>	<p>Adopted recommendations</p> <p>Adopted recommendation and consulted with state and national DPI's and biosecurity departments and organisations. Feedback was to remove unit from qualification but do not delete as it will be used in pending biosecurity related qualifications. This feedback has been adopted</p>
<ul style="list-style-type: none"> Industry, NSW 	<p>The core should be expanded to 8 units, and we believes the qualification should work to meet this end, no matter what rules are currently in place. Recommended core-</p> <p>AHCBUS501 AHC BIO305 AHC BAC505 AHC WAT502 AHC SOL501 AHC PHT5XX AHC PCM501 AHC CHM501</p>	<p>Feedback carefully considered and taken to wider subject matter expert working group. Majority of subject matter expert working group disagreed with this proposed core.</p> <p>Benefits of keeping AHCPM501 and AHCCM501 as electives put to subject matter expert from other members of subject matter expert working group.</p> <p>subject matter expert did not alter view on proposed core, but understands that this is not the majority view, and appreciates the detail and scope of the conversation their proposed core units list generated</p>

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
	What's taught within these units accurately reflects what he does every day as a viticulturist, and are essential to all those learning viticulture.	
<ul style="list-style-type: none"> Government, WA 	AHCBIO305 Apply biosecurity measures has been recommended for the core, which makes sense given the increase awareness in biosecurity across the board and as long as industry recognise the need for this, then it is a good inclusion.	Adopted recommendation
<ul style="list-style-type: none"> Industry, NSW 	<p>AHCBUS501 very important but managing contractors should be part of it. AHCWAT502 irrigation should form AHCSOL501 soils as they're so inter related.</p> <p>I know most of these units cross over and is dependent on teaching abilities, resources and applicants. Basic framework of core units need refining and all electives be on offer.</p>	Adopted recommendation in so far as Managing contractors is covered under AHCBUS501, AHCWAT502 and AHCSOL501 have broader usage than just viticulture, as such they need to be retained as separate units. Situation explained to subject matter expert and they agreed. No further action.
<ul style="list-style-type: none"> Association, National 	Very happy that AHCBA505 and AHCBIO305 are recommended to be included in the core. Would also like to see a review into the pest related units in the electives, as some may be redundant.	Comments noted, the pest related units have been recently reviewed. The pest related units in the qualification have been reduced following subject matter expert working group feedback.
<ul style="list-style-type: none"> Union, National 	<p>Initial thoughts on AHCBER501 and AHCBER502 units, as these are biosecurity units, they are too important to be deleted, and thought should be given about putting them in the core of the qualification. Informed of other feedback from subject matter expert Workshops and said he'll contact some industry friends to inform his view further.</p> <p>Further advice provided that AHCBA505 should go into the core, AHCBER501 should be an elective and AHCBER502 should be deleted.</p>	<p>Targeted feedback from biosecurity people sought regarding deletion of AHCBER502 and AHCBER501. Biosecurity subject matter expert advice supported the following:</p> <p>AHCBER501 and AHCBER502 units are needed as it is intended that they will be included in other qualifications. Currently they exist in the Diploma of Production Horticulture qualification, and AHCBER502 is available through the Diploma of Conservation and Land Management. These units will also be used in both the Certificate IV in Public Safety (Biosecurity Response Leadership) – AHCBER501 as an elective and the Diploma of Public Safety (Biosecurity Response Management) AHCBER502 as a core unit.</p> <p>AHCBER502 has been removed from the qualification, AHCBER501 has been added to the elective unit list in the qualification. The units</p>

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
		will be retained in the training package and are recommended for broader review separately to this project.
<ul style="list-style-type: none"> CMM, VIC 	<p>Core should include soils, plant physiology, botany/ taxonomy, plant nutrition, grape selection and cultural practices, pests/ diseases/plant health and sustainable water management.</p> <p>Do not agree that AHCBUS501 Manage staff should be a core unit as small winery operators may not have staff to manage.</p> <p>Did not think that the machinery unit should be included as a core unit as many growers are small operators and need the machinery skills from the Cert III level not diploma and the bigger operators would generally bring in contractors.</p>	<p>Adopted recommendations to form new core units list.</p> <p>Discussed the other subject matter expert feedback with subject matter expert. They felt it still should not be a core unit, however conceded that this went against the majority of other subject matter experts, and that as a diploma, it is promoted a manager level qualification, so should include a unit on how to manage</p>
<p>Ten (10) redesigned units</p> <p>The units have been altered to better reflect the nature of the tasks undertaken by viticulturists.</p> <p>AHCBAC505 Plan and manage long-term weed, pest or disease control in crops</p>		
<ul style="list-style-type: none"> Association, NSW 	<p>AHCBAC505:</p> <p>Include consideration of meeting export destination MRL's for Agrochemicals; Element 1, Suggest 1.8 – Assess the crop ENDUSE and the agrochemical maximum residue limits for both domestic and export AND primary and secondary product outcome. This is important as there are different considerations for the use of agrochemicals for domestic and export markets AND for grapes as opposed to wine. So assuming this subject is offered for a number of crops, I suspect it is important to crops other than just grapes; any that may have value adding processing e.g. apples to juice or cucumbers to pickles etc....</p> <p>Performance Outcomes</p> <p>Currently: Recognise poor growth and lack of vigour caused by weeds, pests or diseases rather than nutrient deficiency</p>	<p>Adopted recommendations</p> <p>Added Performance Criteria 1.8 - "Assess crop end use and agrochemical maximum residue limits for domestic and export, primary and secondary product outcomes". Changed Performance Evidence to "recognised poor growth and lack of vigour caused by weeds, pests or disease rather than nutrient deficiency, with consideration to biosecurity".</p>

Stakeholders Comments and Identified Issues	Consideration and Proposed Resolution
	<p>Suggest: Recognise poor growth and lack of vigour caused by weeds, pests or diseases rather than nutrient deficiency, with consideration of biosecurity. (The cause may be something new and a biosecurity incursion).</p>
<ul style="list-style-type: none"> CMM, VIC 	<p>AHCBAC505:</p> <p>Element 2.4- the word 'Establish' is vague and could be misinterpreted</p> <p>Elements- Should biosecurity be included the PCs in elements 1 and or 2?</p> <p>Performance Evidence feedback-</p> <p>Dot points one and two - word 'interpret' does not appear in PC or elements</p> <p>Dot point 4- Concept of land 'use' not specified in elements or PCs</p> <p>Dot point 6- remove word 'correct'. It is subjective and will only add confusion</p> <p>Dot point 7- 'agreements' not mentioned in elements of PC's</p> <p>Dot point 8- mention of 'neighbours'- Where is this mentioned in the elements and PCs?</p> <p>Dot point 9- The need to identify and diagnose the plant health issue is not mentioned in the elements or PCs. This unit seems to be more about researching, working out strategies, putting into a plan, monitor and evaluate. Would you need to be the person who does the identification and diagnosis of the plant health issue to do this? If so, would that need to be in the elements and PCs? Could you be relying input from a specialist?</p>

Stakeholders Comments and Identified Issues		Consideration and Proposed Resolution
	<p>Dot point 10- According to element 5.1 you are evaluating effectiveness ...and making adjustments not observing, identifying and reacting as the point current states here</p> <p>Dot point 13- Is this a repeat of point 3? Perhaps land use could be in 1.4</p> <p>Dot point 16- 'Implementation' not mentioned in PC's</p> <p>Knowledge Evidence</p> <p>Dot point 2- Could this say pest, weed and disease control strategies including integrated pest management?</p> <p>Dot point 5- Environmental legislation and Biosecurity legislation should be included</p> <p>Assessment conditions- dot point 7- Would not be just for pesticide and herbicide use.</p>	<p>Knowledge Evidence:</p> <p>Dot point 2- changed to 'pest, weed and disease control strategies including integrated pest management'</p> <p>Dot point 5- added sub-dot point 'environment and biosecurity'</p> <p>Noted; dot point reads information regarding pesticide or herbicide use, alternative methods and non-chemical preventative methods. No further action.</p>
<p>AHCBER501 Manage active operational emergency disease or plant pest sites AHCBER502 Manage the implementation of an emergency disease or plant pest control program</p>		
<ul style="list-style-type: none"> Association, National 	<p>In relation to the AHCBER501 and AHCBER502 units:</p> <p>In my work with citrus and the current canker response in the NT and WA there is a need for growers to have some understanding of how emergency responses work but I can see how most seeking a qualification in production horticulture would think there are more relevant units.</p> <p>I am sure they would be applicable to those employed by agencies involved in the response, and the need will become greater with the pressure on our borders/horticulture industries.</p> <p>I have also been talking to Box Hill TAFE re: entry level biosecurity awareness requirements for corporate farms staff and</p>	<p>Adopted recommendation and consulted with state and national DPI's and biosecurity departments and organisations. Feedback was to remove AHCBER502 unit from qualification but do not delete as it will be used in pending biosecurity related qualifications. This feedback has been adopted.</p>

	<p>we planned to be in contact with skills impact when they returned after the Christmas break.</p> <p>As horticulture becomes more corporate and the biosecurity risks more recognised I am sure there will be a further training requirement.</p>	
<ul style="list-style-type: none"> • CMM, VIC 	AHCBER501 is more than covered in the qualification with other BIO units.	Adopted recommendation with AHCBER501 moved to elective units list
<ul style="list-style-type: none"> • Government, VIC 	AHCBER501 and AHCBER502 units are needed by the department as they intend to run them through other courses to the Diploma of Viticulture. Currently they exist in the Diploma of Production Horticulture qualification, and AHCBER502 is available through the Diploma of Conservation and Land Management.	Adopted recommendation and consulted with state and national DPI's and biosecurity departments and organisations. Feedback was to remove AHCBER502 unit from qualification but do not delete as it will be used in pending biosecurity related qualifications. This feedback has been adopted. AHCBER501 moved to elective units list
<ul style="list-style-type: none"> • RTO, VIC 	AHCBER501 and AHCBER502 might not be correct in the Diploma of Viticulture qualification, and should be merged with other biosecurity units. He believes that while they have some good content, they do not possess enough content to command their own separate units, and that there is a lot of content sharing with other biosecurity units.	Recommendation noted but due to the units being scheduled for inclusion in Biosecurity and Land Management qualifications, they are being left as they are until these projects commence.
<ul style="list-style-type: none"> • Association, National 	Agrees that AHCBER501 should remain as an elective in the qualification, and that AHCBER502 should not be deleted. Doesn't mind that it is being removed from the qualification, so long as it's available to access in the future.	Adopted recommendation
<p>AHCORG501 Develop an organic management plan</p>		
<ul style="list-style-type: none"> • Association, NSW 	AHCORG501: Any reason why this would not be Develop an organic or biodynamic management plan? Would then harmonise it with AHCORG5XX?	Adopted: unit title and code changed to: "AHCORG5XX Develop an organic or biodynamic management plan". Minor edits to: application; element 1; PC 1.4, 2.1, 2.5, 3.4 and 7.5. New Element 8 and PC's 8.1, 8.2, 8.3, 8.4. Renumber and minor edits to element 9; PC 9.1, 9.2 and 9.3. Minor edits to: FS - Reading, Oral Communication and Numeracy; PE; KE; and AC.

<ul style="list-style-type: none"> CMM, VIC 	<p>AHCORG501: Agrees with removal of 'internet sources' from unit as they are too vague and often not credible sources.</p> <p>Recommends the addition of an element that addresses climate risk and risk management strategies.</p> <p>Performance Evidence, dot point 5 documented the plan in compliance with certification requirements.- Would the plan also need to be compliant with relevant legislation, regulation and Codes of Practice?</p> <p>Knowledge evidence, dot point 5- Knowledge of relevant legislation, regulation, Codes of Practice e.g. biosecurity, environmental, planning etc.? Also the PC mention soil fertility, biology, chemistry soil tests, weeds, pest, diseases, animal health but not mentioned here.</p> <p>This is a very big unit with 8 elements incorporating a soil fertility plan, soil management plan, weed management plan, pest and disease management plan and an animal health management plan - even though you may not be farming animals.</p>	<p>Explanation: this change was a result of feedback received during the initial redesign of the unit. Comment noted, no further action.</p> <p>Adopted recommendation</p> <p>Explanation: OMP and BMP are covered by a set of standards that you have to certify against, changed to "certification standards requirements".</p> <p>Explanation: OMP and BMP are covered by a set of standards that you have to be certified against, changed to "certification standards requirements".</p> <p>Explanation: these plans are sub-plans of an OMP or BMP according to the certification standards. Although you would train and assess someone on how to do all the plans, in reality/practice when creating the sub-plans there could be plans that are submitted as 'not applicable' to the enterprise.</p>
<ul style="list-style-type: none"> Association, NSW 	<p>Retain AHCORG501 and AHCORG5XX (formerly AHCORG502) as separate units. The desire to go down the road for the system does not always translate into a desire for certification. The person who manages the system may also not be the person who does the certification.</p>	<p>Adopted recommendation</p>
AHCPHT504 Develop a grape production plan		
<ul style="list-style-type: none"> Industry, SA 	<p>AHCPHT504: recommend changing PC 1.2 from "Determine client preferences and requirements for the production of grapes" to "Determine client specifications for the production of grapes"</p>	<p>Adopted recommendation: PC 1.2 Changed to: "Determine client specifications for the production of grapes". Also changed KE sub-dot point to "establishment and management of grape production in relation to client specifications and the standards required by the marketplace".</p>

<ul style="list-style-type: none"> Industry, SA 	<p>AHCPHT504: Wants to see "production costs" embedded in this unit.</p>	<p>Adopted: PC 2.6 Changed to: "Determine production costs". Also added Foundation Skills - Numeracy: "Identify and calculate production costs", and Performance Evidence - "calculated production costs, including:</p> <ul style="list-style-type: none"> staff resources tools equipment and machinery required for production".
<ul style="list-style-type: none"> CMM, VIC 	<p>AHCPHT504:</p> <p>Element 1.3- Assess the vineyard site for growing environmental factors, services and site modifications. What about available resources?</p> <p>Element 1.8- Develop a draft plan that reflects client preferences and requirements and takes into account site factors and any identified sustainable land use requirements-what about including relevant Legislation, regulations, Codes of Practice.</p> <p>Element 4- Would need to modify this element to include table grape production rather than exclusively wine for table grape growers.</p> <p>Element 6.1- use of the word 'quotations' not in required evidence.</p> <p>Performance Evidence dot point 5 and 7- You might write the plan but not actually be the person communicating directly with the staff, managers and contractors.</p> <p>Knowledge Evidence. Dot point 1- include 'Environmental growing conditions' as sub dot point.</p>	<p>Adopted:</p> <p>Element 1.3 changed to: 'Assess the vineyard site for growing environment factors, resources, services and site modifications'.</p> <p>Element 1.8 changed to: 'Develop a draft plan that reflects client preferences and requirements, and regulatory requirements and takes into account site factors and any identified sustainable land use requirements'.</p> <p>This is actually referring to Element 5. Removed references to wine from both the element and PC 5.2.</p> <p>Removed 'quotations' from PC 6.1.</p> <p>PE dot point 5 & 7 removed 'staff, managers, suppliers, contractors and consultants'.</p> <p>KE added sub-dot point 'environmental growing conditions and sustainable land use strategies'.</p>

	<p>Knowledge Evidence- dot point 1, sub dot point 2- use of the word 'plant' not specific enough. Does this refer to grape variety or cultivar selection?</p> <p>For the same sub dot point, replace the word 'production' with 'sustainable land use issues'.</p>	<p>KE dot point 1, sub-dot point 2: changed to 'grape variety selection'.</p> <p>Not adopted: kept 'production' added 'sustainable land use strategies' to new sub-dot point.</p>
AHCPHT505 Evaluate wine		
<ul style="list-style-type: none"> Industry, SA 	<p>AHCPHT505 Recommend changing the following:</p> <p>PC 5.2 from "Identify effects of the physical characteristics of vineyard sites and wine region on grapes" to "Identify site effects on grape quality"</p> <p>PC 5.4 from "Identify and analyse effects of grape variety" to "Identify and analyse effects of grape variety on wine flavour"</p> <p>KE sub dot point from "irrigation management" to "management of plant moisture status"</p>	<p>Adopted recommendations</p> <p>PC 5.2 changed to: "Identify site effects on grape quality"</p> <p>PC 5.4 changed to "Identify and analyse effects of grape variety on wine flavour"</p> <p>KE sub dot point changed to "plant moisture status management".</p>
AHCSOL501 Monitor and manage soils for production projects		
<ul style="list-style-type: none"> Association, NSW 	<p>AHCMOM501 Yes move out to electives. With the use of contractors for many machinery based tasks this is a lower priority than in the past. AHCSOL501 Yes move it in to core. Critical to understand the environment the vines grow in. Management decisions regarding the soil impact on water use and crop outcomes.</p>	<p>Adopted recommendation</p>
<ul style="list-style-type: none"> CMM, VIC 	<p>AHCSOL501 needs to go back into the core, and swap it for the mechanical unit which should go back to the electives.</p> <p>Performance Evidence dot point 3- Conducting the program might present difficulties in delivering the unit as measurable outcomes can be over a long-term time frame.</p>	<p>Adopted recommendation</p> <p>PE dot point 3, removed 'and conducted'.</p>

	<p>Performance Evidence dot point 6 contains possible overlap with Element 5 of the unit. Use of the word analysed in particular could be troublesome.</p> <p>Knowledge Evidence dot point 4- plant nutrition through soil management is not explicitly covered in the Performance Criteria.</p>	<p>PE dot point 6, removed 'and analysed'.</p> <p>KE sub-dot point 3, removed 'plant nutrition through soil management'.</p>
	<p>Knowledge Evidence dot point 10. The word 'technique' should be replaced with 'strategies' or 'resources'.</p>	<p>KE sub-dot point 9, replaced 'techniques' with 'strategies'.</p>
AHCWAT502 Manage water systems		
<ul style="list-style-type: none"> Industry, SA 	<p>AHCWAT502:</p> <p>PC 1.5 is covering a lot and may be required to be broken down into other PC's. Also commented that it might be good to link it in with the soil unit somehow.</p> <p>Element 2 is well written and lies at the core of viticulture.</p>	<p>Adopted recommendation, removed PC 1.5 and added the following Element and PC's:</p> <ol style="list-style-type: none"> 1. Assess soil and water resources <ol style="list-style-type: none"> 1.1 Identify suitability of soil and water resources for irrigation 1.2 Determine range of crops and plant types that could be grown in soil utilising available water resources 1.3 Select crop or plant type <p>Renumbered all elements and PC's after Element 1.</p> <p>Added the following PE: 'assessed soil and water resources'</p> <p>Added the following KE: 'natural water system retention and storage soil moisture storage use of yeoman's keyline or swales strategies for reducing water evaporation and transpiration water quality maintenance'</p>
<ul style="list-style-type: none"> Association, National 	<p>AHCWAT502:</p> <p>It might be good to link PC 1.5 to the soil unit somehow.</p> <p>Element 2 is well written.</p>	<p>Adopted recommendation</p>
<ul style="list-style-type: none"> Association, National 	<p>AHCWAT502: Is this unit only to do with managing water systems, or does it involve water resources. Water resources would be a better fit for the viticulture qualification than managing</p>	<p>Consultation with other subject matter experts and discussion around this comment lead to the majority of other subject matter experts and the subject matter expert working group to disagree with this</p>

	water systems. This could then include irrigation methods and dry growth methods.	comment. Subject matter expert accepted their viewpoint but did not change their view point.
<ul style="list-style-type: none"> RTO, WA 	AHCWAT502: would be good to include water resources.	Consultation with other subject matter experts and discussion around this comment lead to the majority of other subject matter experts and the subject matter expert working group to disagree with this comment. Subject matter expert accepted their viewpoint but did not change their view point.
<ul style="list-style-type: none"> CMM, VIC 	<p>AHCWAT502: recommend unit includes an element regarding water wastage or prevention of poor water usage practices.</p> <p>Water management is critical, not just irrigation and drainage but evaporation, transpiration, canopy management, soil moisture reserves, using the rain where it falls. The water unit is a bit narrow in this regard. The use of wireless sensors and other technologies not included. The management of water is more important than the designing. Vineyard owners/managers operate systems but will bring in specialists for design and storage advice.</p> <p>This unit does not cover natural water systems - retaining water on the property, soil moisture storage and so on – Yeoman’s keyline/use of swales. Ways of reducing water loss through evaporation/transpiration.</p> <p>A vineyard owner may outsource much of this to a specialist and just use and monitor the system. What about using technology to monitor soils moisture and crop water loss?</p>	<p>Adopted, the following PC's added:</p> <p>4.3 Modify irrigation scheduling to minimise water wastage</p> <p>5.3 Identify and minimise poor water usage practices</p> <p>Added the following PE:</p> <p>'strategically managed irrigated production systems, including:</p> <ul style="list-style-type: none"> • minimised water wastage • prevented of poor water usage practices.' <p>Sensors and technology is covered under AHCIRG325 Operate irrigation technology and monitoring soil moisture and crop water loss is covered under AHCIRG308 Monitor soils under irrigation. These two units are not currently in the qualification as they are lower level units, not diploma level. They could potentially be imported into the qualification.</p>
<p>One (1) new unit AHCPHT5XX Evaluate grapes for production</p>		
<ul style="list-style-type: none"> Industry, SA 	<p>AHCPHT5XX Evaluate grapes for wine production:</p> <p>Recommend changing the following:</p> <p>PC 1.1 from "Identify vineyard block to be sampled" to "Identify vineyard plot to be sampled"</p>	<p>Adopted:</p> <p>PC 1.1 changed to "Identify vineyard plot to be sampled"</p> <p>PC 5.2 changed to: "Identify site effects on grape quality"</p> <p>PC 5.3 changed to "Identify and analyse effects of grape variety on wine flavour"</p>

	<p>PC 5.2 from "Identify effects of the physical characteristics of vineyard sites and wine region on grapes" to "Identify site effects on grape quality"</p> <p>PC 5.3 from "Identify and analyse effects of grape variety" to "Identify and analyse effects of grape variety on wine flavour"</p> <p>KE sub dot point from "irrigation management" to "management of plant moisture status"</p>	KE sub dot point changed to "plant moisture status management".
<ul style="list-style-type: none"> Industry, SA 	<p>AHCPHT5XX Evaluate grapes for wine production:</p> <p>Overall, happy with unit content.</p>	Adopted recommendations, comment noted
<ul style="list-style-type: none"> Association, National 	<p>AHCPHT5XX Evaluate grapes for wine production:</p> <p>Overall, happy with unit content.</p>	Adopted recommendations, comment noted
<ul style="list-style-type: none"> Association, NSW 	<p>AHCPHT5XX Evaluate grapes for wine production:</p> <p>Element 1, suggest:</p> <p>1.3b – utilise plant cell density (PCD) maps (if available) to identify zones of uniformity or variation to assist in determining sampling areas (in conjunction with the client/winemaker).</p> <p>1.3c – observe and record any condition/characteristics of grapes that are outside of specification e.g. disease, hail damage, sunburn etc...</p> <p>This may need to then flow through to the Performance Evidence (towards the bottom)</p> <p>Currently: Identify and recommend improvements to vineyard management practices that will contribute to enhanced wine quality in the next season.</p> <p>Suggest the addition of : Identify areas of concern and opportunities to change harvest plans if there are unsuitable or special parcels of fruit to optimise wine quality outcomes prior to harvest (i.e. implement for the current harvest). This may be selecting a better parcel to become higher value, or selecting an</p>	<p>Adopted, following PC's added:</p> <p>1.4 Utilise plant cell density (PCD) maps where available to identify zones of uniformity or variation</p> <p>1.5 Confirm sampling areas with client or winemaker</p> <p>1.6 Observe and record out of specification condition or characteristics of grapes</p> <p>Renumbered PC 1.4 to 1.7.</p> <p>Added the following FS:</p> <p>Reading "Interpret PCD maps"</p> <p>Oral communication "Initiate discussions with client or winemaker, using clear language to confirm sampling areas and communicate opportunities to optimise wine quality"</p> <p>Interact with others "Use appropriate language and communication skills to disseminate information to client or winemaker"</p> <p>Added the following PE:</p> <p>"utilised plant cell density (PCD) maps where available"</p>

	area for non-inclusion or not to be harvested if it has an issue which is detrimental to wine quality.	"identified areas of concern and opportunities to change harvest plans to optimise wine quality outcomes prior to harvest, including unsuitable or special parcels of fruit" Added the following AC: "relationships: • clients and winemakers"
• RTO, WA	AHCPHT5XX Evaluate grapes for wine production: Does not believe the unit should be in the core. Doesn't see the point of having it in the core.	Adopted recommendation, unit is an elective in the qualification.
• Association, NSW	AHCPHT5XX Evaluate grapes for wine production: Does not want this unit in the core.	Adopted recommendation, unit is an elective in the qualification.
• CMM, VIC	AHCPHT5XX Evaluate grapes for wine production: Problematic to use as a core if table grape growers are to use this qualification. If element 4 was removed then it could work for a dual purpose. AHCPHT505 Evaluate wine is in there as an elective for wine producers. If you removed element 4 it could be used for table grape growers as well. This qualification should be useable by table grape growers too. Unit could be rejigged to cover wine and table grapes. It could just be 'Evaluate grapes for production'. Element 1.4 Taste and evaluate a wine- One wine? Could it be Taste and evaluate wine or if you take this element out then the unit could be used for table grapes and the revised unit (AHCPHT505 Evaluate wine) used for the wine evaluation part. Performance Evidence dot point 4 taste and evaluate a wine- One wine only? Would it be about the process of wine evaluation that includes tasting?	Adopted recommendation, unit is an elective in the qualification. Explanation, the following was referred to subject matter expert working group for advice (as a result of this feedback): Feedback received during public consultation suggests reviewing this unit for broader use to include both table grape growers, this includes the removal of Element 4 Taste and evaluate wine. A reworked unit has been provided to the subject matter expert working group requesting their opinion regarding the changes in this unit. Action: Unit title changed to 'Evaluate grapes for production' and reworked to remove Element 4 and references to wine to enable broader use by industry for both table and wine grape production. Wine tasting removed.

<ul style="list-style-type: none"> CMM, VIC 	<p>AHCPHT5XX Evaluate grapes for production:</p> <p>'I had a read through and it looks like it should work for both purposes (evaluating table and wine grapes) and the title change would then be appropriate (to Evaluate grapes for production). I have found a couple of minor amends –see comments on file attached.</p> <p>I assume that the wine tasting can still be included in the unit delivery but not specifically assessed. As long as the wine tasting is covered in another unit as an option then it should work within the qualification.</p> <p>Remove wine from Performance Evidence introduction</p> <p>Consider the use of the word 'taste' in performance evidence dot point 5. Does it important for both grapes and wine tasting?</p> <p>Remove 'wine' from Knowledge Evidence</p> <p>Assessment Conditions dot point 2.1- should the word 'and' be changes to 'and/or'</p>	<p>Adopted recommendation</p> <p>Subject matter expert spoken to and informed that wine tasting is covered in AHCPHT505 Evaluate wine. subject matter expert thanked SI for directing their attention to this unit</p>
<ul style="list-style-type: none"> Union, National 	<p>AHCPHT5XX Evaluate grapes for production:</p> <p>Agree with all of the proposed changes in the draft sent out on the 14 Jan 2019.</p>	<p>Adopted recommendation</p>
<ul style="list-style-type: none"> Association, National 	<p>AHCPHT5XX Evaluate grapes for production:</p> <p>I believe the unit should be used so that it encompasses wine grape and table grape production and evaluation. Table grape production is a significant industry in some states such as WA. There are of course differences in how grapes are grown/produced and evaluated for the two industries.</p> <p>I have one observation not related to the above question:</p> <p>In the unit outline, reference is made to the use and interpretation of the vegetation index referred to as plant cell density (PCD). This is to be commended! However, in some cases data may be</p>	<p>Adopted recommendation</p> <p>Adopted recommendation</p> <p>PC 1.4 changed to 'Utilise vegetation indices where available to identify zones of uniformity or variation', also reflected in FS, PE and KE.</p>

	<p>in the form of the Normalised Difference Vegetation Index (NDVI) which is a very similar vegetation index to the PCD index but is derived slightly differently. So you may wish to be either not as specific and refer to these as vegetation indices or to include NDVI as well as PCD.</p>	
<ul style="list-style-type: none"> RTO, SA 	<p>AHCPHT5XX Evaluate grapes for production:</p> <p>Element 1.1- Nobody that I have come across working in vineyard refers to vineyard blocks as plots - I would restore the original wording.</p> <p>Element 1.4- So if a vineyard does not have PCD maps - will assessment be able to be completed?</p> <p>Deleted Element 4. Taste and evaluate a wine- I thought this was crucial to the unit?</p> <p>Performance Evidence line 1 'must satisfy all' - Don't like the wording of MUST, when PCD maps might not be available.</p>	<p>Adopted recommendation</p> <p>PC 1.1 changed back to 'block'</p> <p>PC 1.4 changed to 'Utilise vegetation indices where available to identify zones of uniformity or variation', also reflected in FS, PE and KE. See 67 above.</p> <p>Element 4 deleted in total as it is not relevant/achievable for table grape producers and is covered in the unit AHCPHT505 Evaluate wine.</p> <p>Lead-in sentence for PE standard lead-in wording, note that PCD maps has been changed to 'vegetation indices where available'.</p>