



Planning &
Infrastructure

**MAJOR PROJECT ASSESSMENT:
McWilliams Winery Expansion Project
(09_0177)**



Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

May 2013



Cover Photo: Cellar at the Hanwood Estate Winery (Source: Destination NSW)
Inside Photo: Tanks at the Hanwood Estate Winery (Source: Destination NSW)

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EXECUTIVE SUMMARY

The McWilliam's Wine Group Pty Ltd (the Proponent) has operated a winery at Hanwood near Griffith since 1917. The Hanwood winery is the Proponent's largest and currently processes around 34,000 tonnes per annum of grapes to produce table wine, fortified wine and sparkling wine for domestic and international markets.

The Proponent is seeking to expand operations at its Hanwood winery to increase the winery crush capacity from 34,000 tonnes to 65,000 tonnes per annum. In addition, the Proponent also seeks to construct and operate an on site bottling and packaging facility, as well as treat and reuse winery wastewater on its vineyards (the Project). The Project would create an additional 84 permanent positions and 28 casual positions during the operation of the expanded facility. The Project has a capital investment value (CIV) of around \$53 million.

The Project constitutes a transitional 'Major Project' under Part 3A of the *Environmental Planning and Assessment Act 1979*, as it involves development for the purposes of a food and beverage processing industry (which includes wineries) with a CIV of more than \$30 million, and requires the Minister's (or delegates) approval. As the Director-General's environmental assessment requirements (DGRs) were issued in respect of this Project prior to 1 October 2011, the Project is a transitional Part 3A Project.

The Department publicly exhibited the Environmental Assessment (EA) for the proposal from 20 November 2012 until 21 December 2012 and received a total of seven submissions, including five (5) from public authorities and two (2) public submissions. All agencies generally supported the Project in principle and provided recommended conditions for inclusion in the project approval. One of the public submissions objected to the Project on the basis of the potential odour, noise and dust impacts; flooding on neighbouring properties and access restrictions during construction works.

The Department has assessed the application, EA, submissions on the Project, and the Proponent's response to submissions. The assessment found that the key issues associated with the project were odour, noise, traffic and access, and wastewater.

The Department acknowledges the issues raised by the submissions, particularly in relation to odour, noise and traffic. The Department has assessed the issues in detail, and the management measures proposed by the Proponent, and considers that the impacts of the Project could be managed by the recommended conditions of approval.

In response to the issues raised regarding odour and noise, the Department is satisfied that the proposed expansion of operations would result in net improvements to odour and noise management by providing the means for the staged upgrade of the site's wastewater treatment system and the immediate upgrade of its chiller and barrel door infrastructure. The Department notes that without the expansion, it is likely that odour and noise levels from the site would continue at existing levels, which exceed contemporary noise standards at the nearest sensitive receiver. The expanded operations would provide the means for the existing operations to be brought into line with contemporary standards as the development gradually increases production in a staged manner.

With regards to traffic impacts, the Department acknowledges the issues raised by the RMS regarding the potential impacts of the Project on the capacity of the intersection at Kidman Way and Jack McWilliam Road. To address this issue, the Department has recommended a condition requiring the intersection to be independently audited to determine the current intersection standard and whether upgrades are required. The audit would also determine the costs of any upgrade works required and recommend a reasonable level of contribution that the Proponent should make commensurate with the intersections level of use, to the satisfaction of the Director-General. The Department considers that this approach would provide a means for independently determining the upgrade requirements for the Kidman Way and Jack McWilliam Road intersection to address intersection capacity issues raised by the RMS, whilst ensuring a fair contribution from the Proponent. Both the RMS and Proponent have accepted this recommendation.

The Department has assessed the Project, and is satisfied that potential environmental impacts can be mitigated and managed to achieve acceptable levels of environmental performance subject to the recommended conditions. Consequently, the Department recommends approval subject to conditions.

1. BACKGROUND

1.1 Project Setting

McWilliam's Wines Pty Limited (the Proponent) is a family owned company that operates vineyards and wineries to produce table wine, fortified wine and sparkling wine products for domestic and international markets. At present, table wine products account for around 75% of all production.

The Proponent was first established in 1877 and now operates vineyards in most wine growing regions of Australia. It processes approximately 40,000 tonnes of grapes per annum across three sites, being the Hanwood Estate Winery in the Riverina NSW and satellite wineries in the Hunter Valley and at Coonawarra in South Australia.

The majority of the Proponent's wine production occurs at its Hanwood winery, which currently processes around 34,000 tonnes of grapes per annum. The Hanwood site currently operates under a number of development consents issued by Griffith City Council.

The Proponent also operates a bottling facility in a leased building in Chullora, in Sydney's West, where the majority of the Proponent's bottling and packaging activities occur. Wine is currently transported from the Hanwood winery, via road tankers for bottling and packaging at Chullora prior to being dispatched to local distributors or to Port Botany for the export market.

In 2005, following a sustained period of growth, the Proponent conducted a strategic review of its production and distribution footprint to identify the most efficient production model for the Company in terms of grape growing and transportation, wine production, wine bottling and the transportation of finished product to domestic and international markets. The outcome of the review identified the Riverina region as the most appropriate area in which to base its winemaking operations

The Proponent has already commenced consolidating its operations and is now proposing to gradually move the majority of its bottling operations from Chullora to the Hanwood site. In addition, to enable it to meet projected sales growth forecasts, the Proponent is seeking to upgrade the capacity of its Hanwood winery over a 15 year period to ultimately enable it to process a crush of up to 65,000 tonnes of grapes per annum.

1.2 Site and Surrounding Area

The Hanwood winery is located in the Riverina region of New South Wales some 480km south west of Sydney. The winery is located approximately six kilometres south of Griffith and approximately one kilometre south of the township of Hanwood (see Figure 1).

The site comprises both the Hanwood winery and vineyards, and other vineyard sites around the Hanwood property, including:

- The Hanwood winery and vineyards (Lots 165, 166, 168 and 171 of DP 751709) which are accessed off Jack McWilliam Road which is in turn accessed off Kidman Way, an arterial road linking Griffith with the Sturt Highway. The Hanwood winery is located between Jack McWilliam Road and Ben Martin Road, whereas the vineyards at Hanwood winery are located on Jack McWilliam Road and are referred to as Farms 127, 128 and 130; and
- The nearby vineyards (Lot 194 DP 756035 and Lots 72 & 73 DP 756034) are located approximately four kilometres to the west of the winery and are bounded by Walla Avenue, Jon Condon Road and Farrell Road. These vineyards are referred to as Farms 195, 196 and 199.

Both components of the site are located within the Griffith local government area.

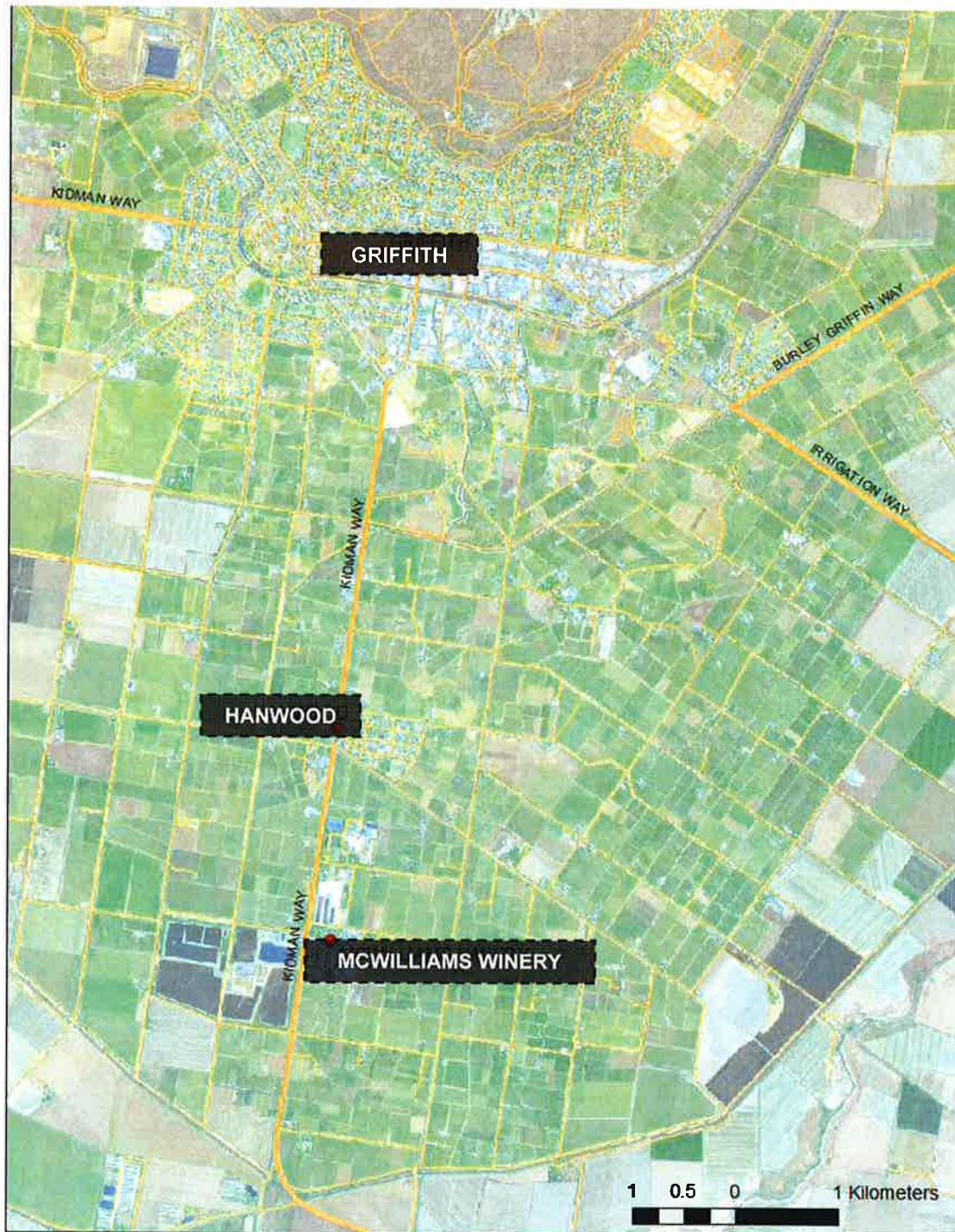


Figure 1: Site and surrounding area

Surrounding Area

Surrounding land use includes viticulture, horticulture and other forms of rural industries. The rural industries in the general area include a poultry feed mill, broiler farm and processing facility to the west and north of the Hanwood winery respectively. Both the poultry processing facility and poultry feed mill are operated by Baiada Poultry Pty Ltd which both have had expansion proposals recently approved. The poultry feed mill is located on Jack McWilliam Road, opposite the Hanwood winery.

Residential land uses in the vicinity of the site include scattered rural residences associated with the agricultural properties, and the town of Hanwood approximately one kilometre to the north of the Hanwood winery. The Hanwood Primary School is located some two kilometres to the north, on Kidman Way in Hanwood.

The nearest rural residences are located approximately 30 metres south and 120 metres to the west of the Winery's boundary, with the closest property to the Winery production area (i.e. storage tanks) located around 300m to the south (see Figure 2 and Figure 3).

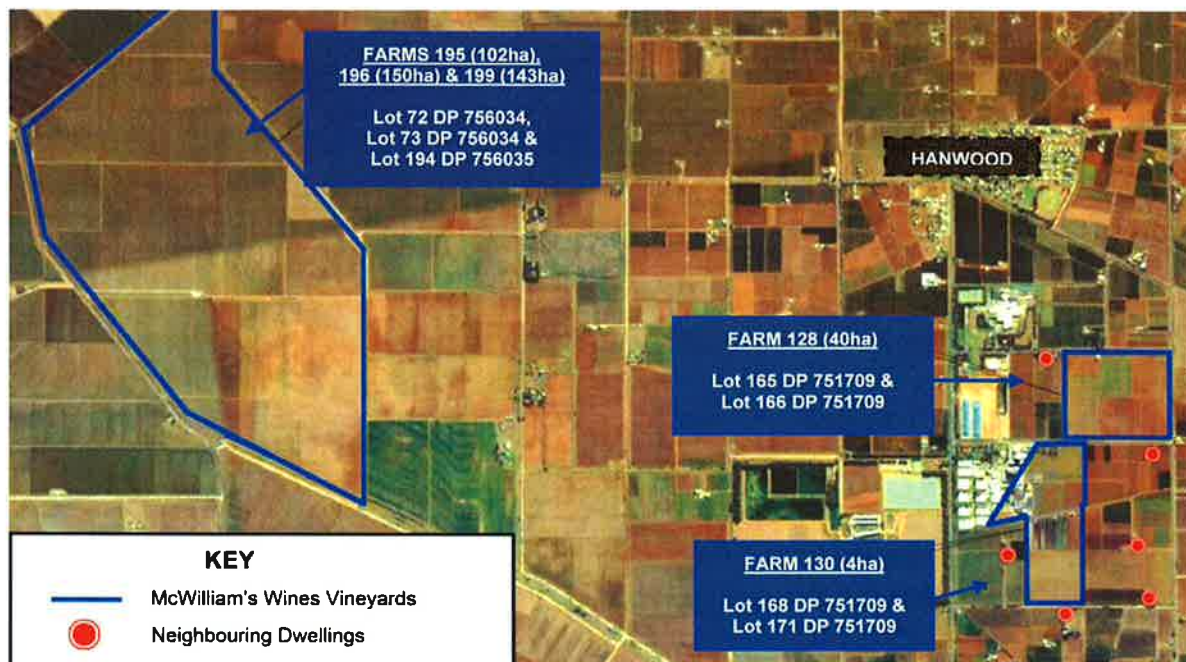


Figure 2: Hanwood Winery and surrounds (Note: Neighbouring dwellings delineated by red circles)

Current Operations - Hanwood Winery

The Hanwood winery was established by Jack McWilliam in 1917. The current operations employ around 43 winery and administration personnel and around 38 casual employees during the vintage period. Fruit is typically harvested between mid-January and late April and then processed to produce a variety of wine products. The Hanwood winery also receives fruit via truck and in total crushes around 34,000 tonnes of grapes per annum (tpa).

Existing infrastructure and operations at the Hanwood winery include:

- vineyards;
- three access points from Jack McWilliam Road leading to internal roadways, being:
 - a heavy vehicle access roadway;
 - a staff and visitors access roadway; and
 - a vintage truck roadway.
- car park for staff and visitors;
- administration building;
- tasting and sales building;
- fermentation tanks and tank farm (which includes around 400 storage tanks of various sizes);
- winery building and crusher areas;
- barrel storage;
- five water storage lagoons; and
- evaporation pans.

The site is bisected by a Murrumbidgee Irrigation drainage channel. The layout of Hanwood winery is shown on Figure 3.

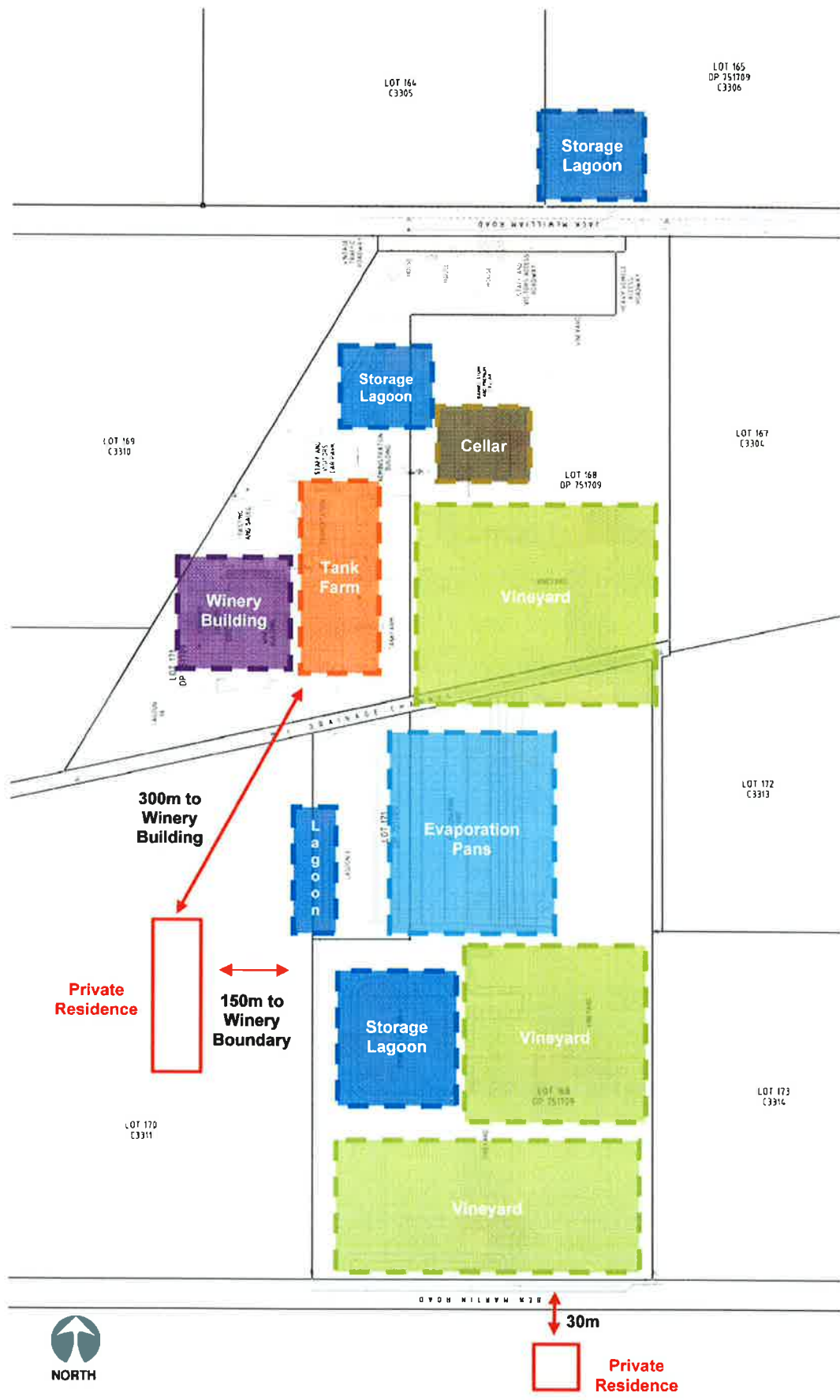


Figure 3: Existing Infrastructure and Site Layout.

1.3 Previous Approvals

A series of minor development applications have been approved by Griffith City Council to consolidate the Proponent's operations into the Hanwood winery and to prepare the site for a major upgrade. The approvals are listed in Table 1, and are in various stages of planning and completion.

Table 1: Approvals at the Hanwood Winery and status

DA No.	Description	Status
DA 353/2005	27ML wine storage	Partly completed
DA 474/2005	10 x 130T SWAPs (sweeping arm fermenter)	Completed
DA 208/2006	Construction of new barrel store building	Completed
DA 289/2006	12 x 100T drainers	Partly completed
DA 545/2006	Construction of new administration building	Completed
DA 220/2007	12 ML wine storage	Partly completed
DA 167/2008	8 x 130T SWAPs (sweeping arm fermenter)	Partly completed
DA 85/2009	Stormwater collection and storage lagoons	Completed
DA 152/2012	Site entrance signage	Not commenced

In addition to the development consents listed in Table 1, the Proponent also currently holds a groundwater extraction licence (#40WA405446) from the NSW Office of Water (NOW).

2. PROJECT DESCRIPTION

The Project is known as the McWilliam's Winery Expansion Project (the Project) and primarily seeks to increase the winery crush capacity from 34,000 tonnes to 65,000 tpa over 15 years in three stages and to facilitate improvements in the efficiency of existing production and wastewater management systems.

The major components of the Project are summarised in Table 2, and depicted in Figure 4 and Figure 5. The Project is described in full in the Environmental Assessment (EA), which is attached at Appendix E. The staging of the Project is outlined in Table 3.

Table 2: Major components of the Project

Component	Description
<i>Winery capacity upgrade</i>	<ul style="list-style-type: none"> • Staged increase in the crush capacity of the winery from 34,000 to 65,000 tpa over 15 years. • Increased storage capacity to allow for the importation of up to 35,000 tonnes of crush for bottling purposes. • Staged installation of additional winery equipment to allow for increase in crush capacity including: <ul style="list-style-type: none"> - 4 x crushers; - 4 x chillers; - 6 x presses (3 x 320 HL and 3 x 680 HL); - 12 drainers; - 30 SWAPs (sweeping arm fermenter); - Two centrifuges; and - 400 additional storage tanks of various sizes to allow for a storage capacity of up to 111,100 kL. • Construction would involve removal of top soil; preparation of foundations and pouring of concrete footings, erection of equipment using cranes and lifting equipment and power/pipeline connection.
<i>Bottling and packaging facility</i>	<ul style="list-style-type: none"> • Staged construction of a new bottling and packaging facility at the Hanwood winery with the ultimate bottling capability of 72 mega litres (ML) of wine (65,000 tonnes crushed on-site and 35,000 of imported crush). • Final footprint of approximately 33,000m² with an eaves height of seven metres and a maximum ridge height of 12 metres.
<i>Wastewater treatment plant</i>	<ul style="list-style-type: none"> • Construction and operation of a wastewater treatment plant to process up to 146 ML per annum of wastewater. • Construction of two additional lagoons (for irrigation and wastewater treatment), a Covered Anaerobic Lagoon (CAL) and a sludge lagoon.

Component	Description
<i>Associated site infrastructure</i>	<ul style="list-style-type: none"> • Extension of the high voltage ring main with additional transformers for refrigeration, packaging, filtration and wastewater treatment. • Extension to the water filtration system. • Extension to the Fire Hydrant Services. • Extension of the east and west car parks for staff parking. • Road works at the entrance to the site. • The following new buildings are proposed: <ul style="list-style-type: none"> – 850 m² extension to the administration building; – Workshop and store; – Staged construction of a product filtration building; – Winery amenities; – Extension to premium cellar/ barrel store; – Security; – Dry goods store; and – Rotary drum vacuum (RDV) shed for wine filtration.
<i>Pipeline</i>	<ul style="list-style-type: none"> • Construction of an eight kilometre pipeline to transport treated wastewater to vineyards for irrigation purposes. The pipeline would convey treated water south of the Hanwood winery to Martin Road, then west under Kidman Way and along gravel road reserves to Walla Avenue (refer to Figure 5). • Construction of a storage lagoon at Farm 199 for treated wastewater storage.
<i>Irrigation area</i>	<ul style="list-style-type: none"> • Irrigation of wastewater at Hanwood winery vineyards (Farms 128 and 130 – see Figure 2). • Piping of treated wastewater via the constructed pipeline to Farms 195, 196 and 199 for irrigation (see Figure 5).
<i>Truck movements</i>	<ul style="list-style-type: none"> • 564 vehicle movements per day at full capacity (127 of which would be heavy vehicles). • During vintage (February to April each year) there would be an additional 10-20 truck movements per hour and additional staff which equates to a total of 853 vehicle movements per day (136 of which would be heavy vehicles).
<i>Employment</i>	<ul style="list-style-type: none"> • Staged increase in operational and vintage staff: <ul style="list-style-type: none"> ○ <u>Current situation</u>: 43 permanent and 38 casual staff ○ <u>Final Project</u>: 127 permanent and 66 casual staff (equates to an additional 84 permanent and 28 casual staff).
<i>Hours of operation</i>	<ul style="list-style-type: none"> • Non-vintage – 24 hours a day, seven days a week with one shift operating 7:00 am-4:00 pm. • Vintage - 24 hours a day, seven days a week, generally in shifts as follows: <ul style="list-style-type: none"> ○ Administration: one shift per day (8:00 am-5:00 pm); ○ Cellar Door: one shift per day (10:00 am-5:00 pm); ○ Winery: two shifts per day (6:00 am-4:00 pm & 4:00 pm-2:00 am); ○ Crushing: two shifts per day (7:00 am-5:00 pm & 10:00 pm-8:00 am); and ○ Packaging: two shifts per day (7:30 am-4:00 pm & 3:30pm-11:30 pm).

Table 3: Project staging

Stage	Crush (tpa)	Bottle up to (ML)	Wastewater volume (ML)	Wastewater treatment plant configuration	Staff	Irrigation
Current	34,000	Nil	44	Evaporation pans	43 permanent 38 casual	
1	45,000	Nil	71.3	1 Sequencing Batch Reactor for bio-treatment	71 permanent 44 casual	Farms 128 & 130
2	55,000	36	118	Covered Anaerobic Lagoon + 2 Sequencing Batch Reactors + pipeline for reuse and winter storage.		Farms 128, 130 and 195, 196, 199 via pipeline.
3	65,000	72	146 (plus 25 ML of harvested stormwater)	Covered Anaerobic Lagoon + 2 Sequencing Batch Reactors + pipeline for reuse and winter storage.	127 permanent 66 casual	Farms 128, 130, and 195, 196, 199 via pipeline.

2.1 Project Need

The Proponent plans to increase wine production at the Hanwood winery and is seeking to increase the capacity of the Hanwood winery accordingly. The Project would allow the Proponent to consolidate its processing operations of table wine to one site, improving quality control and reducing product loss related to product transport.

In broad terms, the Project would also provide benefits to the local community by expanding employment opportunities and furthering tourism in the Riverina region of NSW.

The Department is satisfied that the Project would provide local benefits and notes that the Project would also result in environmental benefits including:

- A reduction in off-site odour pollution through the upgrade of the winery's wastewater treatment plant; and
- Increased use of recycled water, lessening the need to draw on regional water resources.

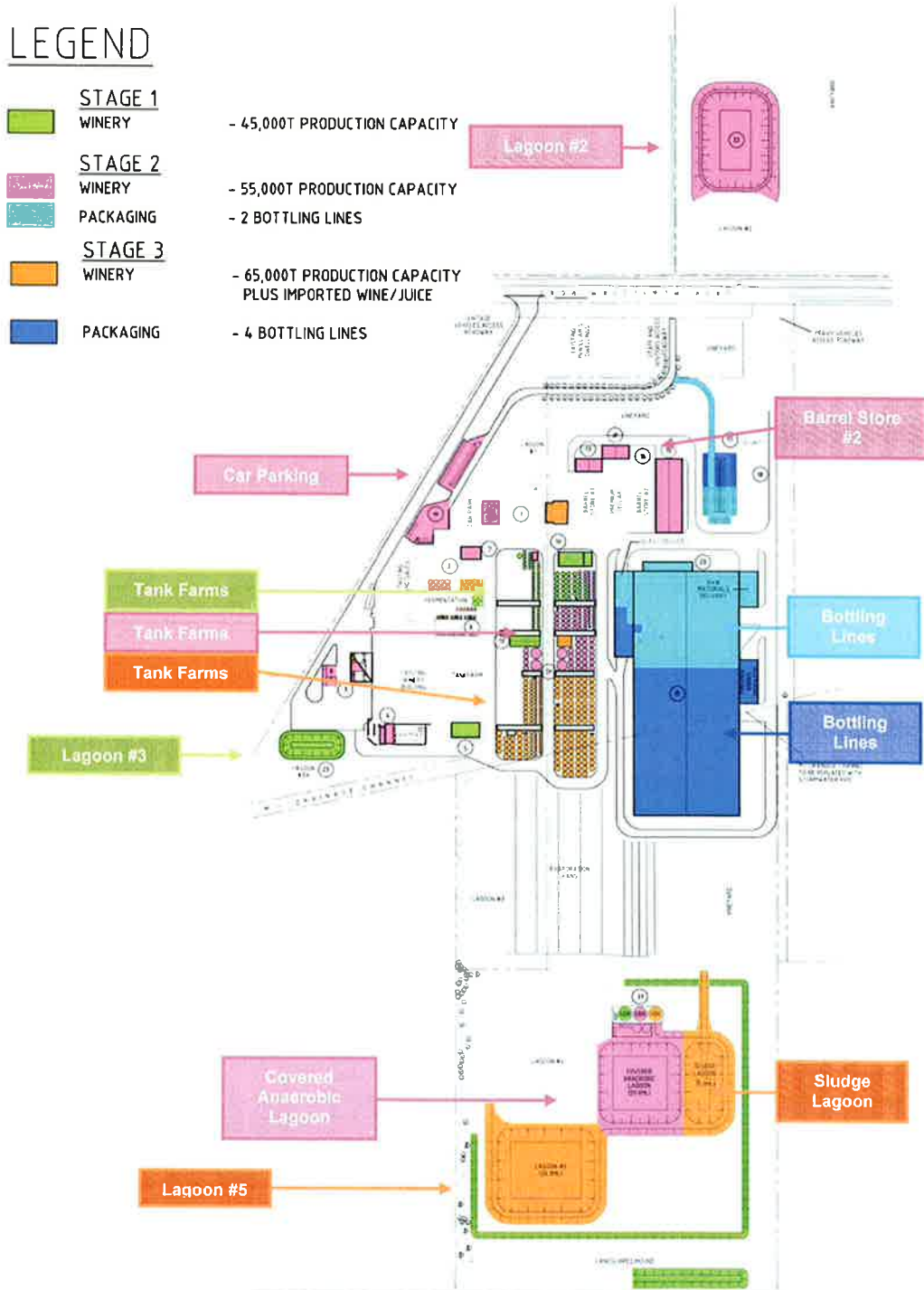


Figure 4: Proposed Winery Upgrades

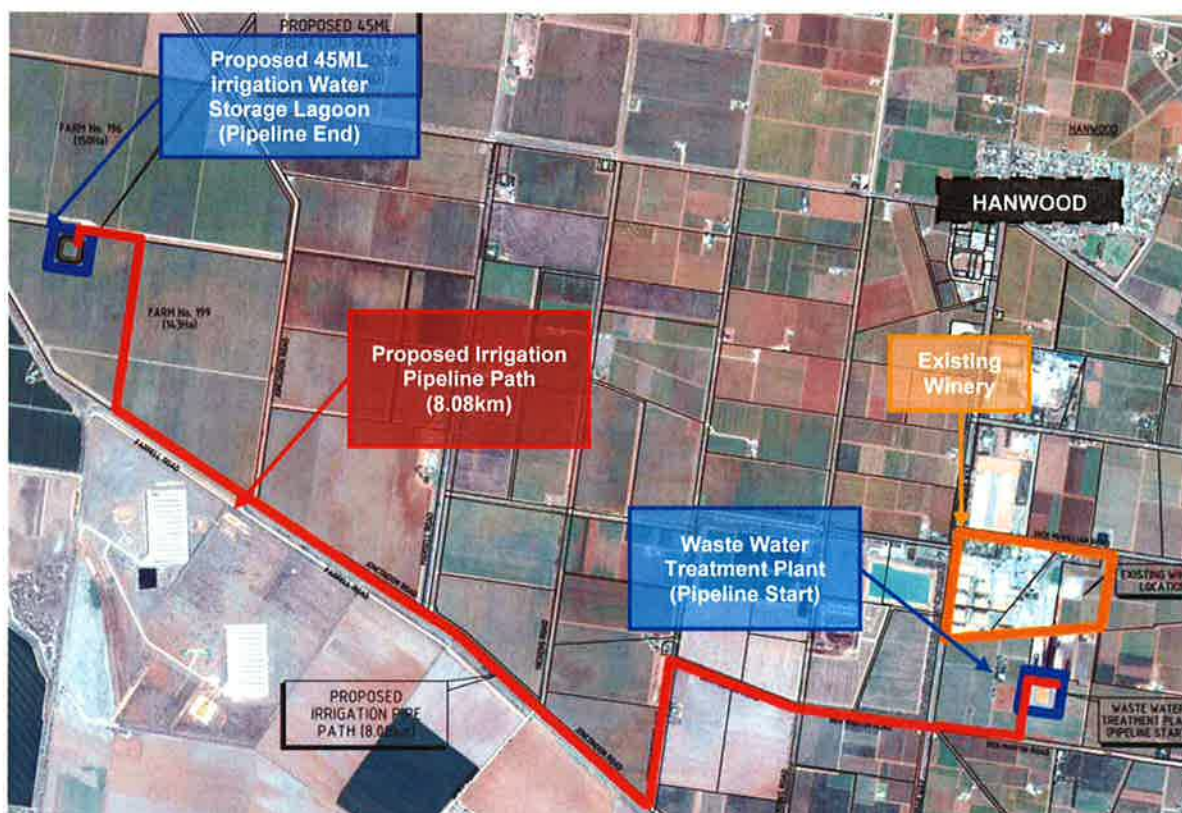


Figure 5: Pipeline route

3. STRATEGIC AND STATUTORY CONTEXT

3.1 Strategic Context

The *Riverina Regional Plan 2012 - 2015* (Regional Development Australia, 2012) (the Regional Plan) sets out the economic, environmental and social vision for the region. The goals of the Regional Plan include increasing business / industry development throughout the region. The increase in capacity at the Hanwood winery and the development of a bottling and packaging plant at Hanwood would result in an additional 84 permanent positions and 28 casual positions at the site and therefore supports the regional goal of business / industry development in the region.

Promoting tourism is also a goal outlined by the Regional Plan. The Project is expected to enhance the existing operations and promote cellar door visits and as such, would further promote tourism in this wine producing region.

In addition, the Project is in line with the environmental objectives of the regional plan, specifically to develop a sustainable environment for future generations through the proposed wastewater treatment component which would allow for the sustainable reuse of water through treatment and irrigation.

3.2 Major Project

The Project is classified as a Major Project under the now repealed Part 3A of the *Environmental Planning & Assessment Act 1979* (EP&A Act), as it includes development for the purpose of food and beverage processing (which includes wineries) with a capital investment value of more than \$30 million.

3.3 Continuing Operation of Part 3A

Part 3A of the EP&A Act, as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A to the EP&A Act, continues to apply to transitional Part 3A Projects. Director-General's environmental assessment requirements (DGRs) were issued in respect of this project prior to 1 October 2011 and the project is therefore a transitional Part 3A Project.

Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or his delegate) may approve or disapprove of the carrying out of the Project under Section 75J of the EP&A Act.

3.4 Approval Authority

The Minister has delegated his functions to determine Part 3A applications to the Executive Director, Development Assessment Systems and Approvals where any one of the following occurs:

- the relevant local council has not made an objection; and
- there are less than 25 public submissions objecting to the proposal; and
- a political donation disclosure statement has not been made in relation to the application.

Two public submissions were received and Griffith City Council has not made an objection to the proposal. No political disclosure statements have been made for this application or for any previous related applications, and no disclosures made by any persons who have lodged an objection to this application.

Accordingly the application is able to be determined by the Executive Director, Development Assessment Systems and Approvals in accordance with the Minister's Instrument of Delegation, dated 27 February 2013.

3.5 Other Approvals

The project will require an environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997*. At this stage, the Hanwood Winery does not have an EPL. This licence must be approved in a manner that is consistent with any Part 3A approval for the Project. The Department has consulted with the Environment Protection Authority (EPA) and considered the relevant issues relating to the grant of a licence in the assessment of the Project (see Section 5 of this report). The EPA has determined that should project approval be granted, it would be able to issue an EPL for the Project subject to conditions.

A groundwater extraction licence exists for the current operations at the Hanwood winery. The water balance for the Project does not identify a need to increase extraction volumes from this source. Therefore, no changes to this licence would be required as part of this project. Notwithstanding, the Department has consulted with the NSW Office of Water (NOW) in respect of this application and has incorporated its requirements into the recommended conditions.

3.6 Permissibility

The Project would be characterised as a rural industry. The Hanwood winery is located within land zoned as 1(e) Rural Industry & Employment under the provisions of the *Griffith Local Environment Plan 2002*. Rural industries (which mean handling, treating, packing or transportation of primary products) are permissible with consent in this zone.

The vineyard site (approximately four kilometres to the west of the Hanwood winery), where the irrigation of wastewater on existing vineyards would occur, is currently zoned 1(b) Rural Agricultural Protection under the provisions of the *Griffith Local Environmental Plan 2002*. Under this zone, agriculture is permissible without development consent, whereas "rural industries" is an innominate use which is permissible with consent. The irrigation of wastewater as part of this Project is associated with agriculture and a rural industry and is permissible with development consent.

Consequently, the Project in its entirety is permissible with consent.

3.7 Exhibition and Notification

Under Section 75(3) of the EP&A Act, the Director-General is required to make the Environmental Assessment (EA) of a Project publicly available for at least 30 days.

After accepting the EA for the Project, the Department:

- made it publicly available from Tuesday 20 November 2012 until Friday 21 December 2012;
 - on the Department's website;
 - at the Department's Head Office Information Centre in Sydney;
 - at the Nature Conservation Council's Head Office in Sydney; and
 - at Griffith City Council's administrative building;
- notified landowners in the vicinity of the site about the exhibition period by letter;
- notified relevant State government authorities and Griffith City Council's Planning Division by letter; and

- placed the exhibition notice in the Griffith Area News.

This satisfies the requirements in Section 75H (3) of the EP&A Act.

During the assessment process, the Department also made a number of documents available for download on the Department's website. These documents included the:

- Project application;
- Director-General's environmental assessment requirements;
- EA;
- submissions received; and
- Response to Submissions Report.

3.8 Environmental Planning Instruments

Under Section 75I of the EP&A Act, the Director-General's report is to include a copy of or reference to the provisions of any:

- State Environmental Planning Policy (SEPP) that substantially govern the carrying out of the Project; and
- environmental planning instrument that would (but for Part 3A) substantially govern the carrying out of the Project and that have been taken into consideration in the environmental assessment of the Project.

The Department has considered the Project against the relevant provisions of several environmental planning instruments (including the Major Development SEPP and the *Griffith Local Environmental Plan 2002*). The Department is satisfied that, subject to the implementation of the recommended conditions of approval, the proposal is generally consistent with the aims and objectives of these instruments (see Appendix B).

3.9 Objects of the *Environmental Planning and Assessment Act 1979*

The Minister is required to consider the objects of the EP&A Act when he makes decisions under the Act. These objects are detailed in Section 5 of the Act, and include:

'The objects of this Act are:

- (a) *to encourage:*
- (i) *the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
 - (ii) *the promotion and co-ordination of the orderly and economic use and development of land,*
 - (iii) *the protection, provision and co-ordination of communication and utility services,*
 - (iv) *the provision of land for public purposes,*
 - (v) *the provision and co-ordination of community services and facilities, and*
 - (vi) *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
 - (vii) *ecologically sustainable development, and*
 - (viii) *the provision and maintenance of affordable housing, and*
- (b) *to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *to provide increased opportunity for public involvement and participation in environmental planning and assessment.'*

The objects of most relevance to the Minister's decision on whether or not to approve the Project are those under Section 5(a)(i), (ii) and (vii).

With respect to ecologically sustainable development (ESD), the EP&A Act adopts the definition in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD *'requires the effective integration of economic and environmental considerations in decision-making processes'* and that ESD *'can be achieved through'* the implementation of the principles and programs including the precautionary principle, the principle of inter-generational equity, the principle of conservation of biological diversity and ecological integrity, and the principle of improved valuation, pricing and incentive mechanisms. In applying the precautionary principle, public decisions should be guided by careful evaluation to avoid,

wherever practicable, serious or irreversible damage to the environment and an assessment of the risk-weighted consequences of various options.

The Department has fully considered the objects of the EP&A Act, including the encouragement of ESD, in its assessment of the Project application and determined that the Project would meet the objects of the EP&A Act on the following grounds:

- Construction of a wastewater treatment plant and reuse of wastewater on site would reduce the volume of irrigation water drawn from Murrumbidgee Irrigation thereby conserving regional water resources; and
- Upgrades to the plant and equipment would reduce noise and odour emissions offsite, lessening the impacts of the Hanwood winery on surrounding residences.

4. CONSULTATION

A total of seven submissions were received by the Department on the Project. These submissions comprised of:

- five submissions from public authorities; and
- two general public submissions.

A summary of the issues raised in submissions is provided below. A copy of these submissions is attached in Appendix D.

4.1 Public Authorities

The **Environment Protection Authority (EPA)** determined there was adequate information to support the Project and did not object to the proposal provided that the amended Statement of Commitments, as recommended by EPA, had been adopted. The EPA recommended amendments pertaining to air quality, noise and wastewater treatment. The Proponent subsequently incorporated these amendments into a revised Statement of Commitments. In response to concerns regarding odour issues from the site, the EPA recommended a condition to monitor odour from the evaporation pans prior to the installation of the wastewater treatment plant to manage any odour impacts. The Department has incorporated this condition into the recommended conditions of approval.

The **Office of Environment and Heritage (OEH)** requested that the Statement of Commitments be updated to incorporate specific recommendations for Aboriginal cultural heritage and flora and fauna. The Proponent subsequently incorporated these amendments into a revised Statement of Commitments and OEH advised it had no further issues or objections to the Project.

Roads and Maritime Services (RMS) had no objection to the proposal but raised a number of issues pertaining to the Traffic and Parking Assessment Report. In particular, issues of traffic generation resulting from the proposed bottling facility including consideration of heavy vehicles and travel routes. RMS requested that an intersection analysis be completed with any input files or assumptions to be provided in order to enable an informed assessment of the traffic generated by the Project. The Proponent subsequently undertook further assessment of the intersection and heavy vehicle use associated with the Project. The Department is satisfied that the issues raised by RMS have been addressed.

In addition, the RMS recommended conditions that would require the Proponent to engage an independent auditor to assess the design and pavement of the intersection of the Kidman Way and Jack McWilliam Road. In the event that the auditor recommends intersection improvements, then the Proponent would be required to make a reasonable contribution to the cost to the improvements. The Department has incorporated these into its recommended conditions of approval.

The **NSW Office of Water (NOW)** raised issues regarding the monitoring of groundwater and recommended a condition for a Groundwater Monitoring Plan to be developed, in consultation with NOW, and implemented prior to the commencement of activities. The Department has incorporated this into its recommended conditions of approval.

Griffith City Council raised no further issues and determined that comments raised by Council during adequacy review of the EA had been addressed. Council is satisfied with the consultation undertaken with the relevant agencies (EPA, RMS and MI) with regard to key issues (odour, noise, wastewater, traffic), and determined that the Project would benefit the community. Griffith City Council also submitted landowners consent for the pipeline component of the Project given it included works within various road reserves.

Murrumbidgee Irrigation (MI) recommended the Proponent install new bores to conduct water quality sampling. MI also recommended the Proponent consult with other parties undertaking groundwater monitoring activities (MI and NOW), to undertake bi-annual electrical conductivity (EC) monitoring of bores. MI also submitted landowners consent for the Project, also relating to the pipeline works which would cross an irrigation supply channel.

4.2 General Public Submissions

Of the two general public submissions, one submission did not object to the Project, however the submitter requested that a fence be constructed around the site to control material blowing offsite into the nearby drainage channel or onto the submitter's property. The Department has recommended a condition which requires the Proponent to install a fence around the Winery site and to manage litter on site to address this issue.

One submission objected to the Project.

The main concerns raised in the two public submissions were:

- potential odour impacts, including cumulative impacts;
- the staged development of the wastewater system over 15 years would result in interim impacts as a result of wastewater discharge into evaporation ponds;
- potential noise and dust impacts due to construction;
- potential for flooding on neighbouring properties as a result of stormwater runoff;
- potential restriction of access to neighbouring properties during construction; and
- a lack of information provided about monitoring strategies to be implemented over the 15 year development period.

4.3 Response to Submissions Report

On 5 April 2013, the Proponent issued a Response to Submissions Report, which responded to the submissions of Government agencies and the general public (see Appendix C). The Response to Submissions Report contained additional information and clarifications, requested by the Department and other Government agencies, mainly relating to:

- water and wastewater management at the site;
- air quality, particularly odour, impacts of the Project and ways in which to reduce odour impacts offsite;
- noise impacts of the project, particularly relating to ways in which to mitigate noise impacts offsite; and
- traffic impacts of the project, specifically relating to heavy vehicle traffic.

5. ASSESSMENT

In assessing the merits of the Project, the Department has considered:

- the EA, submissions and response to submissions on the Project (see Appendices C to E);
- the relevant environmental planning instruments, guidelines and policies (see Appendix B); and
- the objects of the EP&A Act, including the object to encourage ecologically sustainable development.

The Department considers the key issues for the Project include odour; noise, traffic and access and wastewater management. All other issues are considered in Table 4.

5.1 Odour

Issue

The Hanwood winery currently generates odour associated with the wastewater management system at the site. Wastewater from wine production is currently collected and pumped to existing evaporation pans located to the south of the site. The Project would increase the amount of wastewater generated at the site from approximately 53 ML to 145 ML per annum, and as such has the potential to increase the level of odour emissions. Due to the proximity of private properties around the winery (see Figure 3), any increase in odour emissions could potentially generate adverse impacts.

Consideration

The Environmental Assessment for the Project included an odour assessment, incorporating potential cumulative emissions from other off-site sources, which modelled odour generated was prepared by an

odour specialist, Onsite Technology Pty Ltd. The assessment determined that the wastewater evaporation pans would be the primary source of off-site odour associated with the winery. However, the assessment also found that the predicted odour impact at the adjacent residences would, once the Project is fully developed, be less than the 2.4 odour unit criteria which would need to be met to satisfy the EPA's *Assessment and Management of Odour from Stationary Sources in NSW* (2006) guideline.

Odour modelling undertaken for the Project indicates that existing odour emissions at the nearest residence to the evaporation pans (located around 250m west of the pans – see Figure 3) is around 4.5 odour units which exceeds the EPA's relevant criteria of around 2.4 odour units. While the Project would result in a substantial increase in the volume of wastewater to be treated at the site and therefore potentially increase odour emissions, the Proponent has proposed a staged upgrade to the existing wastewater treatment plant to improve wastewater (and thereby odour) management on site.

The Project would include upgrades to the wastewater management system whereby, ultimately, wastewater would be discharged from the winery, screened to remove large solids, settled to remove fine solids and then stored in a covered anaerobic lagoon with an operating capacity of around 5 - 20 ML. The covered anaerobic lagoon would lower both the chemical and biological oxygen demand of the wastewater. The wastewater would then be pumped to a sequencing batch reactor for aerobic processing. As a contingency measure, in the instance that the wastewater load exceeds the treatment capacity of the treatment system, wastewater would be discharged to the evaporation ponds.

The wastewater treatment plant upgrade will consist of:

- Stage 1: installation of a sequencing batch reactor to remove biological oxygen demand from the wastewater by aerobic bio-treatment. The evaporation pans would still be used during Stage 1 as auxiliary storage for wastewater so as not to overload the sequencing batch reactor. However, the volume of wastewater and the duration for which it will be stored in the evaporation pans will be reduced;
- Stage 2: installation of a covered anaerobic lagoon and an additional sequencing batch reactor to treat wastewater. The covered anaerobic lagoon will treat wastewater to lower the chemical oxygen demand and would be covered with a 1.1mm polypropylene floating cover that stores biogas and contains odour; and
- Stage 3: installation of a third sequencing batch reactor.

The modelling undertaken by the Proponent indicated that with the upgrade of the existing wastewater treatment system, improvements to odour levels would be achieved at the nearest receiver. For Stage 1, the modelling indicated that odour emissions at the closest residence would be 2.4 odour units, thereby almost meeting the EPA's criteria of less than 2.4 odour units. While the installation of the covered anaerobic lagoon by Stage 2 would further reduce odour emissions such that the modelled impact at the nearest residence under the Stage 2 and Stage 3 scenarios would be around 1 odour unit.

Odour generated by the existing wastewater management on site was raised as an issue of concern in submissions received from the general public. While the Department acknowledges that odour has historically been a concern to some residents, it would appear that the proposed improvements to the site's wastewater management system as part of the Project would result in beneficial odour reductions on nearby receivers.

The Department notes that without the expansion, it is likely that odour levels from the site would continue at existing levels, which exceed contemporary odour standards at the nearest sensitive receiver. The expanded operations would provide the means for the existing operations to be brought into line with contemporary odour standards as it gradually increases production in a staged manner.

Whilst the staged approach to wastewater upgrade would mean that odour levels on site may not necessarily meet the criterion of less than 2.4 odour units at the nearest receiver right from the commencement of the expanded operations, the Department accepts that implementation of Stage 1 would nevertheless constitute an improvement to the existing situation. In the context of the winery constituting an existing use that was developed on site prior to the application of contemporary odour criteria and given the long-term commitment for improving wastewater (and therefore odour) management on site by the Proponent, the Department considers the Project to be acceptable.

The EPA indicated that they were satisfied with the odour assessment undertaken in the EA and that any potential impacts would be adequately addressed through the proposed mitigation measures outlined in the

EA and the Proponents Response to Submissions report. In addition, the EPA requested that, if the wastewater treatment plan has not been installed prior to the next vintage period, that the Proponent monitor the evaporation pans during vintage and manage any identified odour impacts. These conditions have been included in the Department's recommended instrument.

The Department is satisfied that the Odour Impact Assessment has been undertaken in accordance with the EPA's guideline *Assessment and Management of Odour from Stationary Sources in NSW*. The Department considers that whilst odour criteria will continue to be exceeded in the short term, the impacts will in time be brought into line with contemporary odour standards and would in the meantime be an improvement to the existing situation.

Conclusion

The Department has reviewed the Odour Impact Assessment for the Project and the proposed odour mitigation and management measures, and is satisfied that the Project will result in reduced odour levels compared with the current situation. The Department notes that the winery currently exceeds the relevant odour criteria and that the proposed staged upgrade of the site's wastewater management system would result in immediate improvements to odour emissions and ultimately lead to compliance with contemporary odour standards.

However, to ensure that wastewater improvements are implemented as proposed and that odour emissions from the Project are suitably managed, the Department has recommended a number of conditions which the Proponent is required to satisfy. This includes requirements for the Proponent to:

- undertake daily inspections of the evaporation pans during vintage periods to assess their condition and ensure any specific weather conditions or activities which may enhance odour generation are managed (eg wind conditions or water levels);
- manage odour levels from the evaporation pans during vintage;
- prepare and implement an operational Odour Reduction and Verification Plan, which is to include details of odour reduction measures to be implemented at each of the Project's stages, details of a monitoring program and complaint response procedures; and
- ensure the Project does not generate any offensive odours.

5.2 Noise

Issue

The Project has the potential to result in noise emissions from the construction and operation of the new packaging facility and wastewater treatment facility and from truck movements to and from the site. The Environmental Assessment for the Project was accompanied by a specialist Noise Impact Assessment prepared by Reverb Acoustics Pty Ltd.

Consideration

Operational Noise

There are five private properties that are located in close proximity to the Project as shown in Figure 6, with the closest property located approximately 30m south of the site's boundary (R2).

The noise assessment established noise limits for the site in accordance with the *NSW Industrial Noise Policy (INP)* of 40 dB(A) for the day and evening periods and 38 dB(A) for the night time period. The noise assessment predicted cumulative noise impacts from the existing winery and the Project (comprising the new packaging facility and wastewater treatment plant), during vintage operations which is the period representative of 'worst case' or full capacity operations.

The assessment indicated that cumulative noise from the site would result in a noise level of approximately 45 dB(A) at nearby residences, approximately 5 dB(A) above the established day/evening criteria and 7 dB(A) above the night time criteria. However, the noise assessment identified that the majority of this noise contribution would be from the existing winery operations, which already exceed the criteria by up to 4 dB(A) during the day/evening period and 6 dB(A) during the night time period. Noise contributions from the Project are predicted to be limited to a 1 dB(A) increase of existing exceedances, meaning that the Project would contribute to 1 dB(A) of the 5-7 dB(A) exceedances of the INP criteria predicted from the site.

The Proponent has identified that the design of the Project (i.e. the new packaging facility and wastewater treatment plant) would incorporate noise attenuation measures to ensure noise performance as predicted. These include:

- acoustic treatment of roof ventilation;
- enclosure of refrigeration plant in acoustically rated enclosure;
- installation of acoustic ventilation louvers to plant room walls;
- provision of absorption to underside of dock roof; and
- erection of free-standing acoustic barriers adjacent to all wastewater treatment facility plant and irrigation pumps.

In addition, the Proponent has proposed a number of noise control strategies to control noise emissions from its existing winery. This includes an immediate upgrade of its chiller and barrel room door infrastructure to achieve noise reductions of approximately 3 dB(A) and long-term plans to replace aging infrastructure with quieter plant and equipment. The Proponent's noise assessment suggests that over time, with the incorporation of these measures, noise generation from existing operations could be reduced by 4 dB(A) or more. The Proponent has also indicated that operational controls such as speed restrictions and the use of quieter mobile plant could be used to reduce short-term noise events on site to reduce peak noise generation.

With the above measures in place, the expanded winery is nevertheless predicted to result in residual exceedances of the INP criteria by approximately 1-3 dB(A)

The Department accepts that the existing winery was developed on site prior to the application of current noise criteria and that this needs to be taken into consideration when assessing the upgraded project against contemporary noise standards. The Department notes that whilst the noise mitigation measures proposed may not result in the expanded operations meeting full compliance with contemporary noise limits, the Project provides a means for significantly improving the noise performance of the existing operations. Without the Project, noise impacts from the existing operations would remain. The Project provides a means for improving existing operations over time as the facility is expanded. On this basis, the Department accepts the proposed noise control strategies for the new project and the existing operations represent a genuine means of continuous improvement for the acoustic performance of the site over time. In particular, the Department notes that the mitigation strategy would help reduce noise generation and existing exceedances from the site during the sensitive night-time period.

Based on the Proponent's assessment and in the context of the winery being an existing land use, the Department considers the noise impacts predicted to result from the expanded Project to be acceptable. In this regard, the Department notes that the predicted 1 dB(A) increase to existing noise levels from the Project is likely to be within the confidence limits of the modelling such that there is unlikely to be a significant net difference to existing noise levels as a result of the Project (subject to its design and implementation as proposed). In addition, the Department notes that the worst case noise impacts predicted are limited to the peak vintage production season which would be confined to some three months of the year. This means that for the majority of year, noise levels would likely to be significantly less than that predicted and during vintage with the proposed mitigation measures implemented over time, is likely to be close to or achieving INP noise limits for the majority of the year. The Department considers that with the implementation of the mitigation measures as proposed, the expanded project would result in acceptable noise outcomes which are compatible with surrounding rural land use, consistent with other existing rural/agricultural industries in the area, and consistent with the principles of continuous improvement.

The EPA did not raise any objection to the noise assessment undertaken by the Proponent, however recommended that the noise mitigation measures identified in the Proponent's noise assessment be implemented as proposed. No public submissions raised concern regarding the operational noise impacts of the project. The Department has recommended conditions requiring the staged implementation of mitigation measures and monitoring to verify the acoustic performance of the implemented measures. The Department considers this approach will achieve continuous improvement of acoustic performance overtime.

Construction and Traffic Noise

With respect to construction noise, the Proponent has proposed construction during standard daytime construction hours. Potential noise impacts during construction were raised as an issue of concern in public submissions.

The Project is predicted to exceed construction noise management levels during the day time period with construction noise levels predicted at up to 59dB(A) when works are undertaken near residences as a worst case [14dB(A) above the construction noise management levels for residences]. The construction of the Project also has the potential for vibration impacts at nearest receivers as a result of bull dozers operating in the vicinity of residences. However, this can be mitigated by maintaining appropriate buffer distances from these residences where possible.

The Department considers that whilst some short-term exceedances of construction noise management levels may occur, the impacts will ultimately be temporary in nature and acceptable subject to the Proponent implementing all reasonable and feasible measures to manage and minimise noise and vibration impacts.

An additional noise assessment undertaken by the Proponent as part of its Submissions Report indicated that the Project would not exceed relevant road traffic noise criteria, under worst case traffic volumes during day time or night time periods. On this basis, the Department is satisfied that the Project would not pose a risk of adverse traffic noise impact at surrounding receivers.

Conclusion

Based on its assessment, the Department is satisfied that the noise generated by the Project would not be significant in the context of existing noise levels and considers that whilst some short-term exceedances of criteria may occur, the impacts can be managed with the implementation of appropriate mitigation measures. Key conditions of approval recommended by the Department to manage noise impacts for the Project (operational and construction impacts) include:

- requirement for the operational mitigation measures currently proposed to be implemented on site;
- requirement to prepare an operational noise reduction plan to be implemented for the Project, which is to be updated prior to each stage of implementation of the Project to identify measures to be implemented at that stage including monitoring measures to verify the performance of the implemented measures; and
- requirement for the Proponent to prepare and implement a construction Noise and Vibration Management Plan to ensure all reasonable and feasible measures are implemented to manage noise and vibration impacts at surrounding sensitive receivers.

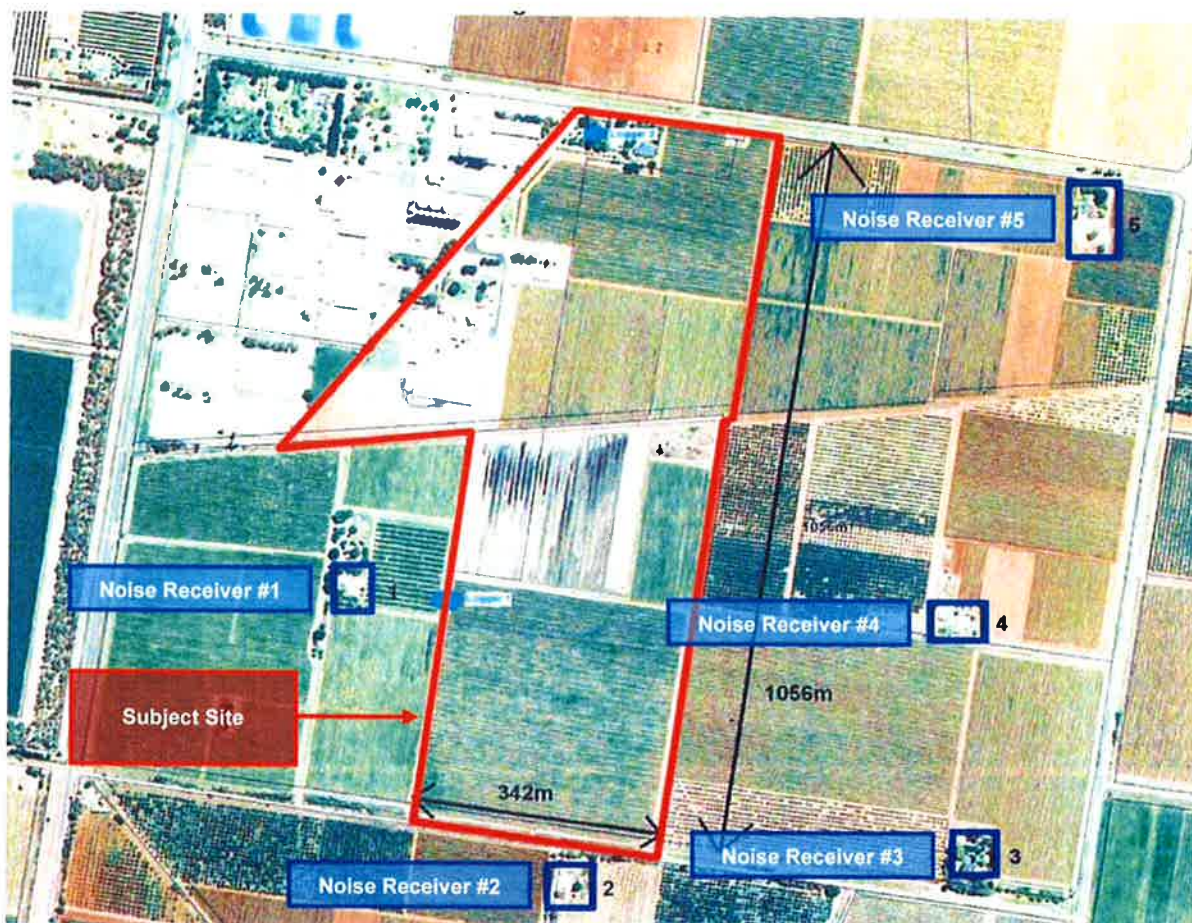


Figure 6: Noise receivers in the vicinity of the Project

5.3 Traffic and Access

Issue

The project would generate additional truck movements on the local traffic network as the result of the export of bottled wine during vintage operations. The Environmental Assessment for the Project was accompanied by a specialist traffic assessment prepared by Varga Traffic Planning Pty Ltd. The assessment considered the existing traffic situation, the predicted traffic generation of the Project, the acceptability of the associated traffic impacts and recommended measures to mitigate residual impacts.

Consideration

Local Road Network

The Project would be located on the southern side of Jack McWilliam Road, between Kidman Way and Old Wilbriggie Road. The existing road network surrounding the site includes:

- Kidman Way, which is classified by RMS as a State Road and provides the key north-south link in the area. It typically comprises two traffic lanes with an additional auxiliary turning lane at the intersection with Jack McWilliam Road;
- Jack McWilliam Road, which is a local, unclassified road and follows a straight east-west alignment. The Project site has a street frontage to this road of approximately 290m; and
- Old Willbriggie Road which is a local, unclassified road which provides a secondary north-south road link and follows an approximately parallel alignment to Kidman Road.

The proposed haulage route to and from the site during the operational phase would be via Kidman Way and Jack McWilliam Road. The intersection at Kidman Way and Jack McWilliam Road consists of AUR (auxiliary right-turn lane) and AUL (auxiliary left-turn lanes) type arrangements.

Traffic surveys

Traffic surveys at the intersection of Kidman Way and Jack McWilliam Road indicated that the peak hour occurred between 8:30 am and 9:30 am and between 3:15 pm and 4:15 pm. Also, the traffic surveys suggested that Jack McWilliam Road is almost exclusively used by traffic accessing the Hanwood winery and the poultry feed mill across the road.

The traffic surveys indicated that:

- Kidman Way has an annual average volume of 3,100 vehicles per day for two-way traffic flow;
- Jack McWilliam Road, during vintage, has an annual average value of 300 to 400 vehicles per day for two-way traffic flow; and
- Jack McWilliam Road, following completion of vintage, has an annual average volume of 200 vehicles per day for two-way traffic flow.

The specialist traffic assessment projected that the Project's traffic volumes would increase as follows:

- an increase of 10 to 20 truck movements per hour generated during vintage as a result of the increase in delivery of grapes and wine production; and
- an increase of 10 to 20 vehicle movements per hour during shift changes as a result of increased staff numbers.

The Department considers the traffic surveys to provide an adequate forecast of the Project's impact on the existing road network.

Kidman Way and Jack McWilliam Road Intersection Capacity

The specialist traffic assessment concluded that under the worst case scenario during vintage, when the Project would be operating at full capacity, the existing auxiliary turning lanes will satisfactorily accommodate the maximum traffic flows.

The Department sought clarification from the Proponent regarding the capacity of the intersection to accommodate heavy vehicle movements associated with the Project.

Clarification was provided by Varga Traffic Planning Pty Ltd and the Proponent, which provided an estimate of the Project's contribution to heavy traffic movements at the intersection of Kidman Way and Jack

McWilliam Road, under existing conditions as well as the projected worst case scenario. The assessment indicated that:

- Currently: the existing winery operations, contributes two heavy vehicle movements per peak hour to the intersection during non-vintage periods and 13 heavy vehicle movements per peak hour during vintage periods, equating to approximately 23% of the current heavy vehicle traffic using the intersection.
- Following the expansion of the winery: under the worst case scenario for the Project (once all stages of the Project are complete and fully operational), heavy vehicle traffic will increase to 18 heavy vehicle movements per peak hour to the intersection during non-vintage periods and 36 movements per peak hour during vintage periods (ie 3 months per year), which is equivalent to approximately 50% of the heavy vehicle traffic projected to be using the intersection as a result of the Project and expansion of other industry within Jack McWilliam Road.

In its submission on the Project, the RMS raised some concerns over the additional traffic loading on the current standard of the Kidman Way and Jack McWilliam Road intersection given that the proposal represents a significant increase in capacity for the facility. The RMS requested that the Proponent undertake an audit of these existing intersections to assess its compliance with the AUL/AUR intersection treatment and the integrity of the existing pavement to cater to the expected turning traffic volumes and the through traffic along the Kidman Way.

The Proponent indicated that it considered an audit was not warranted, particularly as it considered that they are currently not the largest traffic generator at the intersection.

However, the Department consulted with both the RMS and the Proponent regarding the capacity the Kidman Way and Jack McWilliam Road intersection and the potential requirements for upgrades to the intersection. On consideration, the Department has recommended a condition requiring the intersection to be independently audited by an appropriately qualified person, who has been endorsed by the Director-General in consultation with the RMS to undertake this analysis.

The independent audit would serve to determine the current standard of the intersection and identify whether any upgrades are required, report on the cost of the required intersection upgrade and advise on the level of contributions that would be required by the Proponent to fund the intersection upgrade commensurate with its level of use of the intersection. The Department considers that this approach would provide a means for independently determining the upgrade requirements for the Kidman Way and Jack McWilliam Road intersection to address intersection capacity issues raised by the RMS, whilst ensuring a fair contribution from the Proponent to fund the intersection, commensurate with its actual usage of the intersection. Both the RMS and Proponent have accepted this recommendation.

In its submission, Griffith City Council did not raise concerns regarding traffic impacts. However, Council did stipulate that the Proponent would be required to obtain approval from RMS for the carrying out of works and the installation of the pipeline within the Kidman Way Road Reserve. The Department has recommended a condition to this effect.

Conclusion

The Department is satisfied that the traffic generated by the Project would not significantly impact upon the surrounding road network or add significantly to intersection congestion. The Department is satisfied that the recommended audit will appropriately determine the need for an upgrade to the intersection between Kidman Way and Jack McWilliam Road and the Proponent's funding contribution to any such works can be determined in an independent and equitable manner.

5.4 Wastewater Management

Issue

The Project would increase the volume of wastewater generated by winery operations from approximately 53 ML to 145 ML of wastewater per annum. As part of the Project, the Proponent would treat the wastewater for use as supplementary irrigation water for the vineyards at the Hanwood winery and other vineyards nearby. The storage and irrigation of treated wastewater may impact on groundwater levels, contaminate groundwater, increase salinity and affect the nutrient loadings of the soils on the site.

Consideration

The Hanwood winery currently generates around 53 ML of wastewater per annum. Wastewater from wine production is currently collected and pumped to evaporation pans located to the south of the site, from which water evaporates (see Figure 3). An increase in wastewater resulting from an expansion of winery production would exceed the capacity of the existing evaporation pans.

The Project would include upgrades to the wastewater management system in readiness for the increased volume of wastewater (approximately 145 ML of wastewater per annum) that would be generated by the expanded winery operations. The upgraded wastewater treatment system would, ultimately, capture wastewater discharged from the winery, screen to remove large solids, settle to remove fine solids and then store wastewater in a covered anaerobic lagoon with an operating capacity of around 5 - 20 ML. The covered anaerobic lagoon would lower both the chemical and biological oxygen demand of the wastewater. The wastewater would then be pumped to a sequencing batch reactor for aerobic processing. As a contingency measure, where/if wastewater load exceeds the treatment capacity of the treatment system, surplus wastewater would be discharged to the existing evaporation ponds.

The wastewater treatment plant upgrade would consist of:

- Stage 1: installation of a sequencing batch reactor to remove biological oxygen demand from the wastewater by aerobic bio-treatment. The evaporation pans would still be used during Stage 1 as auxiliary storage for wastewater so as not to overload the sequencing batch reactor. However, the volume of wastewater and the duration for which it would be stored in the evaporation pans would be reduced.
- Stage 2: installation of a covered anaerobic lagoon and an additional sequencing batch reactor to treat wastewater. The covered anaerobic lagoon would treat wastewater to lower the chemical oxygen demand and would be covered with a 1.1mm polypropylene floating cover that stores biogas and contains odour. The covered anaerobic lagoon would have a maximum capacity of 20ML. During Stage 2, a pipeline, approximately 8km in length, would be constructed to transfer treated wastewater to irrigate vineyards west of the Hanwood winery (see Figure 5).
- Stage 3: installation of a third sequencing batch reactor.

Treated wastewater would be stored in lagoons (combined capacity of 75 ML) and lined with impermeable liners which would minimise the potential for leaching of stored wastewater into underlying soils and groundwater. The wastewater and stormwater system would be required to provide a winter storage volume of 74ML. Further, as an additional contingency, should the covered anaerobic lagoon reach capacity, the wastewater would be pumped to existing evaporation pans. The Department is satisfied that the system of lagoons would be sufficient to contain wastewater volumes generated by the Project and that the effective construction of the lagoons with impermeable liners would mitigate the risk of potential soil and groundwater contamination by stored wastewaters at the site.

During Stage 2 of the wastewater treatment upgrades, a pipeline would be constructed within Council's road reserve and the Murrumbidgee Irrigation drainage reserve to transport treated wastewater to vineyards approximately 8km to the west of the Hanwood winery. Council has provided in principle support to the construction of the pipeline, subject to the submission of a Construction Certificate (Civil Works), issue of works permit, relevant approval from RMS and approval from Murrumbidgee Irrigation for works within the drainage reserve. The Department has recommended conditions to address Council's comments.

The Proponent proposes to irrigate vineyards using treated wastewater and the Department notes that this has the potential to alter the chemistry of soils and groundwater at the site. The maximum volume of wastewater which is proposed to be irrigated per hectare would occur during Stage 1 (ie prior to the construction of the pipeline). During this Stage, approximately 71 ML per annum would be irrigated on farms 128 and 130 (an area of around 46 ha) which would make up approximately 40% of the overall water volume used for irrigation on these farms (the balance would come from water supplied by Murrumbidgee Irrigation). The nutrient balance for this scenario indicates that the concentration of nutrients in the wastewater would be within the recommended loading rates for vineyards. However, the concentration of potassium in the treated wastewater is projected to be greater than the loading rates for vineyards by a factor of ten.

The Department consulted with the EPA regarding the feasibility of irrigating vineyards with treated wastewater. The EPA confirmed that, providing the wastewater is applied at a rate that does not exceed the nutrient uptake capacity of the plants or hydrological capacity of the soil, there is a low risk of altering the quality or levels of groundwater. Therefore, the use of treated wastewater for irrigation would be sustainable provided that the Proponent manages the irrigation rate within the capacity of the land to assimilate it. Due to

the area of the land proposed to be irrigated at the final Project stage being in the order of 434ha in total, the EPA considers that the application of treated wastewater as irrigation would be feasible.

The EPA, in comments provided on the Proponent's response to submissions, stated that the potential pollution impacts of the Project have been adequately addressed through proposed mitigation measures. Notwithstanding, the Department requires validation from the Proponent for all Stages of the Project, to demonstrate that the Project would not adversely impact on soils and groundwater. The Department notes that wastewater irrigation is undertaken for other land uses in the region and considers that this practice can be undertaken in an environmentally responsible manner, subject to sufficient controls such as treatment and trigger-response based monitoring.

Therefore, prior to construction of the reuse component of the wastewater management upgrades, the Proponent is required to provide details of the irrigation rates, nutrient balance and soil capacity to verify and confirm the feasibility of reusing treated wastewater for irrigation purposes, in consultation with the NSW Office of Water and EPA, and to the satisfaction of the Director-General, that impacts from the use of treated wastewater to irrigate vineyards would be sufficiently mitigated.

Conclusion

Based on its assessment, the Department is satisfied that effective implementation of the stormwater and wastewater management systems would mitigate the potential for uncontrolled spills off-site. Key conditions of approval recommended by the Department to manage water impacts for the Project include that all new and re-constructed wastewater treatment and storage ponds must have a minimum pond base and wall permeability of 1×10^{-9} metres per second or be artificially lined with an impermeable high density polyethylene liner. In addition, all new wastewater storage ponds and stormwater detention basins constructed on site are to be designed and constructed to ensure a sufficient freeboard to accommodate a 1 in 20 year 24 hour storm event.

The Department recommends that the Proponent provide detail of the irrigation rates, nutrient balance and soil capacity to validate that impacts from the use of treated wastewater to irrigate vineyards would be sufficiently mitigated so as not to adversely affect the chemistry of soils and groundwater at the site.

Wastewater utilisation must ensure that the soil is able to absorb the nutrients, salts, hydraulic load and organic materials in the solids or liquids. Monitoring of land and receiving waters to determine the impact of wastewater application would be required by the EPA. Therefore, it has been recommended that the Proponent be required to prepare and implement detailed Groundwater Management and Irrigation and Wastewater Management Plans for the Project, including provision for soil and water monitoring.

5.5 Other issues

Table 4 below presents the Department's assessment of the other issues.

Table 4: Assessment of Other Issues

Issue	Assessment	Recommendation
Air Quality (exc. odour)	<ul style="list-style-type: none"> ▪ As the majority of the site (including all internal roads) is paved, dust generation during the operation of the project would be minor. ▪ During construction, bulk earthworks (e.g. the removal of topsoil) would generate some dust. ▪ The nearest residents are located approximately 30m south of the site, therefore it is important that any dust generated during construction is effectively managed. ▪ To manage air quality impacts, the Proponent made a number of commitments in the EA such as preparing a Construction Environmental Management Plan (CEMP), which would include measures to minimise dust and other air emissions such as truck exhausts. ▪ The EPA recommended that the Proponent also commits to ceasing earthworks if windblown dust is found to be impacting on any residence. ▪ In the RTS, the Proponent revised its commitments to include the EPA's recommendation. ▪ The Department is satisfied that the air quality impacts of the 	<p>Conditions are recommended that would require the Proponent to:</p> <ul style="list-style-type: none"> ▪ prepare and implement a Construction Dust Management Plan including all reasonable and feasible measures to minimise dust emissions; and ▪ prepare and implement a CEMP.

Issue	Assessment	Recommendation
Solid Waste	<p>project would be minor and can be effectively managed, subject to conditions.</p> <ul style="list-style-type: none"> ▪ The Project's increased crush capacity would increase the generation of solid waste streams such as from grape stalks, biosolids and filters used to clarify wine. ▪ Waste management and disposal procedures at the winery (with the exception of biosolids) are well established. ▪ Waste is generally re-used on site or recycled, and waste unable to be recycled is disposed of off-site at an appropriately licensed facility such as a landfill. ▪ Biosolids would be re-used on the vineyards. ▪ The Proponent has committed to disposing of all solid waste in accordance with industry best practice as agreed to by the EPA. ▪ A submission raised concerns over waste material being blown off-site onto their property. To address this issue, the Department has recommended that McWilliam's install a fence surrounding its property as a barrier to wind-blown waste and to implement measures to prevent accumulation of litter on-site. ▪ The EPA did not raise any issues in relation to solid waste. ▪ The Department is satisfied that the solid waste generated by the project can be effectively managed, subject to conditions. 	<p>Conditions are recommended that would require the Proponent to:</p> <ul style="list-style-type: none"> ▪ ensure all waste that is generated by the project is stored, handled and disposed of in accordance with the EPA's <i>Waste Classification Guidelines</i>. ▪ implement suitable measures to prevent the unnecessary proliferation of litter both on and off site, including the installation and maintenance of a fence around the site.
Heritage	<ul style="list-style-type: none"> ▪ As the winery has been operating since 1917, historical activities at the site have resulted in the site being relatively disturbed. ▪ The EA did not identify non-Aboriginal heritage as an issue of concern regarding the project. ▪ Council raised no issues in relation to non-Aboriginal heritage. ▪ The EA included an Aboriginal heritage assessment which found that three Aboriginal sites [one isolated find (MW-IF1 and IF2)] and two open artefact scatters (MW-OS1) would be directly impacted upon by the Project. ▪ MW-IF1 and IF2 are located within the footprint of the proposed bottling plant and MW-OS1 is located along the proposed pipeline route. ▪ These three sites were assessed as significant to the Griffith Local Aboriginal Land Council but having low scientific significance due to high levels of previous disturbance. ▪ The Aboriginal heritage assessment made a number of recommendations, in particular that all isolated finds and artefacts be relocated in consultation with the local Aboriginal community, prior to disturbance. ▪ The Proponent has committed to implementing all recommendations of the report including heritage inductions for construction personnel. ▪ OEH reviewed the Aboriginal heritage assessment and is satisfied its recommendations are acceptable. ▪ The Department is therefore satisfied that the heritage impacts of the Project would be minor and has recommended conditions to deal with existing sites and unexpected finds. 	<p>Conditions are recommended that would require the Proponent to:</p> <ul style="list-style-type: none"> ▪ salvage and relocate Aboriginal sites MW-IF1, IF2 and MW-OS1 in consultation with the relevant Aboriginal stakeholders, prior to construction; and ▪ conduct heritage education inductions for all construction personnel and cease works and notify the relevant authorities in the event that any Aboriginal cultural object(s) or human remains are uncovered on site.
Visual Impacts	<ul style="list-style-type: none"> ▪ The Project is located in an existing and established agricultural based industrial area, which includes vineyards, wineries, orchards and a poultry feed mill. ▪ The winery has been operating at the site since 1917 and is visible from some nearby residences, the nearest being 30m south of the site (see Figure 2). ▪ However, the visual impact of the facility and its structures is typical of agriculture industries in the locality. ▪ Key public vantage points of the site are from Jack McWilliam Road (north), Ben Martin road (south) and residents located to the north and south of the winery. ▪ Key existing structures which visually dominate the site include the storage tanks (which number around 400) and the winery building. The larger storage tanks are around 12m in height. 	<p>Conditions are recommended that would require the Proponent to:</p> <ul style="list-style-type: none"> ▪ install and maintain (for the life of the project) a landscaping mound to screen the project (in particular, the packaging building and wastewater treatment plant) from Ben Martin Road, in consultation with Council and to the satisfaction of the Director-General; and

Issue	Assessment	Recommendation
	<ul style="list-style-type: none"> ▪ Key structures proposed that are likely to have a visual impact include the new barrel store (approximately 12m high), the bottling and packaging building (approximately 33,000m² in area and up to 12m in height), wastewater treatment plant and additional storage tanks (around 400). ▪ All buildings proposed as part of the project would be contemporary in design and of similar height to existing structures on site. All external lighting would be directed to avoid nuisance to nearby residents and traffic. ▪ The new barrel store is likely to be visible from Jack McWilliam Road to the north, however is partially screened by existing vegetation and would be a duplicate of the existing barrel stores located on site. ▪ Views of the bottling and packaging building from Jack McWilliam Road would be prominent, but would be partially blocked by the new barrel store, and are considered consistent with the overall visual character of the site. ▪ The key visual impact of the project would result from the new wastewater treatment plant and bottling and packaging building being visible from Ben Martin Road to the south. ▪ The Proponent proposes to build a landscaped mound along the southern boundary of the site to mitigate these impacts. ▪ Subject to the provision of this mound, the EA concludes that the project would not have any adverse effect of the visual amenity of the area. ▪ Views from the west (at Kidman Way) would be shielded by the Baiada Poultry Pty Ltd poultry feed mill and thus, the Project would have minimal impacts on views from the west. ▪ Council did not raise any issues in relation to visual impacts. ▪ The Department generally accepts the conclusions in the EA and is satisfied that, subject to the provision of the landscaped bund on the southern boundary of the site to mitigate the visual impacts, the project would not result in unacceptable visual impacts. 	<ul style="list-style-type: none"> ▪ prepare and implement a Landscaping and Vegetation Management Plan in consultation with Council, prior to construction including landscaping measures to minimise the visual impact of the project from residences and public vantage points.
Water (exc. wastewater)	<ul style="list-style-type: none"> ▪ Raw water is supplied to the site via a Murray Irrigation Limited (MIL) main and would increase from 69ML to 164ML a year as a result of the expansion. ▪ A third raw water storage lagoon (no. 6) with a 35ML capacity is proposed to store the additional raw water. ▪ MIL did not raise any issues in relation to the supply of this additional water to the facility. ▪ Stormwater harvested off roofs and water treated at the wastewater treatment plant would be re-used on site (e.g. in the manufacture of wine) where possible to substitute raw water requirements. ▪ Clean stormwater (e.g. water captured on roofs) is used for raw water supply and dirty stormwater is directed to either Lagoon no. 3 for storage or the wastewater treatment plant if contaminated, prior to irrigation or discharge off-site into the adjacent MIL channel/s. ▪ Lagoon no. 3 has a dual purpose of collecting stormwater for reuse and to act as a bund for the site to prevent an uncontrolled spill from leaving the site. ▪ Lagoon no. 3 has a capacity of 3.8 ML which would sufficiently contain a 1 in 10 year flood event at the ultimate stage of project plus a spill from the largest above ground storage tank. Lagoon no. 3 is also capable of storing a 1 in 20 year storm event. ▪ The Department sought clarification from the Proponent regarding the potential for the Project to cause flooding of neighbouring properties as a result of uncontrolled discharge from the stormwater (and wastewater) management system/s into the adjacent MIL channel. ▪ In the RTS, the Proponent consulted with MIL and confirmed that in a 1:100 year flood event discharge from the site to the 	<p>Conditions are recommended that would require the Proponent to:</p> <ul style="list-style-type: none"> ▪ ensure that all licensed surface water discharges from the site comply with the discharge limits (volume and quality) set for the development in any EPL or relevant provisions of the POEO Act; ▪ utilise stormwater for dust suppression and watering of landscaped areas as far as practicable; and ▪ ensure that the new stormwater detention basins are designed to ensure a sufficient freeboard to accommodate a 1 in 20 year 24 hour storm event.

Issue	Assessment	Recommendation
Biodiversity	<p>MIL channel would be approximately 3.88 ML per day, which would be within the capacity of the channel (which has capacity of 37ML per day) and therefore was unlikely to impact on surrounding properties by overtopping the channel.</p> <ul style="list-style-type: none"> ▪ The EPA recommended conditions requiring all stormwater water storage ponds/lagoons to have sufficient freeboard to hold a 1:20 year 24 hour storm event. ▪ In the RTS, the Proponent accepted this requirement and the Department have incorporated these into the recommended conditions. ▪ The Department is satisfied that sufficient water would be available for the project and that stormwater can be effectively managed, subject to conditions. <p>A Flora and Fauna assessment found that the Project (excluding the pipeline) would be located on cleared areas of the site and is therefore unlikely to directly impact on any vegetation.</p> <ul style="list-style-type: none"> ▪ However the construction of the pipeline may directly impact on fragmented and disturbed patches of Myall Woodland (including Boree trees), which are located along the road corridors, which is identified as an endangered ecological community (EEC) under the <i>Threatened Species Conservation Act 1997</i>. ▪ Impacts would be limited to the removal of up to 10 juvenile Boree trees (<50cm in height), the lopping of overhanging branches from some mature Booree trees to enable construction access and potential root damage to other Boree trees during pipeline installation. ▪ The Proponent has committed to replacing any native shrub and juvenile Boree species removed with tube stock of local provenance to compensate for the loss of this vegetation. ▪ The OEH acknowledged the biodiversity impacts of the project would be minimal but recommended a number of additions to the Proponent's statement of commitments (SoCs). ▪ In the RTS, the Proponent modified the SoCs to incorporate the OEH's recommendations. ▪ Following review of the RTS, the OEH raised no further issues in relation to biodiversity. ▪ The Department is satisfied that, given the minor level of clearing proposed and the proposed offset measures, the project would not result in significant impacts to biodiversity in the region. 	<p>Conditions are recommended that would require the Proponent to:</p> <ul style="list-style-type: none"> ▪ prepare and implement a Biodiversity Management Plan, in consultation with OEH, to implement measures to avoid and minimise impacts on the Myall Woodland during construction and provide details of compensatory measures should any impacts occur.
Greenhouse Gas	<p>The Project would generate Scope 1, 2 and 3 greenhouse gas (GHG) emissions from fuel extraction and combustion of natural gas delivered in the pipeline, mobile equipment, wastewater treatment, purchased power and traffic movements.</p> <ul style="list-style-type: none"> ▪ Overall it was estimated in the EA that the total GHG emissions would double from the existing emissions to around 27,447 CO_{2e} tonnes per annum. ▪ This represents approximately 0.017% of total greenhouse gas emissions in NSW in 2010 which is considered to be negligible. ▪ The Commonwealth's Clean Energy Legislative Package and carbon pricing mechanism also commenced on 1 July 2012. ▪ The legislation aims to provide a coordinated nationwide response to greenhouse gas management, reduce Australia's carbon pollution and provide incentives for industry to move to using clean energy. ▪ The Department is satisfied that the GHG emissions of the project would be acceptable and are likely to continue to improve as a result of recommended conditions and the new Commonwealth legislation. 	<p>Conditions are recommended that would require the Proponent to:</p> <ul style="list-style-type: none"> ▪ prepare and implement an Energy Savings Action Plan for the project, prior to operation outlining all reasonable and feasible measures to minimise the release of greenhouse gas from the site.

6. RECOMMENDED CONDITIONS

The Department has prepared recommended conditions of approval for the Project (see Appendices A and B). These conditions are required to:

- prevent, minimise, and/or offset adverse impacts of the Project;
- set standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the Project.

The Department has provided the draft recommended conditions of approval for the Project to relevant government authorities for comment, and has incorporated these comments into the conditions of approval where appropriate.

The Proponent has also reviewed and accepted the draft conditions.

7. CONCLUSION

The Department has assessed the project application, EA, submissions on the project and the Proponent response to submissions, in accordance with relevant statutory requirements.

The assessment shows that the key issues relate to odour, noise, traffic and access and wastewater. Other issues include air quality, waste, visual, heritage, water and flora and fauna.

The Department has assessed these issues in detail having regard to the objects of the EP&A Act. The Department's assessment of environmental issues has identified that the project would not result in significant amenity contributions with respect to odour, noise, traffic and access impacts subject to the conditions of consent.

In response to the issues raised regarding odour and noise, the Department is satisfied that the proposed expansion of operations would result in net improvements to odour and noise management by providing the means for the staged upgrade of the site's wastewater treatment system and the immediate upgrade of its chiller and barrel door infrastructure. The Department notes that without the expansion, it is likely that odour and noise levels from the site would continue at existing levels, which exceed contemporary limits at the nearest sensitive receiver. The expanded operations would provide the means for the existing operations to come in line with contemporary standards as it gradually increases production in a staged manner.

With regards to traffic impacts, RMS raised concerns regarding the impacts of the project on the current capacity of the intersection at Kidman Way and Jack McWilliam Road. The Department has recommended a condition requiring the intersection to be independently audited by an appropriately qualified person, who has been endorsed by the Director-General in consultation with the RMS for this purpose. The independent audit would serve to determine the current standard of the intersection and identify whether any upgrades are required, report on the cost of the required intersection upgrade and advise on the level of contributions that would be required by the Proponent to fund the intersection upgrade commensurate with its level of use of the intersection. The Department considers that this approach would provide a means for independently determining the upgrade requirements for the Kidman Way and Jack McWilliam Road intersection to address intersection capacity issues raised by RMS, whilst ensuring fair contribution from the Proponent to fund the intersection, commensurate with its actual usage of the intersection.

Overall, the Department believes that the project has been adequately justified on economic, social and environmental grounds and it is in the public interest and should be approved subject conditions.

8. RECOMMENDATION

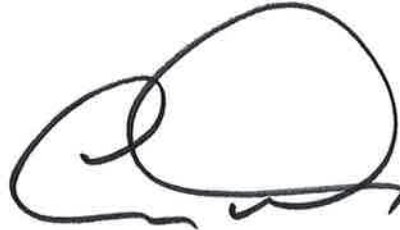
It is RECOMMENDED that the Executive Director, Development Assessment Systems and Approvals:

- **consider** the findings and recommendations of this report;
- **approve** the Project Application, subject to conditions, under Section 75J of the *Environmental Planning and Assessment Act 1979*; and
- **sign** the attached Project Approval (see Appendix A).



Chris Ritchie
**Manager – Industry
Mining and Industry Projects**

3/5/13.



Chris Wilson
**Executive Director
Development Assessment Systems and Approvals**

13.5.13