



NSW GOVERNMENT
Department of Planning

***MAJOR PROJECT ASSESSMENT:
De Bortoli Winery Upgrade and
Expansion, Bilbul***

Director-General's
Environmental Assessment Report
Prepared by Griffith City Council

Section 75I of the
*Environmental Planning and Assessment Act
1979*

March 2006

1. EXECUTIVE SUMMARY

Under the *Environmental Planning and Assessment Act 1979*, (the Act), the proposed development is classified as a Major Project. The Minister for Planning is the approval authority for Major Developments by virtue of the provisions of Part 3A of the *Environmental Planning and Assessment Act 1979*.

The proposed development does not constitute a Controlled Action, and therefore does not require an approval from the Commonwealth Minister for the Environment and Heritage under the *Environment Protection Biodiversity Conservation Act 1999*.

Griffith City Council was contracted to undertake the assessment of the proposal on behalf of the Department. The following report is consideration of the application against the objects of the Act and the requirements of Section 75I.

In accordance with the *Environmental Planning and Assessment Regulation 2000* (the Regulation), the Environmental Assessment (EA) was publicly exhibited from Friday 18 November 2005 until Friday 16 December 2005, and a total of seven (7) submissions were received. This included submissions from the Department of Environment and Conservation, Roads and Traffic Authority, Department of Natural Resources, Department of Primary Industries and Griffith City Council. In addition, there were two (2) submission received from private individuals objecting to the proposal. Key issues raised included:

- odour impacts;
- impacts on groundwater and surface water;
- salinity issues;
- dust and noise impacts.

Council has assessed the project application including issues of concern raised in submissions, and recommends that the Minister approve the project, subject to conditions. It is considered that the conditions of the recommended instrument of approval impose appropriate measures to ensure the environmental impacts associated with the proposed development are appropriately managed, mitigated and monitored. Key matters covered by the recommended conditions include:

- establishment of an environmental management plan for the key construction and operational issues, including noise, dust, traffic, groundwater, soils and irrigation,
- employment of an Environmental Representative with specific responsibility for oversight of environmental management of the winery,
- on-going monitoring of soil and groundwater parameters to ensure impacts are contained within specified limits, and
- annual environmental reporting to the Director General.

Council is satisfied that appropriate measures can be incorporated to manage adverse impacts of the operation.

Council considers that the significant environmental benefits would offset any potential residual impacts from the proposed development.

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2. INTRODUCTION

Griffith City Council was contracted to undertake the assessment of the proposal on behalf of the Department. The following report is consideration of the application against the objects of the Act and the requirements of Section 75I.

Attachments to this report include the following:

- 'A' Assessment against Griffith Local Environmental Plan 2002
- 'B' Assessment of submissions received
- 'C' A copy of the proponents environmental assessment
- 'D' General Terms of Approval – Department of Environment and Conservation
- 'E' General Terms of Approval – Department of Natural Resources
- 'F' General Terms of Approval – NSW Roads and Traffic Authority
- 'G' Submission from Griffith City Council
- 'H' Advice received from public authorities in relation to the development

Other documents that relate to the development or have been used in this assessment include:

- 'I' State Environmental Planning Policy – Major Projects (2005)
- 'J' Griffith Local Environmental Plan 2002 that would (but for Part 3A of the Act) govern the carrying out of the project

In November 2005, the Department received an application for approval to carry out a Major Project. The EA was prepared by E. A. Systems Pty Limited on behalf of De Bortoli Pty Ltd (the Proponent) to address the expansion of operations at de Bortoli Winery, Bilbul. The site of the development is located some 9km east of the city centre of Griffith, within the Griffith local government area.

De Bortoli Wines Pty Limited are the owners of the land and the entity proposing to undertake the works and activities outlined in the EA.

The de Bortoli Winery has experienced unprecedented growth over recent years and this has dramatically increased the potential for adverse environmental impacts on the surrounding environment and community. In particular, the Department of Environment and Conservation (DEC) and Griffith City Council (GCC) have received an increase in the number of complaints concerning the operation of the winery.

The development will:

1. provide employment for 440 persons
2. contribute some \$86M annually to the local economy and
3. contribute \$200M annually to the national economy

The proposed development aims to:

- rectify a number of anomalies relating to non-approved development;
- substantially upgrade the waste water treatment plant attached to the winery;
- establish or improve re-use of treated waste water;
- program a structured upgrading and refurbishment of the winery to allow crushing of up to 150,000 tonnes of grapes per year and manufacture of wine from that crush.

This report addresses the matters that must be addressed in the Director General's Report to the Minister under Section 75I and 75J of the *Environmental Planning and Assessment Act 1979* and Clause 8B of the Regulation 2000.

It is considered that the conditions of the recommended instrument of approval, impose appropriate measures to ensure the potential environmental, social and economic impacts

associated with the proposed expansion and upgrading are managed, mitigated and monitored.

3. SITE CONTEXT

3.1 Site Location

The proposed development is located on land south of the village of Bilbul (map reference numbers DC210068) and includes:

DP 1024102 - Lot 1;

DP 751728 - Lots 115 to 118, 120, 121, 140, 141, 144, 145, 165 to 171, 228, 533, 534 and 966;

DP 837695 - Lot 3.

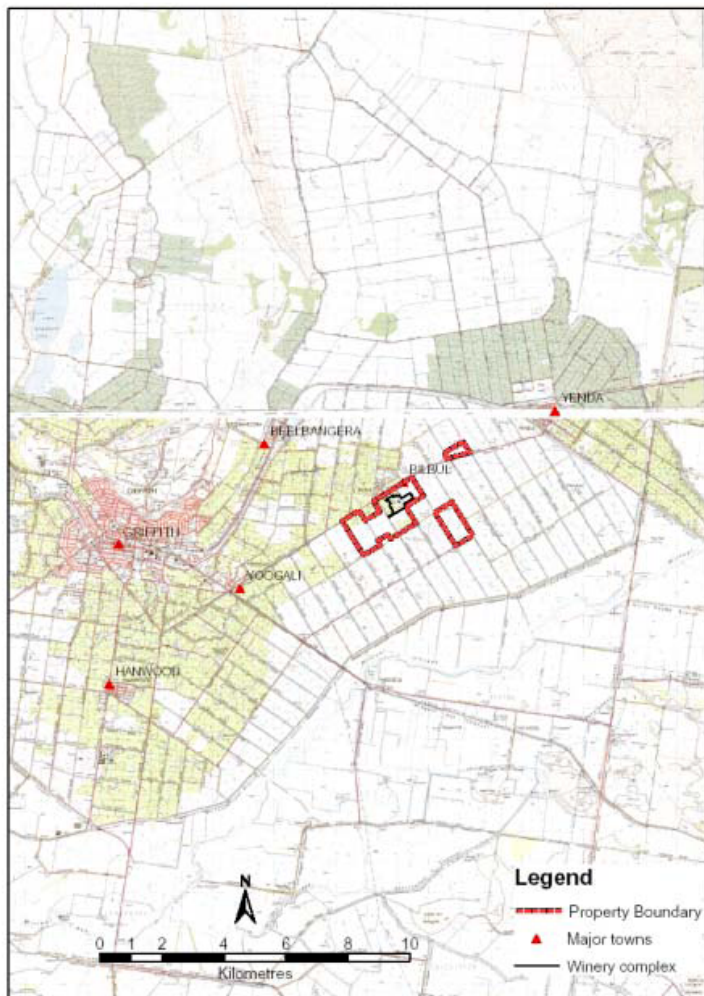


Figure 1 – Locality Plan

The site of the development is approximately half way between the villages of Yoogali and Yenda and immediately opposite the village of Bilbul; around 9 km east of the centre of the City of Griffith, in the Griffith local government area. Figure 1 shows the location in relation to surrounding development.

The winery is approximately 300 metres distant from the nearest point in the Village of Bilbul.

Access to the winery is gained off Burley Griffin Way, which is a State Highway. It provides access from Griffith, east to the Newell Highway at Ardlethan. Main road access is also available to Leeton and Narrandera. Freight rail connections are available to Sydney and Melbourne.

3.2 Surrounding Land Uses

The proposed development is located within the Murrumbidgee Irrigation Area (MIA). The surrounding area is dominated by irrigated agricultural land uses and related infrastructure of irrigation channels. Significant surrounding land uses include:

- Irrigated grapes
- irrigated fodder and grain crops
- irrigated stone fruit

- residential dwellings
- rural and rural-residential dwellings

The winery is an integral component of the rural environment and contributes substantially to the economic and social stability and sustainability of the local community.

4. DEVELOPMENT PROPOSAL

4.1 Site History

The winery commenced operations many years ago. At that time it was located within Wade Shire local government area. No planning consent was required or given for the original development.

Following incorporation of the site within the Griffith local government area in the mid 90's, planning controls were applied to industrial development within the former rural sections of Wade Shire. Griffith City Council has granted more than 20 development or building consents since 1995.

4.2 Background to the Proposal

In 2004, Griffith City Council issued consent (DA 400/2004) covering significant expansion works including new tank farms and a new crusher. Conditions applied under that consent required de Bortoli Wines to prepare a Master Plan and submit a further development application for future growth at the winery. Major Project application 05_0080 has been prepared in part satisfaction of conditions attached to DA 400/2004.

Matters that DA400/2004 required to be addressed as part of (or before lodgement of) any future development application included:

- A comprehensive landscape plan for the entire winery site – not provided;
- A Master Plan indicating proposed future expansion works - provided;
- A waste management strategy covering all waste streams - provided;
- Provision for on-site car parking arrangements relating to visitors and staff - provided;
- Traffic issues relating to the winery operation and necessary road upgrading works - provided;
- An Environmental Management Plan relating to all aspects of the operation of the winery – not provided;
- An odour assessment - provided.

Expansion of the winery has continued but has been in a more structured manner. Recent 'urgent' consents have been issued by Griffith City Council for works that are now included in the Master Plan for the winery expansion and are supported by adequate research and site assessments. These include the construction of additional tanks, construction of the pipeline from the treatment works to the irrigation farm and other minor components.

The ever increasing capacity of the winery has provided strong support for the surrounding vineyards. As the winery has expanded, the surrounding areas have expanded. Interaction between the winery and residents of the area (including the village of Bilbul) has increased and the adverse or offensive components of the operation have become more significant.

4.3 Outline of the Proposal

The development is an expansion of an existing industry that has been in operation for many years and is a major component of the Murrumbidgee Wine environment.

The current application includes works and proposals that would address, in particular, odour, noise, traffic and drainage. Without satisfactory attention to these matters, the adverse impacts of the winery would become unacceptable to the surrounding residential community and would produce unacceptable impacts on the environment.

The figure below shows the layout of the winery and identifies major components, both existing and proposed.

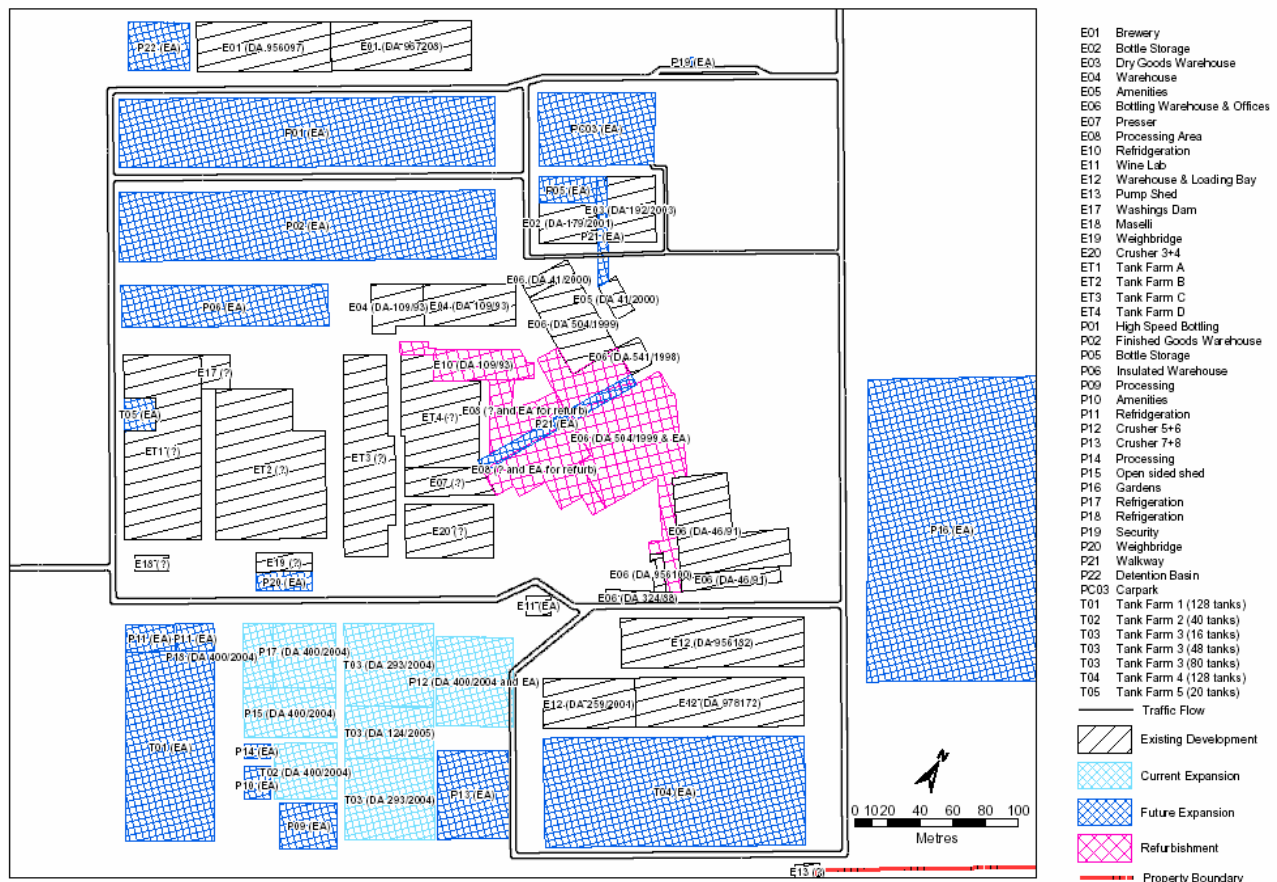


Figure 9 Current and proposed infrastructure.

Key components of the proposal include redesign of the waste water treatment system including establishment of a waste water irrigation farm; upgrading of road intersections at Burley Griffin Way; and construction of warehousing, processing facilities and the like. Memorial Gardens are proposed east of de Bortoli Road in memory of Dean de Bortoli.

The current development application includes the following components:

- High speed bottling line
- Finished goods warehouse
- Bottle storage
- Insulated warehouse
- Memorial gardens
- Security office
- Weighbridge
- Walkways
- Tank farm 5 (20 tanks)
- Additional processing area
- Crusher No. 6
- Possible upgrading of Lawrence Road (including intersection with Burley Griffin Way)

- | | | |
|--|---------------------------|---|
| ▪ Processing | ▪ Detention basins (2) | ▪ Upgrading of de Bortoli Road (including intersection with Burley Griffin Way) |
| ▪ Amenities | ▪ Staff carpark | ▪ Treatment of domestic waste from amenities, cellar door area and offices |
| ▪ Refrigeration and refrigeration transformers | ▪ Tank farm 1 (128 tanks) | ▪ Treatment, storage and irrigation of winery waste water |
| ▪ Crusher 7 and 8 | ▪ Tank farm 3 (98 tanks) | ▪ New Cellar Door |
| ▪ New manager's residence | ▪ Tank farm 4 (128 tanks) | |

On completion, the development would provide for the following capacities and volumes.

1. Crush capacity – up to 150,000 tonnes of grapes per annum
2. Wine storage on site – total of 230 ML in tanks of various sizes
3. Bottling capacity – (unspecified)
4. Waste water processing capacity – 160 ML per annum
5. Treated waste water storage capacity – 54ML
6. Stormwater storage capacity – 25 ML
7. Raw water storage (MIL) 3.5ML in de Bortoli Road
8. Area approved for irrigation of treated waste water – 96 hectares (total area of land is about 130 hectares)
9. Staff numbers – 440
10. Car parking capacity – 210

4.4 Amendments Made to the Proposal

Addenda and Additional Information

Following receipt of the original application, a number of addenda and supplementary reports have been provided in answer to queries or as changes to minor detail of the EA. The following documents and communications should be read as part of the documentation in support of the application:

Addendum to Environmental Assessment - 11 November 2005 – Report No. 20873.6162. Includes minor amendments to terms and references used in the EA plus a re-structure of the works schedule.

Amendments and Additional Information - November 2005. This document includes the addendum above plus a reworking of the calculations in Section 4.2.3.2 for Stormwater Management including consideration of storage requirements. Minor changes are made for Section 4.3.1.1 Odour Emissions. Qualifying summaries are provided for air quality, traffic management and noise. An Appendix is included giving a discussion of 'Management of Water Resources' in response to a request from Department of Natural Resources.

Pollution Reduction Program Report - December 2005 — Report No. 20950.4633. The report was initially prepared for the Department of Environment and Conservation in satisfaction of a license condition for the winery. It provides a discussion of

groundwater impacts and monitoring proposals plus a discussion of irrigation proposals for waste water disposal.

Hydrological Study - December 2005 — Report No. 20873.6517. Includes a discussion of water and waste water issues and develops a water balance for the collection of waste water and runoff and irrigation of crops and gardens.

Summary of Potential Impacts, Mitigation Measures and Monitoring - December 2005 — Report No. 20873.6557. Collects mitigation and monitoring proposals scattered throughout the EA and presents the information in a series of tables for easy consideration.

Overview of Nutrients and Salt Balance - December 2005 — Report No. 20873.6552. This report addresses confusion that may have arisen from a reading of Appendices D, E and F of the EA.

None of the above addenda or reports changes the nature or magnitude of the development outlined in the EA. The additional information has been provided by way of explanation or elaboration of matters already addressed in the EA.

Changes and Modifications

Since receipt of the above information, further discussions were held regarding a number of matters including external and internal traffic and waste treatment and disposal (both domestic waste and winery waste). Following these discussions, a number of changes have been made to the project as set out below:

Traffic Routes and Management: The proponent now proposes to utilise de Bortoli Road as the main entrance for all traffic. Lawrence Road would only be used as an emergency access or for minor delivery access. This will reduce traffic conflicts, avoid the need to close the access to the Bilbul shop and improve security arrangements. It will also reduce the upgrading work required on Lawrence Road.

The use of de Bortoli Road as the main entrance will alter the design of the intersection between de Bortoli Road and Burley Griffin Way. The design will need to ensure the right-turn holding lanes are of adequate length. The design will be complicated by the need to accommodate the eastern entrance into Bilbul village (Crescent Street), which is located only 350 metres from de Bortoli Road. The Roads and Traffic Authority considered the alteration and confirm agreement in principle subject to compliance with RTA requirements and submission of concept plans and traffic figures in support of their choice.

The relocation will also require re drafting of the internal traffic flows and a rethink of building and facility locations, such as the Testing Maselli, weighbridges, entrances and exits etc. Preliminary concepts sketches have been provided by the proponent to confirm internal traffic routes and turning movements can be accommodated. On-going changes will need to be made to traffic routes as the winery expands to full capacity. These can be managed internally without affecting the wider community or public road system.

Domestic Waste Management: Griffith City Council has advised it has no record of approval for any existing on-site septic systems at the winery. The EA advises that these systems (there are six of them) are already overloaded. Overflow is directed to the winery waste water ponds. The EA proposes to direct overflow from these tanks to a separate treatment system that will include disinfection prior to discharge to the winery waste water plant. The location and size of the waste water treatment system was not detailed in the EA.

A revised layout plan has been provided by the proponent showing the location of the domestic waste water treatment system. This plan confirms that the integrity of the winery waste water treatment system and associated ponds will be retained. Waste water from this system will be directed to the winery waste water ponds for irrigation to crops.

De Bortoli Wines have also indicated verbally that they propose to replace some of the existing septic systems with aerated septs to improve pre-treatment and solids removal.

DEC have considered the revised system and confirm the treated and disinfected waste water can be incorporated with winery waste water and there is adequate capacity to safely handle the irrigation of this waste water.

Separate approval should be gained from Griffith City Council under the *Local Government Act 1993* for each septic unit and for the on-site treatment of domestic waste.

Winery Waste Management and Irrigation of Waste water: The EA identified the winery waste water treatment process including a series of aeration and holding ponds. These are to be used to reduce BOD levels of the waste water prior to irrigation. The ponds would also act as holding dams in case of wet weather. The proponent now proposes to minimise the use of these ponds for aeration and instead deliver waste water direct to the irrigation farm when ever possible.

This would reduce the loss of liquid volumes through evaporation and would require high BOD waste water to be irrigated onto crops. Concern was expressed that the loss of evaporation would significantly increase the volume of waste water to be irrigated and the high BOD levels could result in odour being generated from the irrigation farms or the tail-water dam. This, coupled with the inclusion of treated waste water from the domestic system could overload the irrigation farm and lead to further problems.

DEC have reviewed the changes and have advised the changes are acceptable and *‘On going monitoring, assessment and reporting by the proponent and the use of trigger levels to identify any adverse trends will ensure any adverse impacts, if they occur, are identified and mitigation measures are implemented. The modifications will not result in any changes to the suggested consent conditions provided by us to the Department of Planning.’*

5. STATUTORY PLANNING FRAMEWORK

5.1 Permissibility and the Minister’s Role

Group 1, Clause 3 of Schedule 1 of *State Environmental Planning Policy (Major Projects) 2005* identifies that food and beverage processing industries that employ more than 100 people or has a capital investment of more than \$30 million, is a project to which Part 3A of the Act applies. As the project has a capital investment value of around \$80 million, Part 3A of the Act applies and consequently, the Minister is the approval authority for the project.

But for Part 3A of the Act, the development would be subject to the *Griffith Local Environmental Plan 2002* (GLEP 2002). Under that Planning Instrument, the development would be permissible with consent in both the zones (1(b) Rural Agriculture Protection and 4(e) Rural Industry and Employment) that apply to the land to be developed.

5.2 Major Projects and Infrastructure Development

The proposed development constitutes a Major Project by virtue of the provisions of Part 3A of the Act. The Minister is the approval authority for Major Projects identified under Part 3A.

Parts 4 and 5 of the Act do not apply to the development.

5.3 Relevant Environmental Planning Instruments

The following environmental planning instruments apply to the proposed development:

- *State Environmental Planning Policy No.11 – Traffic Generating Development; and*
- *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development; and*
- *State Environmental Planning Policy No.52 – Farm Dams and Other Works in a Land and Water Management Plan Area; and*
- *State Environmental Planning Policy No. 55 Remediation of Land; and*
- *State Environmental Planning Policy – Major Projects 2005; and*
- *Griffith Local Environmental Plan 2002.*

Consideration of the proposed development in the context of the objectives and provisions of these environmental planning instruments is provided below.

5.4 State Environmental Planning Policies

SEPP No.	Title or Description	Comments
11	Traffic Generating Developments Requires referral of certain development proposals to the Roads and Traffic Authority for comment prior to determination. Ensures that traffic impacts of significant developments comply with the traffic management requirements of the RTA.	The development is a Schedule 1 development under SEPP 11 and must be referred to the RTA for comment. The RTA has considered the application and has advised its requirements.
33	Hazardous and Offensive Development Ensures that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact.	The development has been identified as Offensive and is a scheduled premise under the POEO Act. Licensing of the premise is required from the Department of Environment and Conservation. The proponent has been in consultation with DEC throughout the preparation of the EA and the development includes components designed to address the concerns of DEC. DEC has reviewed the EA and has recommended conditions that must be applied to any approval.
52	Farm Dams and Other Works in Land and Water Management Plan Areas Requires proposals for artificial water bodies that meet the criteria set out in the SEPP to require development consent under Part 4 of the Act. In doing so, SEPP 52 aims to ensure that the environmental impacts associated	The development site is included within an area listed under Schedule 1 of the SEPP. The development includes a storage dam of 3.5ML capacity located within de Bortoli Road reserve. Consent is required for this work but it is not identified as Designated development under the SEPP. Consequently, Council is satisfied that the aims and objectives of SEPP 52 have been met.

SEPP No.	Title or Description	Comments
	with these types of proposals are appropriately considered and assessed.	
55	Remediation of Land In particular, this Policy aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.	The EA advises that the only potentially contaminated site within the winery is the storm water runoff dam. The EA also suggests that a preliminary contaminated sites assessment would be completed within the next 12 months. Griffith City Council's historical records indicate that waste water evaporation dams were originally located within the winery site. These may have caused contamination of soils in that area. A preliminary assessment of contaminated sites should be required as a condition of any approval.
	(Major Projects) 2005 This Policy aims to identify development to which the development assessment and approval process under Part 3A of the Act applies.	The development has been confirmed as a Major Project and the EA has been prepared accordingly.

5.5 Griffith Local Environmental Plan 2002

The aims of the *Griffith Local Environmental Plan 2002* (GLEP 2002) that are relevant to the proposed development are; to protect areas on which agriculture depends, to promote ecologically sustainable rural development and to promote development of rural land in accordance with the objectives of the MIA and Districts Community Land and Water Management Plan.

The project would be located within two (2) zones under the LEP. These zones are 1(b) – Rural Agricultural Protection and 1(e) – Rural Industry and Employment. The objectives for each zone are set out below. Griffith City Council is satisfied that these aims and objectives would be satisfied.

The objectives of Zone 1(b) – Rural Agricultural Protection are:

- (a) To preserve areas of higher quality agricultural land, and
- (b) To permit a range of activities that support the agricultural industries being conducted on the land and limit development that may, in the opinion of the Council, reduce the agricultural production potential of the land, and
- (c) To control development that may restrict the function of or create traffic hazards along classified roads, and
- (d) To enable tourist facilities to be provided that promote an appreciation of the rural environment and associated agricultural and horticultural activities, while ensuring the continued economic viability of the land, and
- (e) To establish appropriate buffer zones between high quality agricultural land and land not used for agriculture, particularly near the perimeter of such lands.

The objectives of Zone 1(e) – Rural Industry and Employment are:

- (a) To provide areas for a range of rural industries and employment-generating uses, and permit commercial development where it is ancillary to and associated with a rural industrial or employment-generating use of land within the zone, or it serves the convenience needs of the

workforce in the area, if any such commercial development does not have an adverse impact on the continued viability of land within business zones in Griffith, and

- (b) To provide land primarily for rural industries so as to protect existing and potential rural industries, and
- (c) To allow accommodation that is ancillary to rural industries.

Griffith City Council advises that the development could be carried out in both these zones with consent.

5.6 Development Control Plans

Development control plans prepared under GLEP 2002 do not apply to the development. None-the-less, Griffith DCP 20 – Off Street Car Parking provides a consistent guide for the assessment of car-parking requirements for the development.

Appendix 'F' provides an assessment of the project against that DCP and a discussion of the proponent's assessment of parking requirements for the development.

5.7 Commonwealth Approvals

The proponent has evaluated the proposed development against the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Potential impacts on Ramsar Wetlands or threatened ecological communities are stated to be unlikely to occur. On this basis, no consent or consideration is required under this act.

6. EXHIBITION OF DEVELOPMENT APPLICATION

The EA was lodged with the Department in November 2005. The EA was publicly exhibited from Wednesday 16 November 2005 until Friday 16 December 2005 in accordance with the *Environmental Planning and Assessment Act 1979*. The EA was exhibited at the following locations:

- Department of Planning, Information Centre, 23 to 33 Bridge Street, Sydney; and
- Department of Planning, Regional Planning Office, Queanbeyan; and
- Griffith City Council, Benerembah Street, Griffith.

Public notification of the proposal was comprehensive, with notices of the proposal placed in the local newspaper, the Griffith Area News (on two occasions) and on the Department's Website.

The Department also advised all adjoining and surrounding landowners of the proposed development by letter. The Department consulted with the Council concerning the proposed notification area. Council confirms that it was satisfied with the notification area.

7. CONSIDERATION OF ISSUES RAISED IN SUBMISSIONS

In response to the exhibition period and letter notification, the Department received a total of seven (7) submissions: including five (5) submissions from government agencies and two (2) from the general public. A summary of the submissions is provided in Attachment 'B' of this report.

7.1 Public Submissions

Both public submissions were from residents living in close proximity to the winery. The concerns expressed relate to odour and ecological impacts. In both cases, the concern relates to the historical operation of the winery and does not necessarily recognise the benefits of the improvements proposed under this application. Both submission express

doubt that any changes could address the issues observed from past performance of the winery.

The EA addresses these concerns and gives particular attention to the minimisation of odour from the waste water process. It includes controls to ensure that ecological impacts are monitored.

7.2 Submissions from Government Authorities and other parties

Submissions were received from the Department of Environment and Conservation (DEC), Department of Natural Resources (DNR), Roads and Traffic Authority (RTA) and Griffith City Council. None of the government authority submissions objected to the proposal but raised some issues to consider. All the conditions recommended by the DEC, DNR and RTA have been incorporated into the recommended instrument of consent.

Council provided suggested conditions to address its interests. These cover roads and environmental issues. Where appropriate, suggested conditions have been incorporated in the Draft Instrument of Approval.

A submission was also received from Murrumbidgee Irrigation (MI) who advised its requirements for those aspects of the development that inter-relate with drains, channels and groundwater. This development will introduce or involve several changes to current arrangements between MI and de Bortoli Wines. These include the use of a section of supply canal within de Bortoli Road for storage of raw water over winter months and the disconnection of any existing connections between the winery and MI drainage channels. The irrigation farm must be bunded to prevent waste water from discharging to MI drains.

In order to meet MI's requirements, the proponent proposes to bund the irrigation farms and will construct two on-site stormwater dams to retain runoff within the winery complex. Water collected in these dams will be used for irrigation of gardens, dust control and other matters.

8. CONSIDERATION OF ENVIRONMENTAL ISSUES

The winery is well located for the agricultural community it depends on and is well located for access and transport of processed product from the region to markets in capital cities and overseas. Its proximity to expanding residential areas means that this and future expansion would need to pay more attention to mitigation of adverse impacts such as odour, noise and traffic.

A detailed review of information supplied by the Proponent in the Environmental Assessment and additional information has been undertaken. Issues raised in submissions received in response to the public exhibition of the development application have been assessed and where relevant, appropriate conditions have been included in the draft Instrument of Approval.

In light of these considerations, Council has been able to complete a screening of environmental planning and assessment issues associated with the proposed development. Issues have generally been considered in the context of the assessed environmental planning significance of matters outlined in the Environmental Assessment, and the level of interest, concern or complexity of matters raised in submissions. A combination of these considerations has been used to develop the preliminary screening table reproduced in Table 1 below. The primary purpose of the preliminary screening is to ensure focussed consideration of key issues associated with the proposed development, with an appropriate level of detail applied depending on the relative importance of the issue under consideration.

From review of the Environmental Assessment, Council has nominated environmental planning issues as, key, major, moderate or low significance in the context of environmental planning and assessment. In all cases, a conservative approach has been applied and in the case of any doubt, a precautionary approach has been taken to ensure that at worst, issues have been overestimated rather than assigned a lower significance. As a general indication, levels of environmental planning and assessment significance have been applied as follows:

- **Key significance** – those issues of fundamental importance to the proposal. Resolution of these matters is considered fundamental to achieving acceptable environmental and public health and amenity outcomes and in some cases may include tests or requirements that must be met by the proposal before it could be determined.
- **Major significance** – those issues representing the most significant environmental impacts associated with the proposal. Assessment has either indicated that relevant criteria or outcomes cannot be met, or compliance is predicted to be marginal. These issues also include matters for which there remains some doubt as to the assessment approach or outcomes.
- **Moderate significance** – those issues assessed as meeting relevant criteria or outcomes, but with a significant residual impact that needs to be mitigated and managed.
- **Low significance** – those issues that are either not associated with the proposal, clearly within acceptable environmental criteria, and/ or are the subject of well-established and applied environmental management measures. These issues also include those matters that could be easily and effectively addressed through conditions of approval, should the Minister determine to approve the proposed development.

All issues identified as having moderate, major or key significance as a result of Council's consideration of the Environmental Assessment have been carried forward for further assessment. In addition, issues raised in submissions have been considered both in the context of the frequency of occurrence and the level of concern expressed. Similar definitions have been used to characterise the significance of issues raised in submissions:

- **Key significance** – issues raised in the majority of submissions, issues representing primary public concern or the subject of detailed public comment or criticism.
- **Major significance** – issues raised in most submissions or subject to specific comment on a fundamental component of the proposal.
- **Moderate significance** – issues raised in detail in some submissions or as a general statement across the majority of submissions.
- **Low significance** – not raised in submissions, or only noted in a cursory manner.

Regardless of the assessed significance of issues from the EA, any matter identified as being of major or key significance from public submissions has been carried forward for further detailed assessment. Preliminary screening, including comments on the screening and identification of matters for further assessment, is outlined in Table 1.

Table 1 –Screening of Environmental Impacts for Detailed Consideration

Issue	Assessed Environmental Significance	Assessed Submissions	Comment
Waste Management	Key significance	Key significance	<p>Issue: - wastes can cause odour or contamination of the environment.</p> <p>Sources: - Waste streams include solid wastes such as card, glass and marc as well as liquid wastes from grape processing and staff amenities.</p> <p>Quantities: - Marc = 21,300 tpa; other solid wastes = 5,200 tpa; winery waste = 213ML/a</p> <p>Methods: - marc is collected and delivered to a distillery for alcohol manufacture and tartrate recovery.</p> <p>Other solids are collected, stored on site and disposed of to an authorised waste management depot or to reuse in composting.</p> <p>Domestic waste from staff facilities is collected into septic tanks and the waste water processed by extended aeration, filtration and disinfection before being added to winery waste water for irrigated onto crops.</p> <p>Winery waste is de-sludged, pH corrected and delivered to a treatment plant for processing prior to irrigation onto crops under controlled conditions.</p> <p>Sludge is de-watered on site and delivered to a composting site for processing into fertiliser/ soil conditioner.</p> <p>Authority positions: - DEC – Waste management and monitoring is a major component of the license issued by DEC under the POEO Act. Conditions are already in place to ensure waste streams are properly managed.</p> <p>DNR require monitoring of discharge and groundwater conditions to ensure no contamination of groundwater occurs.</p> <p>On-going concerns: - domestic waste and liquid wastes will require strict monitoring to ensure adequate treatment is given</p> <p>Carried forward for further assessment – section 8.1</p>
Odour and Air Quality	Key significance	Key significance	<p>Issue: - Air quality can be adversely impacted by dust and odour.</p> <p>Sources: - dust from traffic and site operations; odour from waste treatment facilities and wine making processes.</p> <p>Quantities: - Griffith is located in a semi-arid area where back-ground levels of dust are about</p>

Issue	Assessed Environmental Significance	Assessed Submissions	Comment
			<p>4g/m²/month to as high as 6g/m²/month. These are higher than desirable and can frequently exceed recommended levels.</p> <p>Methods: - dust control will include watering of traffic areas, progressive bitumen or concrete surfacing of main traffic routes and speed controls on trucks and winery traffic.</p> <p>Odour control will be minimised by improved treatment of winery waste water, reduced storage times and irrigation of treated waste water to crops.</p> <p>Authority positions: - DEC required a complete level 3 odour audit of the winery. Changes were made to the waste water treatment processes last vintage and achieved a significant improvement in odour emissions from the waste water ponds. DEC will require continued strict monitoring of odour emissions and any complaints from the community. Decisive action will be required to correct any departure from accepted levels.</p> <p>Griffith City Council has historically received complaints about odour from the winery. These will be passed on to DEC for action.</p> <p>On-going concerns: - Dust management will require day to day attention by winery management. Odour will need to be monitored and management practices be in place to allow community complaints to be received and acted upon promptly. Close monitoring of winery processes, waste treatment disposal will be essential.</p> <p>Carried forward for further assessment – section 8.2</p>
Groundwater	Key significance	Moderate significance	<p>Issue: - depth to groundwater is generally less than 2 metres under the treatment ponds and irrigation farm. Contamination of groundwater could occur if the waste water treatment and disposal process is not carefully managed.</p> <p>Sources: - leakage of waste water from aeration and holding ponds; seepage from irrigation farm.</p> <p>Quantities: - the winery will discharge over 213ML of waste water per year. Most of this will be 'shandied' with raw water from the irrigation canals and irrigated to crops via flood irrigation. Tail water from irrigation will be collected in a dam on the farm for return to the waste water treatment plant.</p> <p>Methods: - Proposed control methods include: - lining of waste water ponds to achieve permeability of 1×10^{-9} mm/d;</p>

Issue	Assessed Environmental Significance	Assessed Submissions	Comment
			<ul style="list-style-type: none"> - under-drains below irrigation areas with pump-out and return to tail-water dam/ treatment facility; - planting of deep rooted trees around irrigation plots; - monitoring of soil and groundwater conditions. <p>Authority positions: - DEC will require continued strict monitoring of groundwater levels and soil conditions. Decisive action will be required to correct any departure from accepted levels.</p> <p>Griffith City Council has requested that an Environmental Management Plan be prepared to cover this and other issues.</p> <p>DNR has raised concerns about groundwater impacts and require installation of piezometers to monitor water levels.</p> <p>On-going concerns: - Over watering of irrigated areas could cause soil 'failure'. Continuous monitoring of groundwater levels and soil conditions will be essential to ensure protection of groundwater sources.</p> <p>Carried forward for further assessment – section 8.3</p>
Traffic and Transport Impacts	Major significance	Major Significance	<p>Issue: - significant increase in traffic entering and exiting the winery will require upgrading of roads and intersections. Noise from traffic will impact Bilbul residents.</p> <p>Sources: - staff vehicles; grape deliveries; dry goods deliveries; maintenance and trades personnel; construction traffic; export of product; export of waste products; delivery of chemicals; internal machinery movements etc</p> <p>Quantities: - Light vehicles and staff cars = 1,800 vpd; Heavy vehicles = 550 vpd (estimated peak daily volumes in vintage). (Note: The proponent has advised that all traffic will be redirected to use de Bortoli Road. Only emergency traffic would use Lawrence Road)</p> <p>Methods: - Intersections between de Bortoli Road (and Lawrence Road if it is used) and Burley Griffin Way would be reconstructed to provide a CHR type intersection with sufficient length of holding lane for design traffic volumes. Debortoli Road (and Lawrence Road if it is used) would be reconstructed to carry heavy traffic and provide adequate turning sweeps at intersections and access ways.</p> <p>Authority positions: - The Roads and Traffic Authority require intersections with Burley Griffin</p>

Issue	Assessed Environmental Significance	Assessed Submissions	Comment
			<p>Way to be upgraded to CHR type. Griffith City Council require de Bortoli Road (and Lawrence Road if it is used) to be reconstructed to heavy vehicle standard with widened access ways. Griffith City Council require progressive upgrade of internal roads to minimise dust generation.</p> <p>On-going concerns: - Changes to preferred access roads could create unacceptable heavy vehicle loads on Council roads. Turning movements of heavy, articulated vehicles in confined locations such as access ways to the winery, may cause early collapse of road pavement.</p> <p>Carried forward for further assessment – section 8.4</p>
Water Supply and Sewage	Major significance	Moderate significance	<p>Issue: - If domestic sewage from amenities at the winery was discharged to the Bilbul sewage treatment plant, it would cause overload and failure of the system;</p> <p>Existing on-site sewage septic systems are overloaded and contaminate surface waters discharged from the winery;</p> <p>Water demand at the winery is already at peak capacity for the trunk delivery system. Upgrading would be necessary to meet future demand from the winery.</p> <p>Sources: - Domestic sewage from staff amenities and visitor facilities is collected in a series of on-site septic tanks that experience frequent overload.</p> <p>The winery consumes about 1.4KL of potable water for each tonne of grapes processed.</p> <p>Quantities: - Domestic sewage volume is estimated to be over 200 equivalent persons.</p> <p>Total potable water demand is estimated at 210ML per annum based on 1.4ML per 1,000 tonnes of grapes processed.</p> <p>Methods: - Septic systems will be progressively upgraded or replaced with aerated septic systems (pers. communication). Overflow from the septics will be directed to aeration ponds, sand filters and sterilisation processes at the treatment site before being mixed with winery waste water for irrigation to crops.</p> <p>An agreement will be executed with Griffith City Council for upgrading of the trunk water delivery system to provide adequate delivery of potable water for the expanded winery.</p>

Issue	Assessed Environmental Significance	Assessed Submissions	Comment
			<p>de Bortoli Wines will investigate options to utilise raw water from Murrumbidgee Irrigation or recycled water for selected activities.</p> <p>One day's on site storage of potable water will be provided in case of delivery system failure.</p> <p>Authority positions: - DEC require monitoring of treated waste to ensure adequate treatment (and sterilisation) before irrigation to crops. Griffith City Council will consult with the proponent regarding acquisition of additional land and upgrading of the Bilbul sewage treatment plant if required.</p> <p>Griffith City Council will undertake water reticulation system upgrade to Yoogali. Upgrading from Yoogali to the Winery can be completed progressively as the winery expands but an agreement to cover costs will need to be in place before work is scheduled.</p> <p>On-going concerns: - Monitoring of sewage waste water quality prior to irrigation; peak water demands in excess of design capacity.</p> <p>Carried forward for further assessment – section 8.5</p>
Hydrology and Surface Drainage	Moderate significance	Moderate significance	<p>Issue: - The impervious area of the winery will be quite large and has the potential to create significant volumes of runoff in a storm event; runoff from some areas may be polluted with winery waste and other contaminants; uncontrolled discharge of stormwater from the site could cause or contribute to local flooding; capture and storage of runoff for re-use would be beneficial.</p> <p>Sources: - runoff from impervious and compacted areas within the winery complex; roof water from large buildings; Flood water back-up from ' Main Drain J'; general surface water on flat land in heavy storm events.</p> <p>Quantities: - Two on-site retention dams are proposed for clean runoff, one of 3.6ML capacity in the Gardens and one of 1ML capacity near the brewery building; 100ML of storage will be available for contaminated runoff.</p> <p>Methods: - Clean and contaminated runoff will be separated. Clean runoff will be directed to on-site retention dams for re-use on gardens and landscaping. Contaminated runoff will be directed to the winery waste treatment system for treatment prior to irrigation.</p>

Issue	Assessed Environmental Significance	Assessed Submissions	Comment
			<p>Authority positions: - Griffith City Council requires retarding of any runoff to Main Drain 'J'. Murrumbidgee Irrigation require no discharge to drains. DEC require management in accordance with license conditions.</p> <p>On-going concerns: - Possible mixing of clean and contaminated runoff; failure of on-site storage could lead to local flooding from Main Drain 'J'.</p> <p>Carried forward for further assessment – section 8.6</p>
Noise and Vibration impacts	Moderate significance	Moderate significance	<p>Issue: - Impact of increased traffic noise on Bilbul residents; increased industrial noise from the winery.</p> <p>Sources: - Increased heavy vehicles delivering grapes to the winery, mostly at night; increased activity at the winery consistent with the increased crush; increased heavy vehicle traffic throughout the year for export of product</p> <p>Quantities: - Impact of the expansion including traffic and site activities on Bilbul has been estimated at 1.0 dB(A) Leq.</p> <p>Methods: - Retain large sheds (brewery) between winery and Bilbul; no detrimental road traffic noise increase is predicted.</p> <p>Authority positions: - DEC require compliance with license conditions.</p> <p>On-going concerns: - Higher noise from accelerating and decelerating trucks;</p> <p>Carried forward for further assessment – section 8.7</p>
Visual Impacts	Low significance	Low significance	<p>Issue: - A large industrial complex may degrade the rural outlook of the area. Lighting at night may distract drives or disturb residents.</p> <p>Sources: - Large buildings, tanks, lights at night.</p> <p>Quantities: - The winery covers some 22 hectares and is visible up to 2 kilometres distance. Lighting of walk ways is elevated above the tank farms and easily visible.</p> <p>Methods: - Landscaping with tress and shrubs.</p> <p>Authority positions: - Griffith City Council requires all lighting to be designed to minimise glare impacts on drivers and to minimise lighting of any residential areas or dwellings.</p> <p>On-going concerns: - possible conflict between security lighting requirements and minimisation</p>

Issue	Assessed Environmental Significance	Assessed Submissions	Comment
			of impacts on roads and dwellings. This issue is of low significance and will not be considered further.
Socio-Economic Impacts	Low significance	Low significance	Issue: - The winery is a major contributor to the stable socio-economic environment of the region. Sources: - employment opportunities; supports grape growers. Quantities: - Will employ 440 persons; will contribute \$86M to local economy. On-going concerns: - Continued viability in a competitive environment. This issue is of low significance and will not be considered further.
Ecology	Low significance	Low significance	Issue: - Impacts on surface and groundwater; noise impacts on wildlife Sources: - Traffic; industrial activity; removal of natural environment. Authority positions: - Griffith City Council requires a landscape plan to be prepared and approved and requires the use of endemic native species of plants where ever possible. On-going concerns: - Establishment of approved landscape plan. This issue is of low significance and will not be considered further.
Heritage and Archaeology	Low significance	Low significance	Issue: - Possible impact on heritage sites or buildings. Sources: - None This issue is of low significance and will not be considered further.

8.1 Waste Management

Proponent's Position

Solid Wastes

Solid waste is collected from a number of different sources and includes marc and stalks as well as packaging material (card, glass etc).

Table 2 below sets out a summary of solid waste streams from the current winery operation.

de Bortoli Wines is a member of the Regional Innovation and Technology Adoption Committee and a member of the National Packaging Covenant. Through membership in these organisations, de Bortoli Wines hopes to reduce the volume of waste.

Table 2. Summary of solid waste streams.

Solid Waste Stream	Estimated value per tonne of grape throughput.	Quantities based on 2004 year (85 000 tonnes).
Stalks	21 kg	1,785 T
Marc	142 kg	12,070 T
Spent filters-Filter pads	0.13 pads	11,050 pads
Lenticular filters	0.025 filters	2,125 filters
Membranes	0.0026 filters	221 filters
Diatomaceous earth/perlite	5.76 kg	490 T
Wood chips	0.5 kg	42.5 T
Staves	0.4 kg	34 T
Lees – Distillation lees	0.6L	50000L
Bentonite	0.8kg	70 T
Tartrate	0.9kg	76.5 T
Packaging materials	5 kg	425 T

When the winery is operating at full capacity, total volumes/ weights will be about 210 m³ of filter pads and membranes plus 26,500 tonnes of other waste. The majority of this (marc) will be delivered to the distillery for processing into alcohol and recovery.

Liquid Wastes

Liquid wastes come from the winery process. Domestic waste water from staff amenities and visitor facilities is addressed in Section 8.5 below. Each stream is initially treated separately and then combined prior to delivery to the irrigation farm and irrigation onto crops.

Total winery waste water is estimated to be about 213ML per annum at full production, including domestic waste water.

Summary of Issue

The EA determines that all wastes generated by the winery operation can be managed without adverse impacts on the environment.

Issues Raised in Submissions

The Department of Natural Resources has expressed some concern about the management of the irrigation farm. This concern relates to potential groundwater impacts and changes to the soil profile and structure.

The Department of Environment and Conservation has expressed similar concerns.

Draft conditions to manage these concerns have been submitted by both Departments.

Two private submissions have expressed concern about the odour potential of the treatment ponds and adverse impacts of waste water on the ecology of the area.

Council's Assessment

The table below sets out a summary of solid waste streams from the current and expanded winery operation. The information has been extracted from the EA and extended to show the anticipated waste at full production of 150,000 tonnes per annum. The projections for 150,000 tonnes production should be treated with some caution.

Solid Waste Stream	Estimated value per tonne of grape throughput.	Quantities based on 2004 year (85 000 tonnes).	Projected quantities at 150,000 tonnes production
Stalks	21 kg	1,785 T	3,150 T
Marc	142 kg	12,070 T	21,300 T
Spent filters-Filter pads	0.13 pads	11,050 pads	19,000 pads *
Lenticular filters	0.025 filters	2,125 filters	3,750 filters *
Membranes	0.0026 filters	221 filters	390 filters *
Diatomaceous earth/perlite	5.76 kg	490 T	865 T
Wood chips	0.5 kg	42.5 T	75 T
Staves	0.4 kg	34 T	60 T
Lees – Distillation lees	0.6L	50000L	88,235 L
Bentonite	0.8kg	70 T	123.5 T
Tartrate	0.9kg	76.5 T	135 T
Packaging materials	5 kg	425 T	750 T *

* These figures may vary due to changes in processing technology.

The volume of waste water from domestic sources is not estimated separately in the EA but may be of the order of 40ML per annum.

The winery is a licensed premise under the POEO Act and currently holds a licence from the Department of Environment and Conservation. The Department will be responsible for monitoring and management of waste issues associated with the winery. Should changes be made to any management system or process, these can be reflected in changes to the DEC license.

The efficient management of waste processes will rely heavily upon close monitoring of waste streams and treatment processes. This will be a matter for winery management and DEC (through its licensing conditions and on-going monitoring). Provided the controls and monitoring processes set out in the EA and subsequent documents are followed and implemented, waste streams from the winery operation should be managed within environmentally acceptable limits.

8.2 Odour and Air Quality

Proponent's Position

Odour is the major air quality issue. The EA includes an exhaustive assessment of odour sources together with the results of monitoring over the past 12 months period.

Identified odour sources include:

- Winery waste water;
- Direct emissions from the fermentation process;
- Semi-liquid or high moisture content wastes such as
 - Grape marc and pomace,

- Lees,
- Spent filter earths (diatomaceous earthy, bentonite and perlite),
- Waste water pond sludges and evaporite

Management of odour from the semi-liquid components is achieved by collection under controlled conditions (filter press, screening etc) and delivery off-site to facilities where the various components are recycled or reprocessed into other products such as alcohol.

Odour from the fermentation process is localised and does not cause an odour nuisance.

Management of winery waste water is the major task in control of odour. This is achieved by removal of suspended solids (filtration and dewatering) and pH correction (winery waste water can be extremely high in BOD – up to 10,000mg/L with an average of about 4,000mg/L). The resulting liquid, still high in BOD, will be directed to aerated lagoons or direct to irrigation. The irrigation of waste water direct to soil and crops allows efficient management of the odour potential. Waste water not able to be directed to irrigation will be held in the aerated lagoons until needed. The aeration is designed to provide sufficient oxygen to allow aerobic digestion of organisms in the waste water this limiting the potential for odour generation.

Trials have been conducted over the past 12 months and efficient odour reduction has been achieved.

Modelling of the odour plume shows that these treatment methods will keep odour emissions within acceptable limits.

Issues Raised in Submissions

The Department of Environment and Conservation advise that the proposed odour management methods are acceptable and recommend conditions to monitor and manage odour occurrences.

Two private submissions have been received and express concern about past odour events from the winery. One writer states that obnoxious odour events have occurred on a regular basis in the past and suggests that all offending operations such as waste water treatment be designed to use some sort of underground process. Doubt is expressed about the ability of any treatment process to eliminate odour problems.

Council's Assessment

Odour has been a major concern for the community in relation to the operation of the winery over past years. Following a petition to Griffith City Council and DEC, considerable effort has been taken over the past 12 months to rectify problems and minimise odour. These have proved quite successful. Monitoring and management of these matters will be a component of the DEC license.

Griffith LEP 2002 sets guidelines that the consent authority should consider for a development that has potential to cause odour or air quality concerns. These guidelines apply in particular to recognised odour generating developments such as wineries and suggest buffer or separation distances between wineries and residential areas or developments. In this instance a separation distance of 400 metres is recommended. The winery is located only 300 metres from the village of Bilbul. This proposal is an expansion of an existing winery and therefore enjoys existing use privileges.

The EA includes comprehensive assessment of noise and odour nuisance and limited discussion of lighting and dust impacts. Provided the proposals set out in the EA are incorporated in the development, noise, dust and lighting impacts would be acceptable.

Odour has been a continuing problem at the winery for some years. The work included in the EA is comprehensive and sets new ground for the assessment of winery odour issues and controls. Significant improvement has been made over the last vintage and the implementation of the proposals set out in the EA for the reduction and management of odour should provide acceptable control of odour. None-the-less, close monitoring would be required.

An Environmental Management Plan (EMP) should be developed as a matter of urgency and should be in place before the commencement of next vintage (2007). The EMP should include requirements for monitoring of parameters (such as BOD and soil conditions at the irrigation farm), that could indicate odorous conditions. Compliance with DEC requirements will need to be carefully monitored.

8.3 Groundwater

Proponent's Position

Groundwater in the area is generally at shallow depths and has high salinity levels. Infiltration of waste water or stormwater from the development could cause increased salinity, raising of groundwater levels and contamination of groundwater with winery waste water. This in turn could impact upon crops and sights down-flow from the winery that rely upon groundwater.

The EA identifies potential for groundwater contamination and suggests a number of options for management or control of infiltration. These recommendations include monitoring of irrigation areas, planting of trees, construction of interception drains and other methods.

The monitoring equipment and the collected data would be used to design appropriate action should any likelihood of contamination or infiltration be identified.

Issues Raised in Submissions

The Department of Natural Resources has expressed concern about the potential for contamination of groundwater. In particular infiltration from the irrigation farm has potential to raise water levels and contamination could occur from infiltration of contaminated waste water from the treatment lagoons.

Conditions are recommended to monitor and manage this potential and include a requirement for regular reporting. Monitoring piezometers would be installed at several locations to provide data on groundwater levels and salinity etc.

DEC requires strict monitoring of groundwater levels and soil conditions. Any departure from acceptable parameters would require decisive action to rectify the situation and prevent any recurrence.

Griffith City Council requests that an EMP be prepared and include appropriate controls to monitor impacts on groundwater.

Murrumbidgee Irrigation has requested bunding of the irrigation area to prevent waste water from contaminating drainage and supply channels.

Council's Assessment

Soils within the treatment and irrigation areas may be critical to the continued safe and successful operation of the winery. The EA provides considerable detail on soil types and their suitability for the particular use on each site. The performance of the soils under operational conditions is examined at length. A number of problems are identified and monitoring will be an essential part of successful operation. If the treatment and irrigation areas are not managed correctly, there is potential to cause severe damage to soil structure

or to create a soil environment no longer suitable for the designed purpose. Failure of the soils would allow groundwater contamination to occur.

Likewise, monitoring and control of the treatment lagoons will be essential to ensure soil structure does not deteriorate (especially in those lagoons that will not be maintained in a permanently wet condition – cracking or collapse of the clay layers could allow very rapid infiltration)

Careful monitoring of soils and sub-surface water quality in the irrigation farm area will be particularly important. The EMP should require submission of an annual report to Department of Conservation, Department of Natural Resources, Murrumbidgee Irrigation and Griffith City Council outlining test and monitoring results for the year and any identified concerns together with actions taken to correct or eliminate the cause of the concern.

8.4 Traffic and Transport

Proponent's Position

The EA includes a discussion of traffic generation and traffic movements associated with the winery. Following representations and discussions with Griffith City Council, the local community and NSW RTA, a number of modifications have been made to improve traffic and transport management. These include direction of all winery traffic to the de Bortoli Road access and re-routing of internal traffic paths to accommodate that change.

Car parking will be provided in three areas – the existing staff car park will be retained; an additional staff car park will be developed near the brewery building; and a new visitor's car park will be provided to the east of de Bortoli Road.

Traffic Volumes

Traffic volumes along Burley Griffin Way are estimated to increase from about 3,500 vehicles per day (vpd) to 4,000 vpd in the year 2010.

Burley Griffin Way is well able to cope with this increase in traffic volume.

de Bortoli Road is to be closed and developed as an internal access road to serve the winery, thus alleviating the need to close the access to the Bilbul store or use Lawrence Road for heavy traffic.

Issues Raised in Submissions

The Roads and Traffic Authority have assessed the proposal and recommended that the intersections between Burley Griffin Way and de Bortoli Road and Lawrence Road be upgraded to handle B-Double and Road Train movements. Visibility should also be assessed against RTA's standards for the type and speed of traffic using the road.

Following modification of traffic flows to use only de Bortoli Road as the main winery access, RTA confirmed their agreement to the change provided concept plans are submitted and all works are completed in accordance with RTA requirements.

Griffith City Council has considered the project and has suggested a number of conditions regarding the management of traffic and upgrading of intersections and Burley Griffin Way. These include completion of a comprehensive pre-design report and traffic assessment before any work is approved on any roads. Council has also requested that the closure of de Bortoli Road and the western access to Bilbul village be explicitly excluded from any approval that may be issued. These closures would then be the subject of separate applications following a consultation process with the community and RTA.

Council will require upgrading of de Bortoli Road.

Council has also suggested that there is insufficient car parking provided in the proposal and additional parking should be required.

Council's Assessment

Council estimates that winery traffic will contribute about 14% of total annual traffic along Burley Griffin Way. This is a significant contribution from one development.

Annual vehicle movements for the winery are estimated to be about 213,800 vehicles movements (Note: The EA calculates 129,374 total for de Bortoli Road and 84,424 for Lawrence Road. The combined total of 213,800 vehicle movements will now access the winery via de Bortoli Road only.). This is an average of about 580 vehicle movements per day, but peak traffic in vintage period may be significantly greater per day.

Given the traffic volumes using Burley Griffin Way, there would seem to be significant potential for traffic conflicts and delays for turning vehicles at the access points to the winery.

Upgrading to intersections and access ways will be required to cope with these increased traffic volumes.

Council requested further information regarding provision for car parking within the winery complex. The proponent has provided the following summary of car parking requirements when the winery is working at full capacity.

Table 3 – Car Parking requirements

Source	No of Employees	No of Car Parks
Administration/ Office	60	40
Shift 6:00 am to 6:00 pm	200	100
Shift 6:00 pm to 6:00 am	200	70
TOTAL		210

The above figures are less than would be required under Council's Development Control Plan No. 20 – Off Street Car Parking Policy. If Council's normal car parking policy was applied to the development, a total of 327 car parking spaces would be required.

The proponent has confirmed that actual operational conditions for the winery (changing shifts and large areas of storage that do not require staff attendance) allow a lesser requirement. The proponent has also advised that it is proposed to encourage transport sharing for staff.

Council confirms that the proponent's suggested parking provision is adequate.

Summary

Although the volumes of traffic generated by the winery are large, they are not in excess of the capacity of either Burley Griffin Way or de Bortoli Road provided improvements to intersections and road pavements are carried out as required by RTA and Council.

RTA have requested that a Concept Design be prepared for the de Bortoli Road intersection and that this be supported by appropriate traffic figures.

Council has specified an outline brief for a traffic impact assessment and pre-design report. This may form the basis for the concept design requested by RTA.

8.5 Water Supply and Sewage

Proponent's Position

The EA advises that the expansion of the winery will require additional supply of potable quality water. It estimates requirements at 1.4KL per tonne of grapes crushed. It recognises that some improvements will be required to Griffith City Council's trunk supply system to meet increased demand.

As well as potable water from Council's reticulated supply, raw water will be accessed from Mi's irrigation supply canals. To ensure adequate supply when the canals are inactive (during winter), a storage of 3.5ML will be created using one of the canals in de Bortoli Road.

Domestic waste water from staff amenities and visitor facilities will continue to be directed to the existing septic tanks. Overflow from the septic tanks will be directed to a new on-site domestic waste treatment plant located at the winery waste water treatment area. This will provide aeration, filtration and disinfection before the final waste water is combined with winery waste water for delivery to the irrigation farm. Monitoring will be installed to check that treated waste water is safe for irrigation to fodder crops.

Issues Raised in Submissions

Griffith City Council has suggested conditions be applied to require the proponent to cover the full cost of upgrading the water reticulation system from Yoogali to the winery. This will require the construction of a new 250mm diameter trunk main from Yoogali to the winery – a distance of about 6 kilometres - and that the full cost of the new pipeline would need to be paid by the proponent.

This work would be necessary at the point where the winery requires more than 1ML of water per day. Council has suggested that this work be carried out before the 2007 vintage.

MI has advised conditions that will be applied to any agreement for the use of the supply drain in de Bortoli Road.

Griffith City Council advises that the Bilbul sewage treatment plant does not have land available for expansion of the plant to handle waste water from the winery. Should land be made available, expansion of the plant would be an option that could be further investigated.

Council confirms that the existing septic tank systems neither have approval nor provide adequately for treatment of the volumes of waste generated by the winery. Design details and construction plans should be submitted to Council and approved before any work commences on the installation of the proposed on-site domestic waste water treatment facility.

Council's Assessment

Murrumbidgee Irrigation manages raw water obtained from the irrigation canals. MI has advised that they have no concerns regarding the modification of a section of supply channel to retain raw water during the winter months but will require separation of the retention drain from the supply system.

The arrangements suggested by Griffith City Council would be adequate to provide the necessary potable water supply for the winery. The conditions recommended by Council should be added to any approval that may be issued.

Provided the on-site domestic waste water treatment system is designed in accordance with acceptable practice and there is efficient monitoring of waste water before it is discharged to irrigation, the proposed system would be acceptable.

8.6 Hydrology and Drainage

Proponent's Position

Clean and contaminated storm runoff will be separated. Clean runoff will be directed to on-site retention dams where it will be stored and used for site maintenance purposes. The smaller dam (1ML capacity) will be located to the north west of the winery near the brewery building. The larger dam (3.6ML capacity) will be located within the Memorial Gardens complex. Evaporation from these retention dams will mean that the smaller dam will operate in a normally empty condition. The larger dam within the Memorial Gardens complex, will be used for irrigation of gardens and for aesthetic purposes. Where necessary, this dam will be replenished with raw water from MI supply system.

Contaminated runoff from wash down and cleaning of winery processing equipment will be directed to the winery waste water treatment system and then irrigated to crops. Freeboard within the waste water ponds will provide about 100ML of storage for contaminated runoff. No runoff will be discharged off site.

Issues Raised in Submissions

Griffith City Council advises that the development site naturally drains to Main Drain 'J' which is subject to surcharge and contributes to local flooding. Studies recently completed by Paterson Britton for Griffith City Council indicate that surcharging of the drain along Burley Griffin Way would occur but is not likely to extend to the development site. Council advises the 1 in 100 year flood level in the drainage channel at the corner of de Bortoli Road and Burley Griffin Way is 127.69

Council's Assessment

The total site area of the winery complex is 209 hectares. Some of this area will be pervious and allow normal infiltration. The areas covered by treatment ponds and irrigation farms will provide on-site storage for any rainfall event (through bunding of irrigation areas and freeboard clearance of the lagoons).

The winery storage and processing complex covers an area of about 22 hectares. Both contaminated and clean runoff will be collected from this area.

The proposal includes on-site retention of storm water runoff and this should minimise any adverse effects on flooding in the area by preventing runoff.

The collection, treatment, management and re-use proposals set out in the EA provide adequate control of stormwater runoff from the various components of the winery complex.

8.7 Noise and Vibration

Proponent's Position

The Noise Impact Assessment (Appendix B of the EA) identifies Burley Griffin Way as the dominant noise source in the area, both during the construction period and during normal operations. Construction noise impacts will be of short duration and similar to noise impacts from the ongoing operation of the winery.

Road traffic noise has been considered in the Noise Impact Assessment. The assessment concludes, "*No detrimental road traffic noise increase is predicted from the development.*"

This is based on an increase in heavy vehicle numbers of 128 and light vehicles of 210. The assessment concludes these will contribute an increase for Bilbul residents of +0.9dB(A).

Issues Raised in Submissions

DEC restricts construction activity to 7am to 6pm Monday to Friday and 8am to 5pm Saturday. No construction is permitted on Sundays and public holidays.

Maximum permissible noise levels ($L_{Aeq, 15 \text{ mins}}$) are specified as 45 dB(A) day and night and 42 dB(A) during evening periods.

Council's Assessment

Appendix B of the EA provides an assessment of noise associated with the winery operation. The study does not address noise levels at the nearest sensitive receptor but concentrates on noise levels at or adjacent to Burley Griffin Way. This may not provide a true representation of noise impacts of the existing or expanded winery on the nearest sensitive receptor but address the dominant noise source and the greatest number of residential buildings that impacted.

Noise has not been a significant concern for the local community, however this should not be assumed to be the case as the winery expands.

The majority of land around the winery for a distance of about 500m to 800m is owned by the winery and operated as vineyard. The most notable exception to this is the village of Bilbul, which is within 400 metres of the winery operational area.

Operational noise has the potential to impact on residents in Bilbul village. Provided the large sheds (brewery) located between the village and the winery are retained and do not include openings to the north (village) side, noise at the village will be adequately attenuated.

Landscaping of the land between the winery and the village would improve any perceived adverse noise impacts.

8.8 Cumulative Impacts**Proponent's Position**

Cumulative impacts are not addressed in the EA

Issues Raised in Submissions

None

Council's Assessment

The continued growth of the winery has contributed to the economic strength of the wider Griffith community. The cumulative impacts of that growth on the environment have been significant and have not always been predicted or managed well in the past. This development proposal is the most significant attempt yet to identify and manage cumulative impacts of the continued operation of the winery. The current proposal includes a monitoring regime that will assist in identifying adverse impacts and will allow improved management of those impacts.

Matters that will require continued monitoring into the future will include odour, groundwater impacts, soil impacts and the like.

9. SUMMARY OF RECOMMENDED CONDITIONS OF APPROVAL

The recommended instrument of approval is attached (tagged "A"). The conditions take into consideration the General Terms of Approval and other issues raised by Government agencies, Council, and other submitters including land owners. Should the Minister

determine to approve the development application, Council recommends that a number of conditions be included with the aim of controlling and monitoring the future environmental performance of the proposal and to provide a condition framework to ensure the environmental benefits provided by the proposal are adequately undertaken. Key matters covered by the recommended conditions include:

- community consultation prior to agreement to closure of western access to Bilbul (shop);
- pre-design report or Concept design report and assessment of road and intersection improvements;
- provisions for the on-going monitoring and management of odour, groundwater impacts and traffic;
- implementation of procedures to manage odour, noise, groundwater, salinity, and dust impacts associated with the proposed development;
- requirement for the preparation of an Annual Environmental Management Report to review the performance of the project against the approval conditions, and other licences and approvals relating to the winery;
- provision for the handling of, and response to, any community complaints regarding the construction and operation of the winery and all associated activities; and
- establishment of an environmental management plan for the key construction and operational issues, including odour, noise, traffic and transport, surface and groundwater.

10. CONCLUSION

Council considers that the recommended conditions of approval provide a rigorous and strict framework for the management, monitoring and reporting on the construction and operation of the proposed development. This includes requirements for the management of construction noise impacts, groundwater and water storage seepage, transport issues, noise and dust impacts.

Council is satisfied, through its environmental assessment of the proposal, that the application of the draft approval conditions (which incorporate the General Terms of Approval of the Department of Environment and Conservation, The Roads and Traffic Authority, and the Department of Natural Resources and Griffith City Council), would ameliorate any adverse environmental impacts of the development. The proposal is also consistent with State and regional planning objectives, and with the local planning instruments.

Consequently, it is recommended that the development application be approved subject to Council's recommended conditions which have been formulated to manage, monitor and mitigate potential environmental impacts.

11. RECOMMENDATION

It is RECOMMENDED that the Minister:

- (i). Consider the finding and recommendations of Council's Assessment Report;
- (ii). approval the project application, subject to conditions, under section 75J of the *Environmental Planning and Assessment Act 1979*; and
- (iii). sign the attached project approval (Appendix A).

Satwinder Sandhu
Manager City Development
Griffith City Council

APPENDIX A – CONDITIONS OF APPROVAL

APPENDIX B – STATEMENT OF COMMITMENTS

APPENDIX C – RESPONSE TO SUBMISIONS AND PREFERRED PROJECT REPORT

APPENDIX D – SUBMISSIONS SUMMARY

No	Name	Position	Reasons
Submissions from Authorities			
1.	Roads and Traffic Authority	No objection	<ul style="list-style-type: none"> Intersection of Burley Griffin Way and de Bortoli Road should be upgraded to cater for B-Doubles and Road Trains Intersection of Burley Griffin Way and Lawrence Road should be upgraded to cater for B-Doubles and Road Trains Proponent to consult with Council and the owner of the Bilbul store regarding closure and relocation of access off Burley Griffin Way to the store Consider upgrading of Chauncey Road for staff and visitors Stormwater runoff to the drain in Burley Griffin Way is to be retarded All works are to be completed at no cost to the Authority.
2.	Department of Natural Resources	Supports the proposal	<ul style="list-style-type: none"> Appreciates the need to allow flexibility for treatment of wastes so that technological changes may be made over time Irrigation of waste water onto Lots 165 to 171 of DP 751728 has potential to contaminate groundwater A drainage interception scheme should be implemented for the irrigation area including dewatering bores Licensing by Council would be required for the dewatering and/or under-drain system An Environmental Management Plan is required for the irrigation system and should include strict supervision of the scheme Planting of trees as proposed by the proponent is an essential component of the irrigation scheme.
3.	Department of Environment and Conservation	Supports the proposal	<ul style="list-style-type: none"> The development will require a variation to the existing environment protection license de Bortoli Wines will need to make a separate application to DEC to vary this license Should the development be subsequently modified by the proponent or by the conditions, DEC general terms or agreement may need to be revised Recommends that a site-specific Environmental Management Plan be prepared indicators that would trigger changes the need to change management of to soil or salt levels should be identified Provision should be made for review of the monitoring program
4.	Murrumbidgee Irrigation	Supports the proposal	<ul style="list-style-type: none"> The project will provide significant economic advantages for the MIA Implementation of the proposed environmental management systems will impact positively The proposed storage within de Bortoli Road reserve will require modification to valves and controls mechanism s for the area No treated or untreated waste water is to be directed to the storage in de Bortoli Road Stormwater runoff must be retained on the site. No discharge to drains is permitted All existing discharge points from the winery into MI drains must be disconnected and redirected to on-site storage dams and used for irrigation. Irrigation land is to be bunded to prevent discharge into MI drains

No	Name	Position	Reasons
			<ul style="list-style-type: none"> MI will support the closure of part of de Bortoli Road subject to conditions.
5.	Griffith City Council	Supports the proposal	<ul style="list-style-type: none"> Development will impact on Council's roads particularly de Bortoli Road and Lawrence Road; Council's existing water supply infrastructure cannot meet supply demands of expanded winery A new trunk main will be required from Yoogali to the winery – to be constructed at the proponent's expense; Stormwater from the site discharges to Drain J. Runoff from the site should be retarded to prevent increased flooding from drain J The proposed closure of access to Bilbul should NOT form part of this approval. A process of consultation should be implemented before any decision is made on this option.
Submissions from General Public			
6.	Name withheld on request	Objects	<ul style="list-style-type: none"> Has lived in Bilbul for 10 years Smell is so bad at times that air conditioner must be turned off to avoid drawing odours into house Odour causes discomfort and is quite dreadful Odour can continue for up to three weeks at a time, mostly at night Concerned about long term harm to family All above ground ponds should be filled to avoid odour
7.	Mr A Torrescan	Strongly opposed	<ul style="list-style-type: none"> Will adversely affect the local environment; Seriously doubt whether upgraded wastewater treatment plant will adequately protect the local environment Noted deterioration in air quality – has compromised local residents living standards Wildlife will be affected by strong odours and discharge of winery wastewater Potential long term damage will far outweigh short term financial gains

APPENDIX E – ENVIRONMENTAL ASSESSMENT

APPENDIX F - ENVIRONMENTAL PLANNING INSTRUMENTS CONSIDERATION

CONSIDERATION AGAINST GRIFFITH LOCAL ENVIRONMENTAL PLAN 2002 AND DEVELOPMENT CONTROL PLANS MADE UNDER THAT PLAN

- DCP No. 20 – Off-street Parking. This DCP provides guidelines for the calculation of the number of off-street parking spaces required for a development and for the enhancement of car parking areas. The DCP applies to this development.

The recommended car parking provision for industrial buildings is 1 space per 100m² floor space + 1 space per 37m² of office and retail space. The EA does not advise floor space for either industrial buildings or retail/ office space. Following a request, the proponent has advised that retail and office space would total 2,035 m².

The calculation of industrial floor space for a winery operation is somewhat complicated by the nature of the operation. Tanks farms and warehousing could not be considered as similar to bottling lines or processing areas as regards staff needs and associated parking. For the sake of this calculation, tank farms, crushers, dry goods warehousing, large presses and the like, have been excluded or discounted from the calculation.

Type	Floor Space	Rate Required	Spaces Required	Spaces Provided	Shortfall (Surplus -)
Existing Situation					
Office space	1,228 m ²	1 per 37 m ²	33	12	21
Retail space	446 m ²	1 per 37 m ²	12	12	0
Laboratory	180 m ²	1 per 37 m ²	5	Nil	5
Industrial	30,000 m ² *	1 per 100 m ²	300	90	210
Totals			350	114	236
With Full Development (150,000 tonnes)					
Office space	1,586 m ²	1 per 37 m ²	43	12	31
Retail space	446 m ²	1 per 37 m ²	12	12	0
Memorial Gardens	N/A		4	24	20-
Laboratory	180 m ²	1 per 37 m ²	5	Nil	5
Industrial	50,000 m ² *	1 per 100 m ²	500	140	360
Totals			564	188	376

* These figures were not provided by the proponent but are based upon measurement from plans. They may not be a true assessment of actual floor space.

Given that much of the industrial floor space at a winery is devoted to storage or processing that requires little staff involvement, the application of Council's standard

formulae may be inappropriate. It may be more appropriate to calculate parking spaces required on the basis of employee numbers engaged in the processing operations plus normal floor space ratios for office and retail (bottle shop) areas. In using employee numbers, it must be remembered that there would be several shifts during peak periods and this would again lower the requirement.

The EA does not provide sufficient information to allow a reliable calculation to be completed. **The following additional information was requested and the noted information provided by the proponent:**

- Total office floor space = 1586 m²
- Total retail/ bottle shop floor space = 446 m²
- Estimated number of employees vintage and non-vintage for both processing and administration = 440

The proponent did not provide the following information. The figures have been estimated, based on measurement from plans or are a best guess.

- Laboratory floor space = 180 m²
- Normal shift arrangements and numbers of employees for each shift at full production = 150 (other than office, retail and laboratory staff)

At change over of shifts, there would be a requirement for additional spaces. Whether this should be double the shift number or a proportion of the shift number, would influence the parking requirements. For the purpose of this calculation, parking requirement has been assumed to be 175% of the number of employees for any one shift. On-site parking requirements should then be:

Type	Floor Space or Employees	Rate Required	Spaces Required	Spaces Provided	Shortfall (Surplus +)
With Full Development (150,000 tonnes)					
Office space	1,586 m ²	1 per 37 m ²	43	12	31
Retail space	446 m ²	1 per 37 m ²	12	12	0
Memorial Gardens	N/A		4	24	20+
Laboratory	180 m ²	1 per 37 m ²	5	0	5
Industrial	150 employees	1.75 per 2 employees	263	140	123
Totals			327	188	139

Based on the calculations above, there would be a shortage of 139 car parking spaces at full development. The Master Plan submitted on 8 December 2005 indicates that there is room to increase the size of the proposed staff car parking area. The area of the proposed car park should be quadrupled.

- Best Practice Guidelines for Urban-Rural Fringe and Landuse Buffer Controls - This DCP applies. It provides an interpretation of Clauses 28 and 29 of Griffith LEP 2002 and Schedule 4 of the LEP. Matters covered by the DCP have been addressed above in relation to Clauses 28 and 29 of Griffith LEP 2002.