



Preliminary Environmental Assessment Report

Proposed Winery Expansion to 65,000T, Including:

- New Packaging Facility
- Waste Water Treatment Plant, and
- Associated Site Infrastructure

For

McWilliam's Wines
Jack McWilliam Road
Hanwood, NSW

Prepared By:
Mike Carson
JJC Engineering
34 Logan Street Canterbury, Vic.
mike@jjcgroup.com.au

Executive Summary

McWilliam's Wines is a long established Australian Wine producer that has enjoyed significant growth over the past decade. Following a review of operations in 2005, the Company has embarked on a strategy to position themselves for future growth by consolidating their major winery operations at Hanwood, near Griffith in the Riverina. The next phase of the strategy and the subject of this proposal are to:

- Expand the Hanwood Winery capacity from 34,000 tonnes to 65,000 tonnes, over a period of approximately 15 years.
- Establish a Bottling facility at Hanwood.
- Upgrade the Hanwood site services including the installation of a new Waste Water Treatment Plant.

The proposed staged development has an estimated cost of \$53M and will provide benefits for the Riverina such as:

- Creation of approximately 90 new jobs both in construction and operational stages
- Potential for 'springboard' effects in stimulating economic activity in related sectors such as transportation, materials manufacturing and housing construction.
- The project supports the prominence of the Riverina Region in the context of the Australian wine industry and the global market.

The proposed development is considered to be classified as 'Designated Development' as listed in Schedule 3 of the Environmental Planning & Assessment regulation 2000. The proposal is also considered to be classified as a Part 3A Major Project under the provisions of the *Environmental Planning & Assessment Act 1979*. On this basis, it is proposed to submit a Development Application (DA) relating to the proposal to the NSW Department of Planning for determination.

This report provides an overview of the proposal and a preliminary review of the likely Environmental Impacts from the development in support of an application for development approval.

Table of Contents

1	INTRODUCTION	4
2	BACKGROUND	7
2.1	The site and the surrounding location.....	7
2.2	Current Winery Operations at Hanwood.....	7
2.3	Current Packaging Operations at Chullora	8
2.4	Recent Development Applications and Works in Progress.....	8
3	THE PROPOSAL	10
3.1	Winery Capacity Upgrade.....	10
3.2	Packaging Plant.....	11
3.3	Waste Water Treatment and Reuse	12
3.4	Associated Site Infrastructure and Utilities	13
4	STATUTORY APPROVAL CONTEXT.....	14
4.1	Environmental Planning & Assessment Act 1979.....	14
4.2	Local Government Act 1993	15
4.3	Roads Act 1993	15
4.4	Native Vegetation Act 2003	15
5	POTENTIAL ENVIRONMENTAL ISSUES	16
5.1	Raw Water and Waste Water Management	16
5.2	Solids handling	17
5.3	Air Emissions and Odour Management	17
5.4	Traffic Management.....	18
5.5	Noise	18
5.6	Visual Impacts	18
5.7	Heritage and Archaeological.....	18
5.8	Ecological	18
5.9	Energy Consumption & Greenhouse Gases.....	19
5.10	Stormwater & Flooding	19
5.11	Consultation.....	19
5.12	Hazards	19
6	SUMMARY OF KEY ISSUES	20

Attachments

Attachment 1.	Aerial Photo (showing site location) 0802-00-PL001 Rev C
Attachment 2	Existing Site Plan drawing 0802-05-PL002 Rev C
Attachment 3.	Site Masterplan drawing 0802-05-PL003 Rev D

1 INTRODUCTION

McWilliam's Wines Pty. Ltd. (McWilliam's) has been making Premium Wines in Australia since 1877. The Company's Operations spans six generations and 132 years of excellence and innovation in the Australian Wine Industry.

The Company has vineyards in most wine growing regions of Australia including the Riverina, Hilltops and Hunter Valley regions of NSW, the Yarra Valley in Victoria, the Coonawarra region in South Australia and the Margaret River region in Western Australia.

In total, the Company processes approximately 40,000 tonnes of grapes per annum across 3 sites. It produces Table Wine, Fortified Wine and Sparkling Wine products for Domestic and International markets. Table Wine products currently account for approximately 75% of all production.

The Company's largest winery, and the centre for the majority of its wine production, is the Hanwood site in the Riverina region, near Griffith in NSW. The Hanwood site processes around 34,000 tonnes per vintage. The balance of production occurs at satellite wineries in the Hunter Valley and Coonawarra and under contract in Western Australia.

Nearly all wine bottling and packaging is carried out at McWilliam's packaging facility at Chullora, in the western suburbs of Sydney. A small portion is carried out under contract in Western Australia. Domestic product is dispatched to local distributors from Chullora and product for export markets is container packed at Chullora and shipped from the port of Sydney.

Until recently, McWilliam's operated three sites in the Riverina region, all established in the early 1900's; the large site at Hanwood and subsidiary sites at Yenda and Beelbanger. Processing was split between the sites. Hanwood was the main crushing and pressing site and at Yenda the wine was barrel matured and blended before being transported via rail tankers to Chullora. Beelbanger was and is still used for barrel maturation of fortified wine. The rail link between Yenda and Chullora ceased operating in 2004 forcing a change to road transport.

In 2005, following a sustained period of growth and considering the constraints of its existing sites, McWilliam's conducted a strategic review of its production and distribution footprint. The main objective of the review was 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 at which to base its winemaking operations. It identified processing efficiencies by closing the Yenda site and concentrating future

growth and modernisation at Hanwood. It also identified significant supply chain efficiencies in establishing bottling operations for its Table Wine production at Hanwood. Under this arrangement, the Chullora facility would continue packaging the Sparkling and Fortified products and other contract bottling arrangements.

The advantages for McWilliam's under this production model are:

- Single management function - all Table Wine processing, from fruit to the bottle, managed on the one site.
- Single laboratory function to monitor all aspects of quality control.
- Improved quality and reduced product loss as a result of less product movements.

Following the review in 2005, McWilliams long term plans were presented to stakeholders in a Planning Focus Meeting (PFM) in March 2006. With some uncertainty surrounding the timing of key elements of the strategy, the Company embarked on a staged project to consolidate the Yenda processes into Hanwood and to improve efficiencies and at the Hanwood site. The project included:

- Relocation of winemaking equipment from Yenda to Hanwood.
- Accommodation of staff from Yenda and Hanwood in new Offices, Laboratory and amenities at Hanwood.
- Relocation of wine barrel operations from Yenda to new warehouse and barrel processing facilities at Hanwood.
- Installation of new wine storage tanks to replace the tanks unable to be relocated from Yenda.
- Replacement of old Hanwood winemaking equipment, introducing automation to reduce manual handling, product loss and water and electricity usage.
- Separation of heavy and light traffic on the site through the construction of new entrances and internal roads.
- Improvement of site infrastructure such as water supply and filtration, fire hydrant services and an expanded high voltage electricity supply to the site.
- Phased introduction of Stormwater management and separation.

The next major step for McWilliam's is to prepare the Hanwood site for growth in wine processing and for the introduction of wine bottling at the site.

This Preliminary Environmental Assessment is based on the following proposed changes to the site:

- Staged expansion in winery capacity, from 34,000 tonnes per annum to 65,000 tonnes per annum, over approximately 15 years.
- Introduction of bottling at the site in 2011, with initial bottling capacity of 25M Litres per annum.
- Staged expansion of the bottling facility from 25M Litres per annum to 72M Litres per annum over approximately 25 years.

- Construction of a Waste Water Treatment Plant, to coincide with the new Bottling Facility, for the treatment and re-use of wastewater.

2 BACKGROUND

2.1 The site and the surrounding location

The proposed winery expansion including the packaging facility and waste water treatment plant will be located at the current Hanwood winery site. The treated waste water will be piped approximately 8km to a McWilliam's owned vineyard (Farms 195, 196 & 199) west of Hanwood township. The vineyard will require a new dam to receive the treated water and existing equipment will be used to irrigate the vines.

The Hanwood Winery site comprises Lots 165, 166, 168 & 171, DP 751709, Jack McWilliam Road which is located approximately 2km south of the village of Hanwood and 10km south of Griffith, NSW. The site is located within the City of Griffith local government area. Jack McWilliam Road is currently used for the purpose of rural industry and horticulture.

Farms 195, 196 & 199 are bounded by Walla Avenue, Jon Condon Road and Farrell Roads, comprising Lot 194 DP 756035 and Lots 72 & 73 DP 756034. Surrounding land is used for the purpose of predominantly horticulture with some cropping and rural industry (broiler farms).

Refer the aerial photo (0802-00-PL001 Rev C) showing the site, vineyard and surrounding features provided in Attachment 1.

2.2 Current Winery Operations at Hanwood

Currently, the Winery at Hanwood:

- Crushes 34,000 – 38,000 Tonnes of grapes per annum depending on vineyard yields.
- Processes red and white grapes for sparkling, table and fortified wine products.
- Predominantly sources fruit from the Riverina and Riverland regions but also take fruit from the Hunter Valley, Riverland and Coonawarra areas.
- Receives grape juice and wine from third party producers when required
- Is equipped for all winemaking processes including crushing, pressing, fermentation for both red and white streams, heating, cooling and filtration.
- Dispatches Wine to Chullora for Packaging
- Provides employment for 43 winery and administration personnel and 38 casual employees over the vintage period.

Refer the Existing Site Plan shown on drawing 0802-05-PL002 Rev C provided as Attachment 2.

2.3 Current Packaging Operations at Chullora

The Chullora Packaging Facility:

- Bottles approximately 29ML of wine per annum.
- Operates predominantly on a 6 day week, running 2 shifts per day and increases shifts when required to meet demand.
- Receives empty glass bottles and other packaging materials on a just-in-time basis to minimise inventory.
- Bottles wine and packs bottles into 6 pack or 12 pack cartons depending on market requirements.
- Warehouses cartoned wine on block-stacked pallets for loading onto trucks for distribution to domestic markets. Shipping containers are also packed for export.
- Is equipped to bottle potable spirit products.

The Company's production requirements have increased considerably since the site was established in 1975. In terms of space, all areas of the building including offices, packaging, warehouse and truck maneuvering areas have reached capacity. Constructed to suit rail tanker deliveries, the site also lacks proper truck access.

While it is possible to increase bottling output by increasing packaging line speed and operating additional shifts, the warehouse and distribution activities remain constrained and unable to be expanded. The Company currently leases off-site warehouse space to hold stock not able to be fitted into the Chullora warehouse.

Forecast growth suggests McWilliam's need to have expanded or additional bottling arrangements in place by 2012.

2.4 Recent Development Applications and Works in Progress

Over the past 3 years, a number of minor projects have been undertaken to consolidate Yenda operations into Hanwood and prepare the site for a major upgrade. A list of the recent Development Approvals and their status is provided in Table 1 below:

Table 1. Recently approved Development Applications

DA No.	Description	Status
DA 353/2005	27ML wine storage	Partly completed
DA 474/2005	10 X 130Te SWAPs	Completed
DA 208/2006	Construction of new barrel store building	Completed
DA 289/2006	12 X 100Te Drainers	Partly completed
DA 545/2006	Construction of new Administration building	Completed
DA 220/2007	12ML wine storage	Partly completed

Preliminary Environmental Assessment
McWilliams Wines, Hanwood
Proposal to Expand Winery Capacity, Incorporate Packaging & Waste Water Treatment

DA 167/2008	8 X 130Te SWAPs	Partly completed
DA 85/2009	Stormwater Collection and Storage Lagoons	In progress

3 THE PROPOSAL

Under this proposal, McWilliam's will:

- Expand the Hanwood crush capacity from 34,000 tonnes to 65,000 tonnes at a rate driven by sales but estimated to be over a period of approximately 15 years
- Construct a bottling and packaging plant to be commissioned in 2011. The facility would at first process approximately 25ML of wine per annum or 75% of the Company's production, while the balance remains at Chullora for the short term. The Hanwood packaging facility would ultimately have a bottling capability of 72ML of wine or 100,000 tonnes equivalent. Wine for bottling, over and above the Company crushing would be imported to Hanwood from sources outside Hanwood.
- Build a best-practice waste water treatment plant to process waste water from the Winery and Packaging. It is proposed that the treated water will be used for irrigation purposes on existing vineyards.

3.1 Winery Capacity Upgrade

McWilliams' long term plan is to grow the winery site at Hanwood to an ultimate capacity of 65,000T. This is the level at which the region's fruit would be exhausted for the style of Wines that the Company produces. The plan is to increase the winery's capacity at a rate to meet projected sales growth forecasts. This rate of growth is estimated to be approximately 4% pa. The long term growth forecasts are provided below in Figure 1 and Table 2.

Figure 1. McWilliams Growth Projections

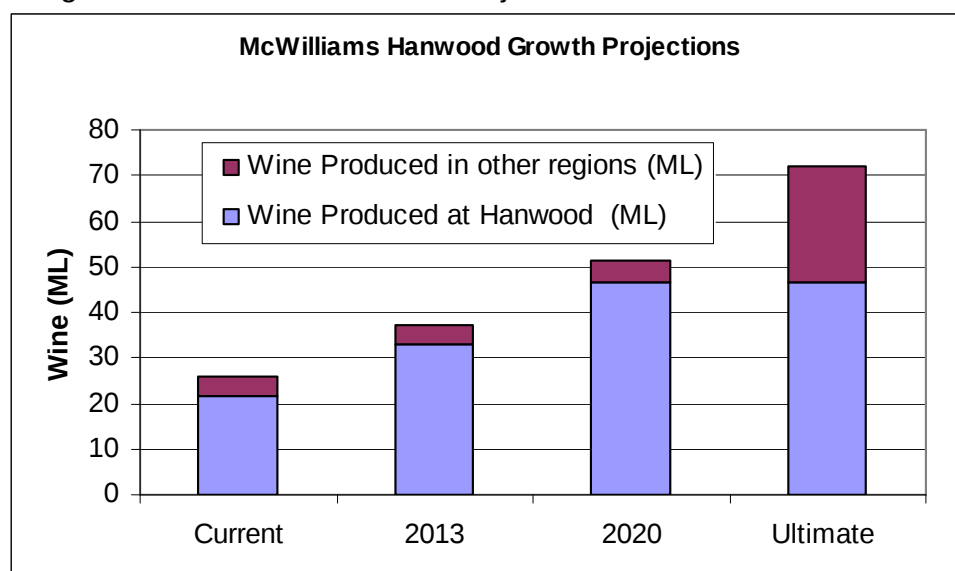


Table 2. Wine Production Growth by source

Year	Grape Crush at Hanwood (T)	Wine Produced at Hanwood (ML)	Wine Produced in other regions (ML)	Total Wine to Packaging (ML)
Current	34,000	24.5	4.3	28.8
2013	45,000	33.0	4.3	37.3
2020	65,000	46.8	4.3	51.1
Ultimate	65,000	46.8	25.2	72.0

The upgrade to the winery to a capacity of 65,000T crush will be completed within the existing site, as shown on the Site Masterplan drawing 0802-05-PL003 Rev C provided in Attachment 3.

3.2 Packaging Plant

The proposal includes the construction of a new bottling and packaging facility on the Hanwood site. The location of the facility and the associated internal roads are shown on the site Masterplan provided in attachment 3.

Construction of the facility will be staged to suit Company growth. Stage 1 is proposed to be approximately 14,000m² in area and be equipped to bottle around 25ML of wine per annum. The final building will measure approximately 23,000m² in area and process 72ML of wine per annum.

The main building will be a single-storey steel structure with external lightweight metal cladding. The building will have an eaves height of 7m and a maximum ridge height of approximately 12m. A 400m² two-storey office, amenities and services building is proposed to be located alongside the northern wall of the main building.

The packaging building will consist of:

- A drive-through canopy area on the east side of the building for unloading raw materials and loading trucks
- A drive-through canopy area on the west side of the building for unloading empty bottles.
- Bottle storage and de-palletising area
- Storage of raw materials: cartons, labels and closures
- Wine buffer tanks
- Bottle filling
- Carton erecting and packing
- Palletising
- Warehousing raw materials and finished goods

Typical operations will include:

- Raw materials and glass delivered to the site by heavy vehicles. Unloading of raw materials and glass by forklifts.
- Transfer of wine via pipework from the Hanwood winery to the Wine buffer tank area inside the building.

- Unloading wine (from other Company sites or from external sources) from road tankers directly to the wine buffer tank area.
- Bottle filling, carton packing and palletisation of finished products.
- Warehousing of semi-finished wine for maturation.
- Warehousing of finished wine prior to despatch.
- Loading of semi-trailers or B-Doubles with palletised finished goods.
- Loading containers onto trucks with finished goods for export.

The finished goods warehouse area will be large enough to hold 2 weeks of production. It is expected that within this time Domestic product will be dispatched to State distribution warehouses and Export product will be dispatched on trucks or into shipping containers to the shipping port.

The following services and utilities will be required for the building:

- Potable water supply – via the existing site water storage and filtration plant, expanded to meet the additional demand
- Sterile filtered water – via a new membrane filtration plant located adjacent to the Packaging building
- Hot water for equipment clean-in-place processes - generated via new gas fired hot water boilers located adjacent to the Packaging building and fed from the site's natural gas supply.
- Compressed air for operating pneumatic equipment – via new air compressors located adjacent to the Packaging building.
- Electricity supply – via new HV transformers added to the site's existing ring main.

The facility will predominantly operate 6 days per week, with 2 x 8hr shifts per day. Additional operating hours may be necessary from time to time to meet exceptional demands.

It is estimated the Stage 1 facility will create an additional 23 permanent positions and potentially 10 casual positions at certain times of the year. These figures are estimated to grow to 56 and 20 respectively as the packaging facility reaches its capacity of 72ML per annum.

3.3 Waste Water Treatment and Reuse

Wastewater generation is expected to increase from the current level of 44ML pa to 146ML pa. The proposal includes the construction of a new Waste Water Treatment Plant (WWTP) that will produce treated water suitable for vineyard irrigation. McWilliams have a number of irrigated vineyards in the vicinity of the winery and the intention is to incorporate treated water into their overall irrigation water needs.

A concept design for waste water management has been prepared including:

- The segregation of waste streams from stormwater
- Treatment of waste water
- Reuse of treated water
- Reuse of biogas

It is proposed that the WWTP will be located on the winery site, south of the existing evaporation ponds in an area currently occupied by vineyards. The location is shown on the Site Masterplan, attachment 3.

3.4 Associated Site Infrastructure and Utilities

The expansion of the winery and packaging facility will require improvements in a range of site services and infrastructure.

- Extension of the HV ring main with additional transformers for Refrigeration, Packaging & Filtration and Waste Water Treatment areas
- An additional 35ML water storage lagoon to store stormwater and raw water to feed to the winery and packaging plants
- Extension to water filtration system
- Extension to Fire Hydrant services
- West car park extension for winery staff
- East car park for packaging employees
- Roadworks around the entrance to the site

New buildings and extensions are also planned in the following areas:

- West extension to Administration Building
- Workshop & store
- Product Filtration Building - staged
- Weighbridge/Office
- Winery Amenities
- Extension to Premium Cellar/Barrel Store
- Security
- Drygoods storage
- RDV shed

The main items noted above are identified on the Site Masterplan (Attachment 3).

4 STATUTORY APPROVAL CONTEXT

4.1 *Environmental Planning & Assessment Act 1979*

The proposed development is considered to be classified as ‘Designated Development’ as listed in Schedule 3 of the *Environmental Planning & Assessment Regulation 2000*. The proposal is also considered to be classified as a Part 3A Major Project under the provisions of the *Environmental Planning & Assessment Act 1979*. On this basis, it is proposed to submit a Development Application (DA) relating to the proposal to the NSW Department of Planning for determination.

The following environmental planning instruments are considered to relate to the proposed development and will be addressed in an Environmental Impact Assessment report submitted in conjunction with the DA:

State Environmental Planning Policy (Infrastructure) 2007:

A portion of the Jack McWilliam Road site fronts a classified road (The Kidman Way). Whilst vehicular access to the site will continue to be gained off Jack McWilliam Road, it is noted that the proposal is considered to be listed in Schedule 3 of SEPP (Infrastructure) 2007. On this basis, it is anticipated that the DA will be referred to the Roads & Traffic Authority of NSW (RTA) and the South-Western NSW Regional Development Committee. It is proposed to submit a Traffic Impact Assessment report in conjunction with the DA.

State Environmental Planning Policy 33:

The nature of the proposed development is considered to be identified as potentially hazardous and/or potentially offensive development. It is proposed to submit a Noise Impact Assessment report and an Air Quality (Odour) Impact Assessment report in conjunction with the DA.

Griffith Local Environmental Plan 2002:

The Jack McWilliam Road site is currently zoned 1(e) – *Rural Industry & Employment* under the provisions of the Griffith Local Environmental Plan 2002 (GLEP2002). The existing winery operation is considered to be defined as “rural industry” in the GLEP2002 Dictionary. The use of land zoned 1(e) – *Rural Industry & Employment* for the purposes of “rural industry” and expansion of an existing “rural industry” are considered to be permissible with development consent. The proposed development is considered to be consistent with the objectives of land zoned 1(e) – *Rural Industry & Employment*.

The Walla Avenue/Gum Creek Road site is currently zoned *1(b) – Rural Agricultural Protection* under the provisions of the Griffith Local Environmental Plan 2002 (GLEP2002). The irrigation of wastewater associated with “rural industry” on land zoned *1(b) – Rural Agricultural Protection* is considered to be permissible with development consent. The proposed development is considered to be consistent with the objectives of land zoned *1(b) – Rural Agricultural Protection*. It is proposed to demonstrate how the proposal complies with the provisions of the GLEP 2002 as part of the EIA report to be submitted in conjunction with the DA.

Griffith City Council DCP No. 1 (Non-Urban Development):

Griffith City Council's *DCP No. 1 – Non-Urban Development* applies to development on land zoned *1(b) – Rural Agricultural Protection* and *1(e) – Rural Industry & Employment*. It is proposed to demonstrate how the proposal complies with the provisions of *DCP 1* as part of the EIA report to be submitted in conjunction with the DA.

Griffith City Council DCP No. 20 (Off-Street Parking):

Griffith City Council's *DCP No. 20 – Off-Street Parking* applies to development for the purposes of “rural industry” on land zoned *1(e) – Rural Industry & Employment*. It is proposed to demonstrate how the proposal complies with the provisions of *DCP 20* as part of the EIA report to be submitted in conjunction with the DA.

4.2 Local Government Act 1993

The proposed development may require approval under the provisions of Section 68 of the Local Government Act 1993 relating to potable water supply, disposal of sewerage and/or the disposal of drainage.

4.3 Roads Act 1993

The proposed development is not anticipated to require the construction of any new public roads or any new driveways off surrounding public roads.

4.4 Native Vegetation Act 2003

The proposed development is not considered to require the removal of any native vegetation or any regrowth.

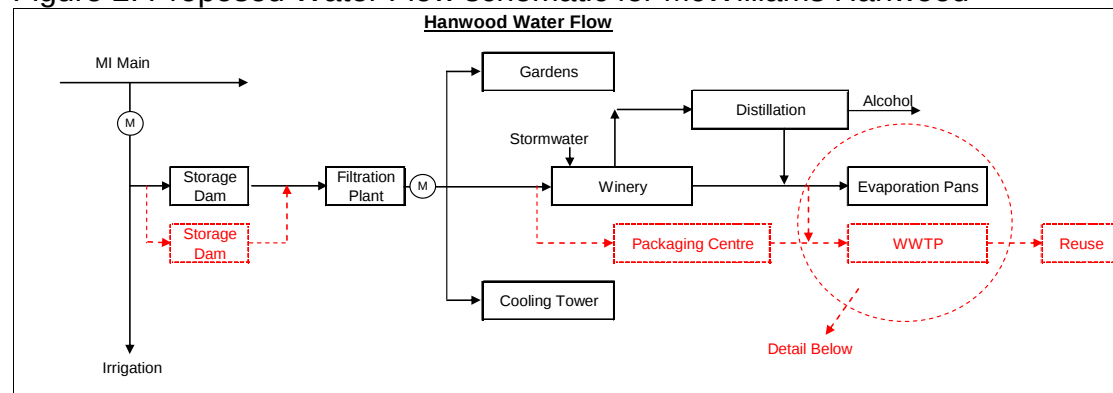
5 POTENTIAL ENVIRONMENTAL ISSUES

5.1 Raw Water and Waste Water Management

Water supply to the site is drawn from Murrumbidgee Irrigation (MI) system into a 10ML holding dam in front of the administration office area. A filtration and chlorination plant treats the water to a suitable standard for the site's operations. The current water usage of 55ML pa is expected to grow to 90ML pa in 2013 and ultimately 160ML pa under this proposal.

The current water schematic (with changes shown in red) for the Hanwood site is provided in Figure 2: below

Figure 2: Proposed Water Flow schematic for McWilliams Hanwood

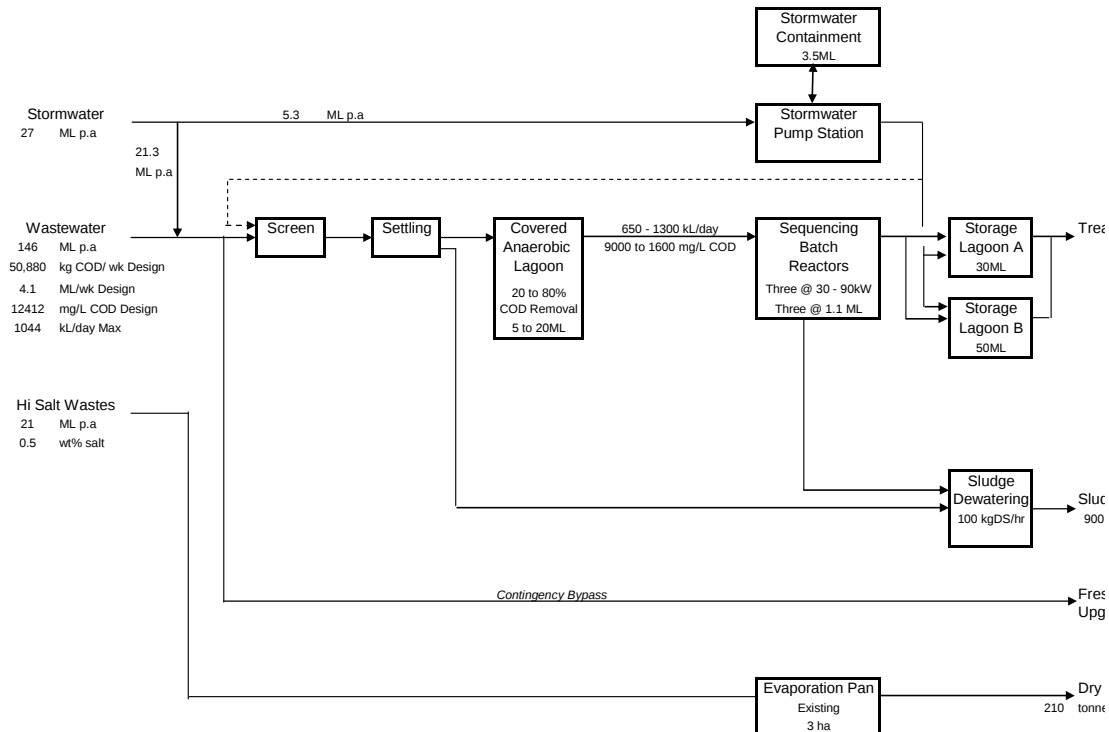


Current Waste Water generation is approximately 44ML pa from a crush of 34,000Te or 1.3kL/Te crush, consistent with industry benchmarks. Growth figures have been extrapolated from historical performance and industry standards as follows:

Operation	Waste Water Expected	Ultimate Capacity	Waste Water Generated
Wine Making	1.3kL/Te Crush	65,000Te	86 ML
Wine Packaging	0.83L/L wine	74,000 kL	60 ML
Total Plant			146 ML

The current method for disposal of waste water is via evaporation pans. The pans have an evaporation capacity of 35.5ML in a decile 5 year and 28.0ML in a decile 9 rainfall year. It is proposed to capture, treat and reuse the waste water for irrigation of vineyards supplemented by water drawn from the MI's system. The evaporation pans will be retained and utilised for some specific high salt waste streams as part of the strategy to improve treated water quality.

The concept design for the Waste Water Treatment Plant (WWTP) has been completed and the flow schematic provided below:



The details of the treatment plant and reuse options including the environmental impact will be explored in the EIA report to be submitted in conjunction with the DA.

5.2 Solids handling

Solid waste streams from winery operations predominantly involve grape stalks and marc from the crushing process. These streams are collected and transported offsite for recovery of alcohol and other residuals. The quantity of solid waste is expected to rise in line with crushing capacity. The method for dealing with these streams is well established and increased capacity is not likely to have adverse environmental impacts.

5.3 Air Emissions and Odour Management

Consultation with nearby neighbours and odour modelling was completed in 2007 by specialist firm OnSiteTechnology (OST) which concluded:

- Extrapolated acceptable crush capacity to 70,000T with the existing evaporation pans, but no mention of packaging waste water flows.
- Conducted consultation via questionnaire with neighbours which indicated a low level of concern with current practices.

Further odour modelling will be conducted as part of the EA study. While waste water volumes will be increasing, the inclusion of a WWTP is expected

to reduce odour emissions in line with the reduced load on the evaporation pans.

5.4 Traffic Management

Traffic movements within the locality are anticipated to increase as a result of the proposed development. This increase in traffic movements will occur gradually in conjunction with an increase in winery production and the commencement of packaging operations.

An indication of current traffic movements within the locality was gathered through the placement of traffic counters by Griffith City Council during the 2007/08 vintage. These counters were selectively placed at key locations such as along The Kidman Way, Jack McWilliam Road, Old Willbriggie Road and at the existing winery entrance. This background data has been reviewed by Varga Traffic Planning and will be used to prepare a Traffic Impact Assessment report to be submitted in conjunction with the DA. The Traffic Impact Assessment report will identify the existing and proposed volumes of traffic likely to be associated with the site over time as expansion of the winery is undertaken. The report will demonstrate whether road improvements will be required within the locality to cater for the proposed expansion.

5.5 Noise

Noise is not considered a significant issue with the operation of the winery itself.

The EA report will specifically address the impacts of the increases in road transports entering and exiting the site. These movements are considered to be the major noise source. Specific site location details and appropriate use of mitigation and screening will help against the potential for noise to be an issue.

5.6 Visual Impacts

The McWilliams winery is located on the southern side of Jack McWilliam Road adjacent to the Barbers Chicken feed mill site. The winery is set back from the road, and the visual impact is typical of the MIA region. The new packaging facility will also be set back from the road and visual impact will be softened with specific measures during the design phase.

5.7 Heritage and Archaeological

McWilliam's has been established on the Hanwood site for 93 years and to date, no Heritage or Archaeological issues have been identified. The proposed expansion is entirely within the boundaries of existing McWilliam's land and there is no indication that the area has any heritage or aboriginal significance.

5.8 Ecological

The subject site is located within an established horticultural area surrounded by rural industry and vineyards. There is relatively little established let alone

remnant vegetation within the locality. Whilst irrigation and drainage channels throughout the MIA can provide habitat for native species, the proposed development will not result in the loss or significant alteration of drainage channels within proximity of the sites.

Given that the proposed development will be undertaken on land that has previously been developed or used for the purposes of vineyards, the proposal is not considered to have any ecological impact. On this basis, it is not proposed to undertake a flora or fauna impact assessment as part of the EIA.

5.9 Energy Consumption & Greenhouse Gases

McWilliam's are committed to a low energy footprint and will look to energy efficient appliances wherever possible. It is noted that any new buildings will need to comply with the Energy Efficiency provisions listed in Section J of the Building Code of Australia. Demonstration of compliance with the BCA will be submitted as part of a comprehensive specification of building works in conjunction with Construction Certificate applications.

5.10 Stormwater & Flooding

Plans are currently in place to better manage stormwater flows on the site by segregating and reusing water where possible. Excess stormwater currently flows to MI's drainage system. A new stormwater catchment dam is being pursued separate to this project and a review of storm event designs will be provided in the EA.

5.11 Consultation

McWilliam's have developed and value a good relationship with their neighbours and local community. It is anticipated that ongoing consultation with neighbours will be incorporated into the approval process.

5.12 Hazards

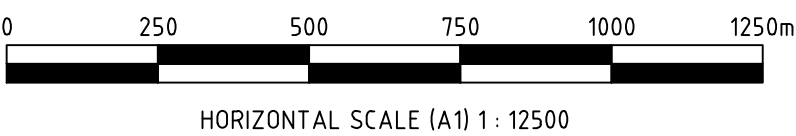
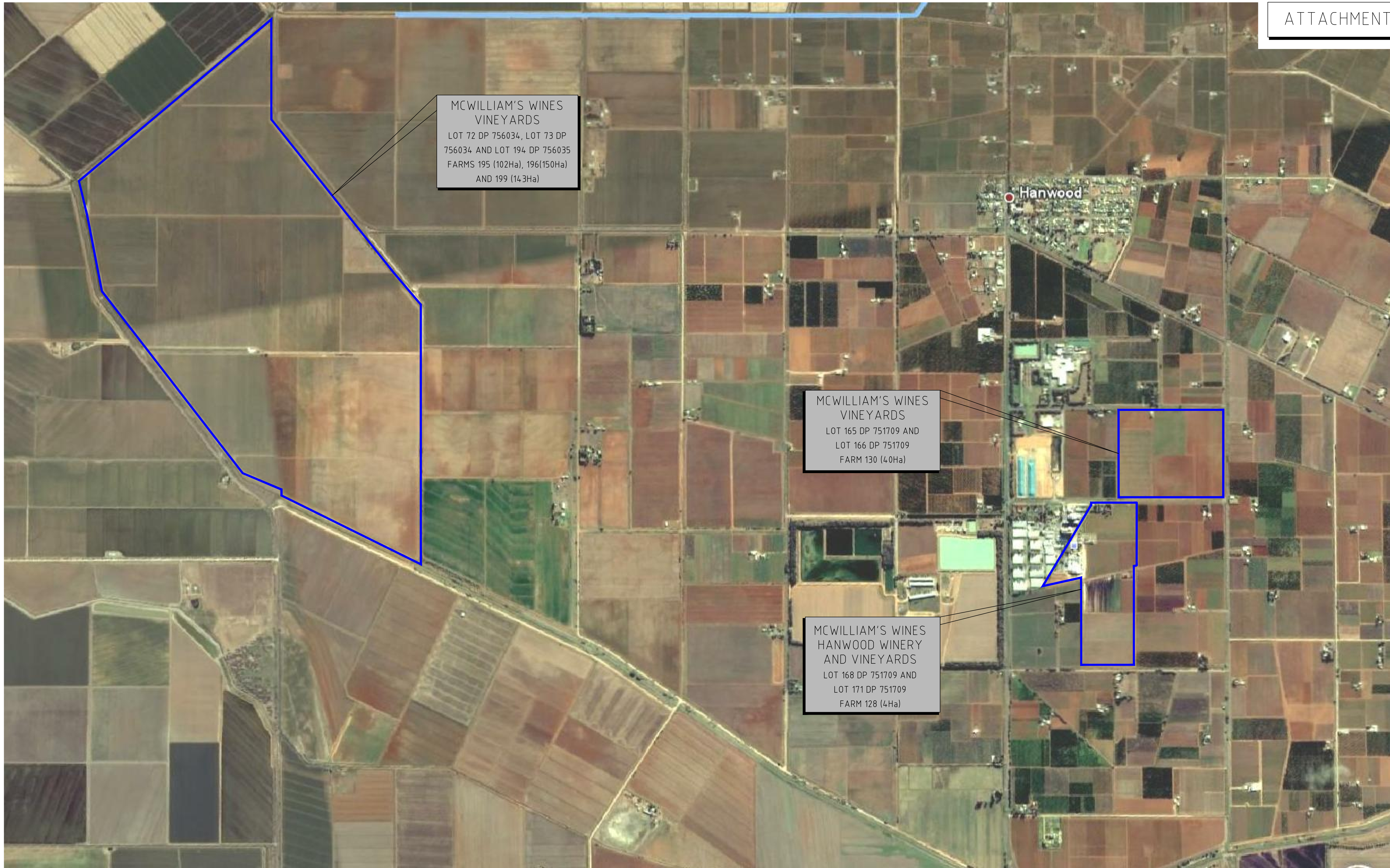
The proposed development is not expected to provide additional hazards to the surrounding community. New equipment and processes will be assessed against OH&S requirements and internal procedures adopted within current legislation.

6 SUMMARY OF KEY ISSUES

Following the assessment of the environmental impact of the proposal, we consider the key issues requiring particular attention in the EA to be:

1. Water and wastewater management, in particular the sustainable reuse of treated water
2. Air emissions and odour management from waste streams will be addressed through the design of adequate waste management facilities
3. Traffic Management from increased operations on the site, particularly packaging

McWilliam's request that the Director General of the NSW Department of Planning provide requirements for the Environmental Assessment of the proposal to expand winery operations to 65,000T that includes a packaging facility and Waste Water Treatment Plant.



C	ISSUED FOR INFORMATION	MJB	JL	17.07.09
B	PRELIMINARY ISSUE	MJB	JL	16.03.09
A	PRELIMINARY ISSUE	MJB	JL	11.03.09
Rev.	Drawing Issue	Drn	Ckd	Date

LINNEY

ENGINEERING SERVICES PTY LTD

FACILITY PLANNING & DESIGN

P. (08) 8343 8464 F. (08) 8343 8466

inquiries@linneyengineering.com.au

ABN 83 120 383 931

Client:



HANWOOD WINERY

Project:

ENVIRONMENTAL IMPACT STUDY

Title:

PLANNING
PROPOSED DEVELOPMENT
EXISTING MCWILLIAM'S WINERY
AND VINEYARD SITES

FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Designer:

J.LINNEY

Date:

FEB 2009

Sheet Size:

A1

Drawn By:

M.BOSSY

Date:

FEB 2009

Scale:

1 : 12500 (A1)

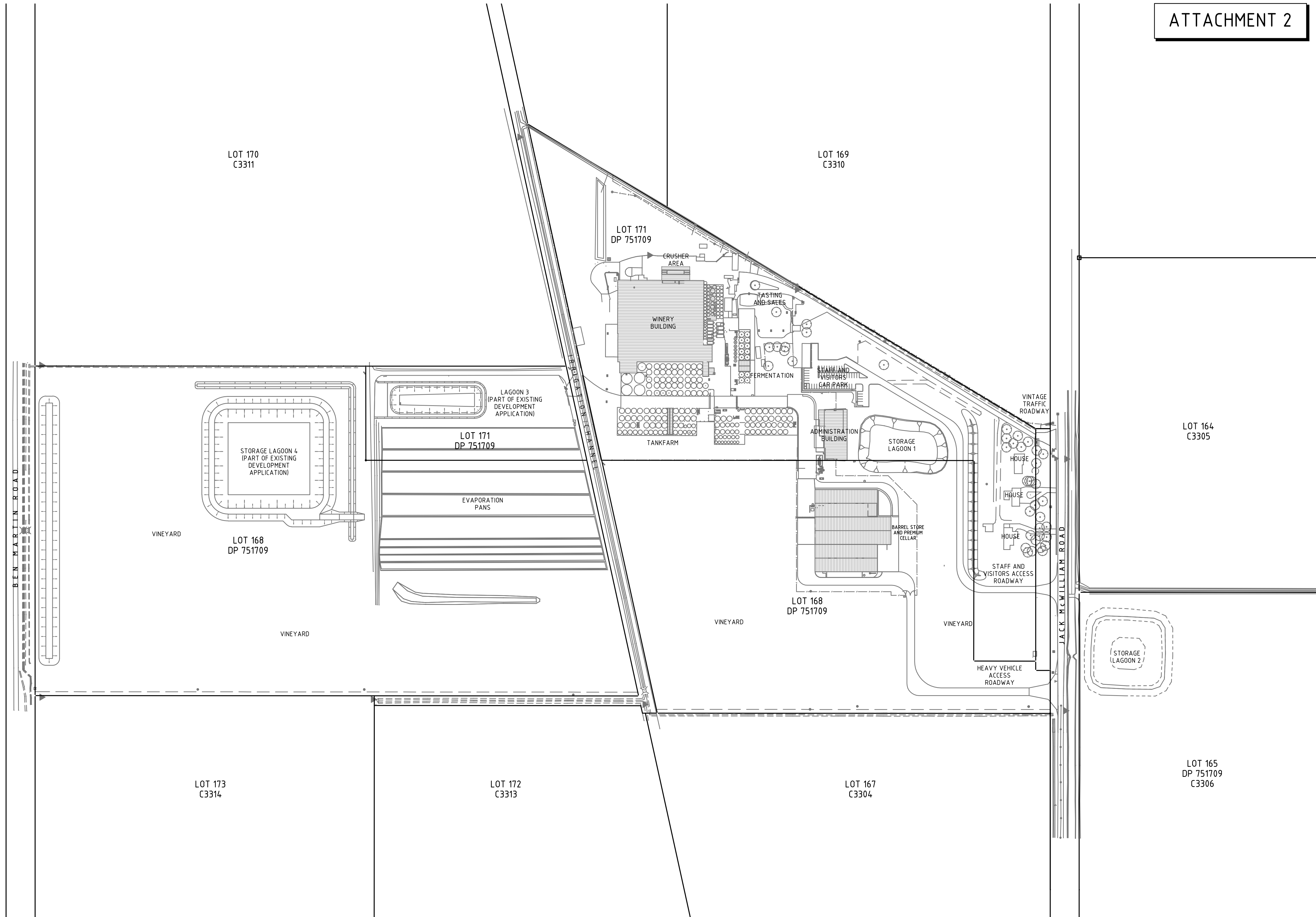
1 : 25000 (A3)

Drawing No:

0802-00-PL001

Rev:

C



FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Rev.		Drn	Ckd	Date
C	ISSUED FOR INFORMATION	MJB	JL	17.07.09
B	PRELIMINARY ISSUE	MJB	JL	15.06.09
A	PRELIMINARY ISSUE	MJB	JL	11.03.09

LINNEY

ENGINEERING SERVICES PTY LTD

FACILITY PLANNING & DESIGN

P. (08) 8343 8464 F. (08) 8343 8466

inquiries@linneyengineering.com.au

ABN 83 120 383 931

Client:

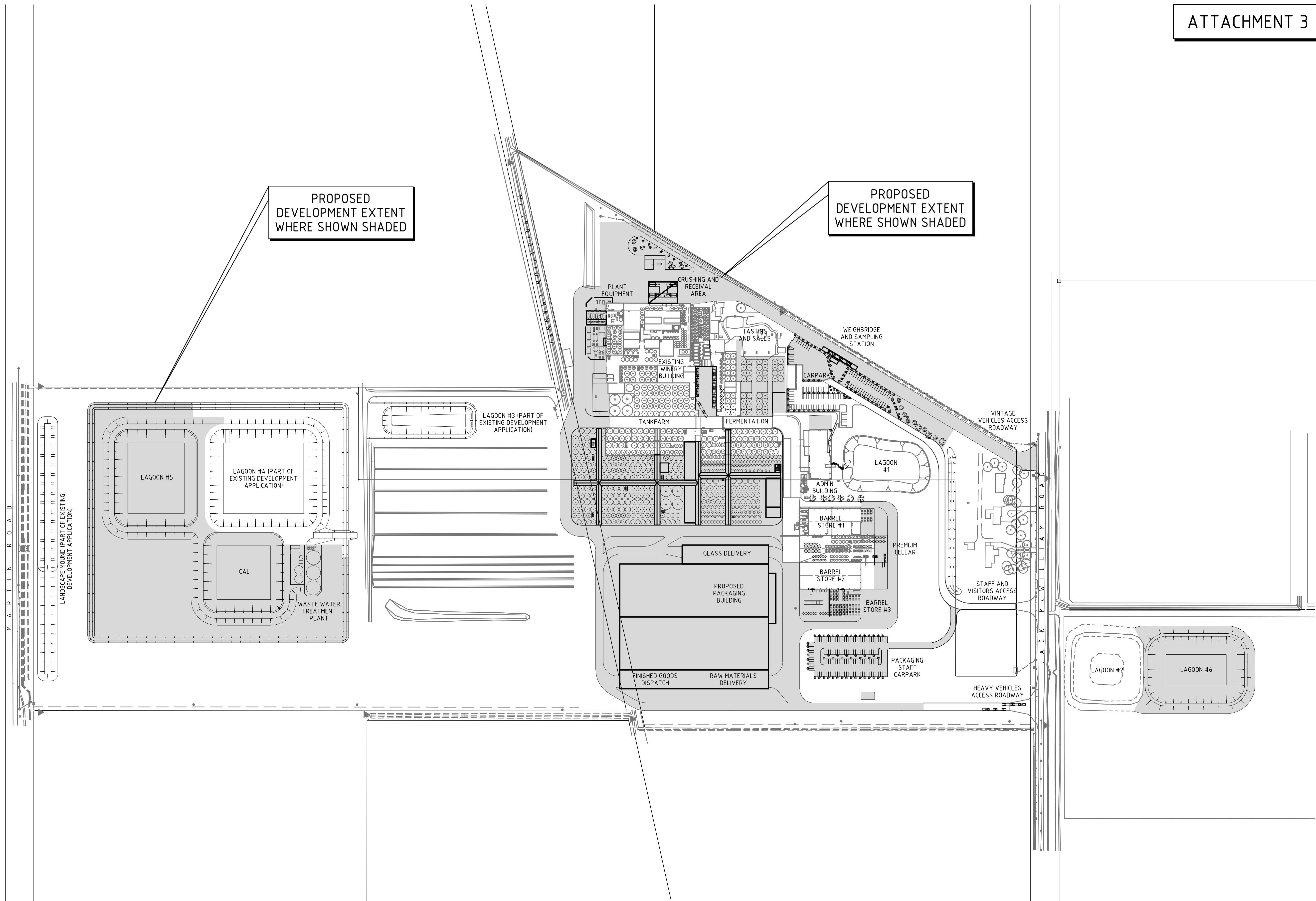


HANWOOD WINERY

Project:	ENVIRONMENTAL IMPACT STUDY
Title:	PLANNING PROPOSED DEVELOPMENT EXISTING SITE PLAN

Designer:	Date:
J.LINNEY	FEB 2009
Drawn By:	Date:
M.BOSSY	FEB 2009
Drawing No:	0802-05-PL002

Sheet Size:	A1
Scale:	1 : 1500 (A1) 1 : 3000 (A3)
Rev:	C



FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Rev.		Drn	Ckd	Date
D	ISSUED FOR INFORMATION	MJB	JL	31.07.09
C	ISSUED FOR INFORMATION	MJB	JL	17.07.09
B	PRELIMINARY ISSUE	MJB	JL	15.06.09
A	PRELIMINARY ISSUE	MJB	JL	11.03.09

LINNEY
ENGINEERING SERVICES PTY LTD
FACILITY PLANNING & DESIGN
P. (08) 8343 8464 F. (08) 8343 8466
inquiries@linneyengineering.com.au
ABN 83 120 383 931

Client:



HANWOOD WINERY

Project:

ENVIRONMENTAL IMPACT STUDY

Title:

PLANNING
PROPOSED DEVELOPMENT
SITE MASTER PLAN

Designer:

J.LINNEY

Date:

FEB 2009

Drawn By:

M.BOSSY

Date:

FEB 2009

Drawing No:

0802-05-PL003

Sheet Size:

A1

Scale:

1: 2000 (A1)

Rev:

D