



Tharbogang Quarry and Landfill Expansion

Response to Submissions – February 2010

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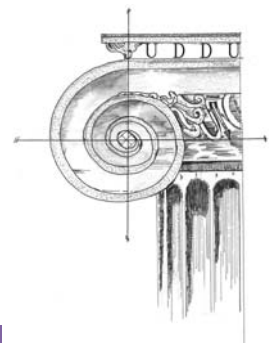


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1. Introduction

Griffith City Council has been working towards selecting and gaining approval for:

- an on-going solid waste disposal site (landfill) to serve the community, and for
- a suitable quarry for the supply of construction rock and gravel for the development industry and Council's needs.

After examining various potential sites around the area, Tharbogang was selected as the preferred site for a variety of reasons including lower environmental impact; volume of resource available; and lowest cost to the community.

In terms of Part 3A of the Environmental Planning and Assessment Act 1979, a comprehensive environmental assessment was completed for the proposal and placed on exhibition by the Department of Planning on 10 September 2009. The exhibition period closed on 9 October 2009 with some 15 submissions being received by that time.

Council arranged and held a community forum during the exhibition period and invited neighbours and the wider community to attend and express their concerns. Where possible, Council has responded to those concerns and that response is included in this submission as **Appendix A**.

Summary details of the submissions received both during and following the exhibition period is set out below in **Section 2**.

Clarification of the project description is provided in **Section 3**, while details of the issues raised and Council's response is set out in **Section 4** below.

2. Summary of Submissions Received

Table 1 below sets out summary details of submissions received and referred to Council for comment.

Table 1. Summary of Submissions

Submission No.	Name	Summary Details
1.	KG & P Williams	➤ Not previously contacted. ➤ Objects to use of land for offset purposes. ➤ Irrigation channel crosses land ➤ Narrow laneway not suitable for vegetation offset ➤ Would exacerbate noxious weeds infestation
2.	Heritage Branch – Department of	➤ Require full historic heritage assessment

Submission No.	Name	Summary Details
	Planning	
3.	ML & MF Brown (1 st submission)	➤ Requests an extension of time ➤ Offset land is their private land. Not interested in allowing it to be used for offset for the quarry and landfill
4.	Department of Employment, Climate Change and Water	➤ Able to support the project for Stage 1 – pits 101 and 103. ➤ Require various amendments to the Statement of Commitments ➤ Require comprehensive Aboriginal heritage assessment to be completed ➤ Providing draft conditions of consent
5.	NSW Office of Water	➤ Can support the proposal subject to inclusion of 3 recommended conditions of approval ➤ No consideration given to groundwater impacts to the west of the project site. Recommend a condition requiring monitoring bores to the west of the site ➤ If groundwater is encountered, a licence will be required under the Water Act 1912 ➤ On-going monitoring as outlined in the Statement of Commitments is critical to ongoing groundwater management. ➤ Proponent must prepare a Groundwater and Surface Water Management Plan in consultation with and to the satisfaction of the NSW Office of Water.
6.	Mr GD & Mrs Na; Mr RA & Mrs WM Amaro	➤ Their land is identified as offset but is privately owned land. ➤ No consultation regarding use of their land for offsets ➤ Will land be purchased compulsorily ➤ Rezoning of their land to Environmental Protection would be deleterious to the value of their land ➤ Looking to lodge an application to quarry on part of their land

Submission No.	Name	Summary Details
7.	John and Glenys Tarr	➤ There are rural buildings in the land at present and they hope to build a residence within the proposed offset zone ➤ Plan to use any offset value for their own carbon credits ➤ Contamination of surface and groundwater not adequately addressed for drinking water and for cereals, fruit and vegetables ➤ Gravel can be purchased from the private sector – no need for this quarry ➤ Landfill can be located in a number of areas and does not need to be here ➤ Previous waste tip has not been rehabilitated. Council's record not good? ➤ Land identified for offset is privately owned land and is already vegetated. Not suitable for extra trees ➤ Want to use for own carbon credits ➤ Council should talk to willing sellers – his land is available and would be a good location for offsets ➤ Proposal does not discuss the possibility of using landfill gas for green electricity as is common practice in other new landfill sites.
8.	Mr L Mancini	A submission of some 47 pages covering a wide variety of issues. ➤ Volumes and time frame for quarries ➤ DG's requirements not satisfied ➤ Need for the project ➤ Alternatives ➤ Public consultation ➤ Response to issues raised at forum in May 2008 ➤ Assessment of potential impacts biased ➤ Issues that GCC should address in response to

Submission No.	Name	Summary Details
		his submission
9.	Community Forum – 30 September 2009	➤ Impact of 'buffer zone' around development ➤ Inadequate notice of meeting given ➤ Offset strategy not discussed with land owners ➤ Possibility of compulsory acquisition or rezoning ➤ Request extension of period for lodging submissions ➤ Impact of recycling on expected life of landfill ➤ Quarry 'rights' and royalty payments ➤ Traffic impact statement only for 25 years
10.	Peter and Kelly Tyson	➤ Offset strategy does not maintain or improve biodiversity outcomes ➤ Offering sound advice and suggestions about the Offset Strategy, its determination and management over time. ➤ Concerned that their land was inspected without consent
11.	NSW Industry and Investment	➤ No concerns. The proposal would significantly extend the life of a regionally significant and strategically located source of construction material. ➤ Any approval should include a condition 'The operator is required to provide annual production data to Industry & Investment NSW – Mineral Resources as requested.'
12.	RTA	Raises no objection to the development provided some 5 suggested conditions of approval are included. These suggested conditions cover ➤ Preparation of a transport management plan ➤ Upgrading of the Auxiliary Right turn treatment at the intersection with Kidman Way ➤ The developer to be responsible for any

Submission No.	Name	Summary Details
		- service adjustments necessary ➤ The operator to maintain a log book of extraction quantities and traffic movements ➤ There being no cost to the RTA for works associated with the development
13.	Mr F Scarfone	Requests consent not be granted till the issue of dust impacts on citrus trees – pollination and general health – is addressed
14.	ML & MF Brown (2 nd submission)	Responding to minutes of Community Forum. ➤ Did not receive an invite to meeting held in May 2008 ➤ Time for response not sufficient ➤ Council failed to consult land owners in the offset areas ➤ Suggesting Council tried to avoid response from affected landowners to allow the project to go 'smoothly' ➤ Asking what Council's advice to the Minister would be to rezoning of (offset) lands ➤ Suggesting there is land for sale close to the quarry that would be suitable for offset. Council should consider this land first
15.	Land and Property Management Authority	➤ Who will manage the offset land after the development is completed? ➤ Is it proposed to acquire the land as Crown Land? This would allow security in perpetuity by way of appropriate reservation ➤ Some of the offset land is identified as Crown Land. LPMA does not support the use of Crown Land for development by external parties ➤ The authority is unable to commit Crown Land for offset for commercial development ➤ A monitoring program should be prepared to ensure no environmental effects on Tharbogang Swamp ➤ GCC to be responsible for any remediation required on surrounding Crown Land as a result

Submission No.	Name	Summary Details
		of the development ➤ EA suggests only shallow rooted plants allowed on rehabilitated landfill. How long will this be required? When will full rehabilitation with natural tree canopy be possible? ➤ Any approval should: - o Ensure adherence to the DECC requirements - o Access to Crown Land not constrained - o Consent or adherence to all statutory requirements - o Avoid any unnecessary disturbance to Crown Land - o Work should not cause or increase soil erosion - o Appropriate sediment and dust control measures are applied - o Work should not contribute to the spread of noxious plants - o GCC to be responsible for any remediation works required by the Crown

3. Proposed Changes to the Project

In response to feedback from the Department of Planning, prior to exhibition of the EA, Council outlined an amended project description as per the letter dated 21 August 2009. Council again want to reiterate their intention to request approval to extract material from pits 205 and 303 within about 20 to 25 years time. However, this application is for:

- a period of up to 25 years,
- an extraction rate of up to 315,000 tonnes per annum from pits 101 and 103 (no development on Lot 201), and for
- the development and operation of a landfill site within the existing quarry.

The existing landfill and quarry operation is described in Section 6.1 of the EA, while the proposed project is detailed in Sections 6.2 to 6.5 of the EA. Further detailed

information on the design and operation of the landfill and quarry is contained in Appendix J of the EA. For clarity, **Figure 1** shows the existing development on Lot 202 as well as the layout of all the project elements.

The omission of pits 205 and 303 from the project description does not have any influence on the remainder of the project, and therefore the project description remains substantively unaltered and the reader should merely ignore any reference to development on Lot 201. However a few omissions, corrections and amendments are highlighted below in order to ensure that the project description is correct.

3.1. Amendments to Existing Operations

There are no changes to Section 6.1- the description of the existing operations, other than the fact that the caretaker's cottage has been demolished.

3.2. Amendments to the Proposed Development Overview

The closure of the existing quarry does not require approval in terms of the Environmental and Planning Assessment Act. Closure will be undertaken as per the requirements of Section 76 of the Protection of the Environment Operations Act 1997. Nonetheless, an overview of the Stage 1 operations and proposed approach to closure is included in Section 6.2 of the EA in order to provide context to the proposed development.

The reserve in the existing quarry is almost depleted and therefore Pit 103 will be developed soon after the requisite approvals have been obtained, rather than during 2009 as stated in the text. Similarly, other text and figures such as Figure 6.6 with timeframes will need to be adjusted to reflect the delay in the project approvals program.

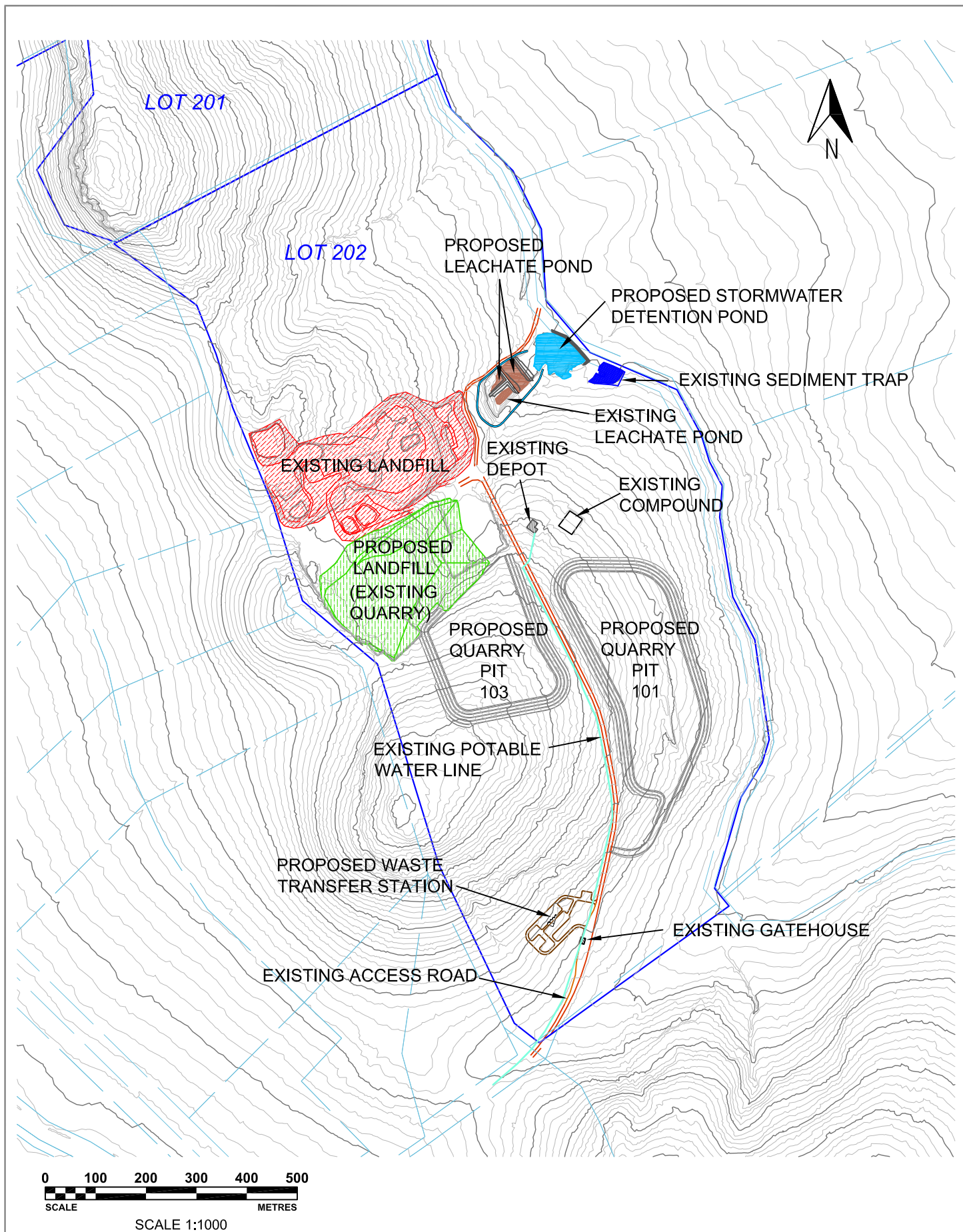
3.3. Amendments to the Proposed Development – Quarry

The terms Section 6.3, it is confirmed that the reserve in Pits 103 and 101 is over 6 million tonnes of material. It is proposed to increase production to meet the demand up to a maximum extraction rate of 315,000 tonnes per annum over a period of 25 years.

While the criteria that influenced the quarry pits remains, some such as the wedge-tailed eagles nest listed in Section 6.3.4 are only applicable to Lot 201, and therefore are not applicable to this application. The existing vehicle washdown area would be utilised and therefore a bunded concrete area and oil trap would not be required within each quarry footprint.

3.4. Amendments to the Proposed Development – Landfill

There are no changes to the landfill component of the project and therefore there are no amendments to Section 6.4 of the EA.



drawn	ML/GG	 coffey mining SPECIALISTS FROM BOARDROOM TO MINE FACE	client:	GRIFFITH CITY COUNCIL	
approved			project:	THARBOGANG QUARRY AND LANDFILL EXPANSION	
date	10/02/2010		title:	EXISTING AND PROPOSED DEVELOPMENT PLAN	
scale	AS SHOWN		project no:	MINENTWN00167AA	FIGURE 1
original size	A4				

3.5. Amendments to the Proposed Development – Water Management

There are no changes to the water management component of the project (other than the implications of the reduced volume of material extracted from the quarry which will reduce the water demand for dust suppression) and therefore there are no amendments to Section 6.5 of the EA.

4. Responses to Issues Raised in Submissions

Table 2 contains a list of issues raised, an indication of which respondents raised the issue and a detailed response. Where appropriate, the responses also refer readers to the suite of Appendices to this Response to Submissions where further information can be found.

Table 2. Response to Issues Raised in Submissions

Issue No.	Issue	Submissions														Response	
		DECCW	Heritage Branch	Industry & Investment	Land & Property Management	NSW Office of Water	Roads and Traffic Authority	Community Forum	Brown ML & MF (1 st submission)	Brown ML & MF (2 nd submission)	Mancini L	Na and Amaro	Tarr J & G	Tyson P & K	Williams KG & P	Scarfone F	
1	Lack of consultation – especially for vegetation Offset areas.							*	*	*	*	*			*		Consultation regarding the project has been quite extensive over the time the Environmental Assessment was undertaken as outlined in Section 4 of the EA. For the 2009 community meeting, Council issued notification to affected residents in two batches. The first batch was posted on 10 September to those within 2 kilometres of the quarry and landfill site boundary. The second batch was issued on 18 September to those within a band approximately 3.5 kilometres wide from the northern end of the quarry to the northern city boundary. The Department of Planning has confirmed that letters were posted to owners within 2 kilometres of the site on 3rd September 2009. Public notice was placed in the Area News paper on two Fridays prior to the date of the forum. As well as the above formal notifications, there were a number of articles in the Area News paper either confirming that the forum was scheduled or putting forward an expression of concern by private residents. Concern from landowners to the north of the proposed quarry and landfill arose as a result of the proposed vegetation offset strategy, rather than due to the project itself. At commencement of the various studies and for the early consultations, Council had not quantified the area of land that might be needed for vegetation offset. It was assumed that there would be sufficient land available from Council owned properties to meet this requirement. However, once the quanta of the offset became clearer, Council set about identifying suitable land along the McPherson's Range and its associated hills. This land was considered as one of the key principles of vegetation offsets is that like vegetation communities should be compensated with like vegetation communities. As the assessment of offset requirements developed and the impact of the offsets on the total Local Government Area (LGA) became apparent, Council recognised a need for an evaluation to be made of the entire LGA with a view to identifying the long term objectives for environmental enhancement in the LGA. It was recognised that, if the principles of the offset policy were applied to future developments, it would not be possible to identify and protect enough land to meet the requirements. Council therefore determined to develop and implement a City-Wide strategy for improvement to the ecological values and environment of the whole LGA. Council identified a need to improve the connection between the existing well vegetated components of the McPhersons Range and areas such as the Tabbita Hills. This would mean offset areas would be best located to the north of the proposed development site. Areas which might be considered as suitable were identified and mapped. The total area of such sites included in the table attached to the Offset Strategy set out in Appendix L of the EA is some 2,521 hectares¹. The EA does NOT identify land that WILL be used for vegetation offset. It identifies land that is potentially suitable for vegetation offset. Accordingly, landowners along the suggested northern extension of the vegetation corridor from the quarry site were invited to the September Community Forum. It is accepted that Council has not made it clear in the EA as to what its intentions are in relation to parts of that land that may be privately owned. This has led to some confusion and significant concerns for those land owners. A letter (Attached as Appendix A) was sent to the affected residents following the Community Forum of 30 September 2009 to better explain Council's intentions.

¹ Note that the offset area requirement has been reduced from the original 443.5 hectares to 182.5 hectares due to the revised project description and the associated omission of proposed quarries 205 and 303. Further details of the revised offset strategy are contained in **Appendix C** of this response to submissions document.

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																	In all other regards, Council believes its consultations have been more than adequate to allow the community to understand the project and its potential impacts.
2	Land owner's entitlement to utilise their land for carbon credits rather than allow use as vegetation offset for quarry							*	*			*	*		*		As explained in the Response to Item 1 above, the revised offset strategy (see Appendix C) requirement of 182.5 hectares can be fully met from land already owned by Council (i.e. Lots 202 and 201). Council reiterates that it cannot acquire or use private land for vegetation offsets without the full consent and agreement of the owners. Therefore landowners' rights to retain vegetation for their own offsets or for carbon credits will not be affected by this project.
3	Use of private land for vegetation offset							*	*	*		*	*		*		See Response to Item 2 above.
4	The 'Offset Strategy' component of the EA requires further development													*			Council agrees with this comment. The offset strategy as discussed in the EA is comprehensive as far as it goes, but it does not identify the land that would be used, how it would be used, what it would provide etc. The EA and Statement of Commitments (see Appendix E) confirm that Council proposes (as an obligatory condition of approval) to develop and implement a comprehensive strategy for the quarry and landfill offsets in conjunction with a city-wide environmental management and enhancement strategy. Council believes that Griffith is in a unique position as far as its environmental health is concerned and that the normal processes now being used for assessment and development of Offsets and environmental enhancement will not adequately address the Local Government Area's requirements. The paucity of remnant vegetation and the almost total clearing of flat arable lands needs to be addressed in a coordinated way and a Strategy developed that achieves real improvement in the ecological values of the area over a period of time. Council believes it is inadequate to consider any application for development in isolation and simply calculate offsets and identify suitable areas for that one development. Future generations will be far better served with a Strategy that takes a holistic view of the ecology and the environment and provides a well thought out plan that provides direction and certainty for the longer term. Further information is contained in Appendix C and Appendix E of this Response to Submissions.
5	Aboriginal Heritage.	*															Black Mountain Projects were commissioned to undertake a detailed heritage assessment. The full report is included as Appendix D of this Response to Submissions, while the salient points are summarised below. In the mid 1970's the surface of Lot 202 was cleared of vegetation and scraped for gravel. Accordingly the site is highly disturbed and unsuitable for the preservation of stone artefacts on the surface. A thorough site inspection revealed no Aboriginal heritage on the site, while the literature review recorded no registered sites situated within the boundaries of the study area. Reinspection of the scarred trees described in the previous report by the Griffith Local Aboriginal Land Council (GLALC) (Appendix G of the EA) was undertaken together with the GLALC. It was concluded that the scarred trees were in fact not Aboriginal scarred trees and further that no other Aboriginal scarred trees occur on the site. Aboriginal consultation was undertaken in accordance with Department of Environment and Conservation's Interim Consultation Requirements for Applicants (2004). Standard recommendations

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																	relating to actions that should be undertaken should any Aboriginal cultural material be found have been detailed and added to the Statement of Commitments (see Appendix E of this Response to Submissions). Council has also committed to standard recommendations relating to actions that should be undertaken should any historical relics be found during development of the site.
6	Recent historical heritage		*														Black Mountain Projects were commissioned to undertake a detailed heritage assessment. The full report is included as Appendix D of this Response to Submissions, while the salient points are summarised below. Lot 202 contains features that are examples of a quarry, landfill operation and speedway. These are considered to be fairly common structures. The site contains no heritage listings on any of the local, state or national statutory or non-statutory registers. Two trees blazed / scarred by a surveyor were identified and are considered to be of local heritage value. The trees are located on the north eastern boundary of Lot 202 and accordingly the proposed development will not affect either tree. Council have committed to preserving them, entering them into the local heritage data base and maintaining a 20 m radius development exclusion zone around each tree. The Bluedot Speedway was established in the early 1980's and its associated structures are not of heritage value, with the exception of the two Bluedot Speedway signs which are considered to have local heritage significance. Council has committed to carefully remove them prior to commencement of any development and handing them over to the car racing club for safekeeping, reuse, or for display at Griffith Pioneer Park Museum.
7	Possibility of compulsory acquisition of private land							*		*		*					The Environmental Assessment identifies the need for a vegetation offset strategy to compensate for the removal of some 37.6 hectares (reduced to 15.2 hectares under the revised project description) of 'remnant' native vegetation. The Environmental Assessment and Appendix L of the EA specifically suggests that there are a number of ways that offset lands could be provided including zoning, agreement with the owners, acquisition etc. Compulsory acquisition of private land has never been considered by Council, nor does the EA suggest it be considered. Acquisition of land for inclusion as offset could only be considered if the land was available on the open market or an agreement to purchase can be negotiated with the existing owners. Compulsory acquisition of land is not considered an option for this development. The Revised Offset Strategy contained in Appendix C reiterates Council's position.
8	Possible rezoning may be deleterious to land values							*		*		*					Rezoning of land is suggested in the EA as one way of identifying or protecting land required for offset. Due to changes being introduced by the Department of Planning, all Councils are required to prepare new Local Environmental Plans for their areas. These plans must follow the template developed by the Department. This will require changes to some of the existing zones. Griffith City Council is in the process of preparing a new LEP and it will most likely make some changes to the existing zones around the quarry and landfill site. Any zoning, or rezoning of land has a potential to increase or decrease the value of the land. The real value of the land must continue to relate more to the potential uses of that land than to changes in the zone name. The process of zoning land and preparing a new LEP is complex and follows a legislated path including exhibition and consultation. Such processes are not part of this development. The community will have opportunity to comment on or challenge any new LEP proposals at the appropriate

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																	time. Further information is contained in Appendix B of this Response to Submissions.
9	Alternative locations – must be better locations elsewhere for both Landfill and Quarry										*	*	*				Some of the landowners adjacent to Lot 202 and 201 have raised concerns that the consideration of alternative sites was biased towards Tharbogang. This matter received considerable attention in Chapters 1, 3 and in particular Chapter 8 and Appendix M of the EA. The revised project description limits the current application to a 25 year time horizon. This places expansion of the quarry operation into pits 205 and 303 on Lot 201 into the future. A new Application will be needed before that expansion can proceed. Nonetheless, Council's forward planning should consider both likely future demands beyond the 25 year term of this application and the potential impacts of satisfying those future demands. Council believes that the rationale and assessment of alternatives remains substantively valid for both the current application and possible future expansions. Council would be fiscally, socially and environmentally irresponsible if it did not consider future growth expectations but simply took the most convenient or easiest short term action. Those landowners directly affected by the residual impacts of proposed projects frequently claim that an alternative benign location exists. However, the facts of the matter are that the Tharbogang site currently supports Council's quarry and landfilling operations. The required infrastructure is in place, including the access road, weighbridge, water supply, electricity, monitoring bores and leachate pond. These works have been provided at considerable cost to the community and should not be discarded. The EA acknowledges that the existing operations have an impact, but also that the proposed expansion will entail better design and operational procedures such that the incremental impacts of the proposed quarries and landfill on Lot 202 will in most cases be lower and in some instances considerably lower than the current impacts. The residual impacts of the proposed development will comply with all statutory requirements and relevant guidelines and standards. Undertaking further investigations of alternative sites will not achieve any overall improvement in engineering, social, ecological or economic outcomes.
10	Groundwater impacts to west of the McPhersons Range					*											The quarry pits will all be located to the east of the ridge of the range and the landfill will be located within the existing quarry void (which is on the eastern side of the ridge). Geological strata under the site generally show a fall to the north east and would thus flow of runoff or infiltration transferring to the west of the range is considered unlikely. Nonetheless, Council have committed to establishing two monitoring bores to the west of the range. Further information is contained in Appendix H.
11	Possible constraints on building within identified offset areas											*					The selection of land for a vegetation offset does not affect the zoning of the land. Building is controlled by the Local Environmental Plan (LEP) and Development Control Plan (DCP). This application does not propose any rezonings as a direct component of approval. It does recognise that subsequent negotiations, agreements etc in relation to the selection of offset lands could include some restrictions on those lands, but only as part of an agreement with the land owner. Future rezonings under the Department's new template may recognise land classed as 'offset' or of ecological significance and may apply restrictions accordingly. This is a matter beyond the gambit of this development.

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																	Further information is contained in Appendix B and Appendix G .
12	Extension of quarry will bring other land within the 'Buffer Zone' around the quarry and apply constraints to future development in those areas							*									The current LEP requires that any development proposal within a specified distance of either a Quarry or Landfill not be approved by Council unless it (Council) is satisfied that measures can be taken to manage odour or noise from the quarry or landfill. This restraint requires assessment on a case by case level. For example, although this quarry is frequently referred to as a 'hard rock quarry' it is NOT 'hard rock' material. The distance for consideration in this case is 300 metres (material other than hard rock, with blasting). 'Hard rock' is normally applied to rock that is suitable for use as aggregate for concrete or road sealing work. Sandstone or conglomerate are not usually consider to be 'hard' enough for these purposes. Hard rock must maintain its strength over a reasonable life period and should not fret away or break down. Likewise, the landfill will NOT be within 500 metres of any residential zone and thus the distance for consideration will be 250 metres for the landfill. Further information is contained in Appendix B.
13	Contamination of groundwater may affect its use for domestic and crop use											*	*				Groundwater in the vicinity of the site and more broadly is not generally used for domestic or crop purposes because of its high salinity levels. The proposed development is unlikely to alter this status. Nonetheless, the landfill has been designed to minimise any risk to groundwater. These measures include a series of fully lined cells with impermeable membranes, stormwater management and leachate management. Further details of the landfill cell designs are contained in Section 6.4 of the EA and Annexure J of the EA. Construction, management and monitoring of the development are all designed to ensure that should any breach of protective membranes occur, it will detected rapidly and corrective action implemented immediately. Council considers it unlikely that any contamination of groundwater from the development could occur. Further information is contained in Appendix H of this Response to Submissions.
14	Gravel can be purchased from other sites thus avoiding the need for this development											*	*				Other sites within the Griffith area have been evaluated. While several locations could provide material of similar quality, there would be a significant cost burden in terms of both environmental impacts and dollar impacts. For example, the area of remnant vegetation removed could be more than doubled and the cost per cubic metre of extracted material could be doubled or more. A site outside of the Griffith Local Government Area carry a similar cost burden. Council believes the Tharbogang site is preferable to other sites it has been able to identify.
15	Council does not have a good record for rehabilitation of sites. Will it be any better for this site?											*					Council accepts that failure to meet licence requirements for the operation of this site may result in prosecution. Council proposes that both components of the operation be established in strict compliance with any conditions of approval or any licence conditions. It would not expect otherwise.
16	Landfill gas could be used to generate												*				While this is a reasonable suggestion, the cost of setting the operation up to collect landfill gas is quite expensive. Given the small size of the landfill operation and the small volume of landfill gas that could be

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	electricity																generated, the cost of establishment to use gas would far exceed any potential benefit. This option should be reconsidered if Council wishes to continue landfill after the limits of approval that may apply to this application – 25 years or more.
17	Will improved recycling affect the life span of the Landfill site							*									Yes. This has been considered in assessing the volumes of waste. Data for the local collection is still quite limited and an accurate appraisal of the reduction cannot be completed until the recycling systems are established and monitored. The landfill will only utilise the void left by the existing quarry. Reduction in volume will have little impact on the potential life of landfill disposal at this site. Appendix J of the EA contains data on the effect of recycling on the lifespan of the landfill.
18	Possible adverse impacts of dust on crops											*				*	Dust generation from the existing operation has been monitored and generally falls within acceptable parameters. The proposed operation includes measures to minimise and manage dust from the site. Council believes current and future measures to manage dust generation from the site will be more than adequate to prevent any damage to crops in the area.
19	On-going management of offset lands – should it be acquired by the Crown?				*									*			Council believes long term management of lands set aside for offset or other revegetation purposes is an issue yet to be resolved at the State and Federal levels. Council would have no concerns about transferring such lands to the crown so long as the crown accepted the responsibility for long term maintenance. This does not appear probable. Council proposes that a city-wide environmental enhancement strategy be developed and funded from royalties to acquire, maintain and manage such land. This was included in the Statement of Commitments in the EA (see Appendix E).
20	Land and Property Management Authority does not support use of Crown Land by external parties or commercial developments				*												As Council sees it, it matters little whether the Land and Property Management Authority supports the offset proposals or not. Any land that is improved with native vegetation and is so maintained, will become 'offsets' regardless of ownership, control or anything else. To say otherwise is to deny the intent of the legislation. Both state and federal governments are acting totally without justification in this regard. Justification is required for their stance.
21	Need for Tharbogang Swamp monitoring program				*	*											Council accepts that monitoring of groundwater and surface water associated with the Tharbogang Swamps should form part of the Statement of Commitments and any conditions of approval for the development.
22	Restrictions on use of deep rooted plants on landfill rehabilitation will restrict establishment of natural tree canopy. Can a time limit be placed on this constraint?				*												Rather than set a time limit in terms of years from capping, Council feels it would be more realistic to base the cessation of restrictions on monitoring of the rate of decomposition of the landfill material. Deep rooted plants can then be added at an appropriate time. It should be noted that many trees and large shrubs do not establish a deep root but rather spread roots out close to the surface. Revegetation should include some of these species at an early stage
23	Roads and intersections may require upgrading over the life of the project						*										Council agrees that a Transport Management Plan should be a requirement of any Approval granted and should clearly specify what works may be required and the stage (traffic volume level or similar) at which such work is to be undertaken.

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24	Period of approval (if granted) and what happens after? EA indicates 50 years life.										*						It is anticipated that any approval that may be granted will be restricted to a period of 25 years. Should Council wish to continue extraction or landfill after that time, a new Environmental Assessment should be completed and a new approval sought. At whatever stage the operation finally ceases, progressive rehabilitation should be well advanced and proposals (including finance) to complete the rehabilitation should be in place. Council is committed to this requirement, including on-going funding through its environmental enhancement strategy.
25	Approval would prevent future rezoning and/or development of adjoining lands for residential or rural residential purposes							*			*						Please refer to the Responses to Issues 8, 11 and 12 above
26	Seepage from the 'animal pit' has contaminated land to the east in the past. Was this monitored?										*						It is understood that the instance referred to occurred some 10 years ago following a major bird kill associated with a bird disease outbreak. Following that occurrence, Council undertook studies of the landfill and animal pit components of the development and constructed modifications to the site – including a cut-off barrier below the animal pit and installation of an impermeable membrane under the landfill area and installation of a lined leachate dam. No problems have been recorded since that time.
27	Has the existing 'Complaints Register' been correctly used and maintained? It seems to have missed a number of concerns and events.										*						Griffith City Council operates a corporate Customer Request Management System (CRMS) designed to make the processing of customer enquiries, requests and complaints as efficient and transparent as possible. The system records the number and the type of customer communications received, tracks all action and responses and automatically escalates any items left un-actioned within agreed service standards to ensure that they are not dismissed. The system provides statistical data for management on the rate of customer communication, their relevant department and response times. This system is used within Council for all customer communications regardless of the nature of the complaint, or the format (telephone, email, fax, letter, etc) in which they are received. This process is commenced by a member of the public contacting council and the council officer registers this query/complaint by selecting one of the many categories the CRMS provides. Each category has an actioning officer which the query/complaint is sent to, and the actioning officer has a set time frame within which the query/complaint has to be dealt with. If the query/complaint isn't dealt with by the action officer within the allotted time frame, the CRMS automatically escalates the issue. An Escalated CRMS is sent to the actioning officer's supervisor/manager, where after the action officer is questioned why the query/complaint hasn't been actioned. All these steps are tracked so if needed the following information on the CRMS can be audited: - Time - Day - Actioning officer. Other than the "complaints" raised (and responded to) as part of the EA process, no complaints relating to the existing landfill and quarry operations have been recorded in the CRMS.
28	Adjoining land has been contaminated by 'poison' drums and plastic bags blown from the existing operation.										*						Council acknowledges that plastic material has been blown into the adjoining property. Council are prepared to pick up this material on a regular basis and have contacted Mr Mancini in this regard. While wind borne matter is difficult to contain, closure of the existing landfill and operation of the new landfill will decrease the risk. The introduction of a Transfer Station at the entrance to the new waste depot will

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																	further reduce the opportunity for escape of wind blown plastic and prevent access to the exposed tip face by domestic cars and trailers. Only triple washed drums are accepted at the landfill and therefore the risk of contamination is regarded as very small. The revised stormwater management measures will minimise the risk of solid or liquids leaving Lot 202.
29	Groundwater test results indicate high levels of lead and cadmium. Suggest these are from landfill contamination										*						Water samples are taken from the monitoring bores twice a year and analysed at a NATA accredited laboratory. Monitoring samples collected since the leachate control works were installed have not repeated these higher levels. This information is included in the annual reporting to the DECCW as part of the Protection of the Environment Operations Act licence requirements.
30	Council has already exceeded its licence conditions re extraction volumes from the quarry. The same probably applies to blasting.										*						Blasting is regularly monitored and the results included in the annual report to DECCW.
31	There is no need for an expanded quarry if private sales are restricted.										*						Whether the extracted material is to be used directly on Council works or on private works is somewhat academic. It is the total cost to the community that drives the need for any resource. It would not seem reasonable to Council to supply gravel and construction material to itself and then require the rest of the community to import material from outside the Local Government Area at twice the cost per cubic metre. Council believes it has a responsibility to serve its total community as best it and economically as it can.
32	The EA does not identify how much material remains in the existing quarry. This is necessary to demonstrate the need for the expansion										*						This is obviously a 'moving target'. The longer any approval of this development is delayed, the smaller the amount of material remaining. The excavation area has already been extended to its reasonable limits. The floor level of the quarry has been reached and is extending rapidly across the pit area. The volume of material remaining will depend on the batter slopes used for the finished excavation. At present, vertical walls are being left around the limits of the excavation. The final finished and rehabilitated profile is for a stepped perimeter bank with 5 metres drops and 5 metre benches. The volume of usable material remaining is estimated at about 115,000 tonnes at the time of drafting this response.
33	The EA does not specify the amount of the royalty to be charged. It does not establish that Council will be able to 'afford' the offset strategy.							*			*						The royalty charge is to be applied to both the volume of gravel removed from the site and the volume of waste delivered to the site. The royalty will be calculated to cover costs associated with the operation including all the requirements of any conditions of approval and rehabilitation of the site on a progressive basis. Council accepts that the royalty is a budgetary cost for the operation.
34	Council 'stands to make millions of dollars in royalties ...'							*			*						Council is not a profit making enterprise. The project will be designed and structured to ensure there is no unacceptable cost burden placed on the local community or rate payers. This is particularly relevant for rehabilitation and the implementation

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																	of the offset strategy.
35	Council says Tharbogang is only 'approved' quarry operating but says there are other quarries. What capacity do those quarries have?										*						Council has not stated that there are no other 'approved quarries' nor has it ever intended to indicate this. There are a number of smaller quarries within the city area that currently hold an approval. Some, such as Wambulgal and Tysons, have been addressed in the EA (see Section 8.2 of the EA). Likewise there are a number of small quarries that do not hold an approval, yet are operated on private land from time to time. Extraction limits for most recorded and approved quarries were set when approval was granted under SEPP 37 some years ago. The estimated resource available in some of these quarries is discussed in the EA. For example, the combined potential yield of Tysons and Wambulgal is less than that from Tharbogang.
36	There is an approved quarry at Warburn with approval to extract 30,000 tonnes per annum. Why cannot that site be used?										*						The Warburn quarry is owned and operated privately and produces crushed aggregate from basalt rock. It is located on a very small basaltic intrusion and is used exclusively for concrete and bitumen sealing aggregates. Material from this quarry is not normally used for road base because of its higher value as aggregate. This is the only sustained source of aggregate within the Griffith area.
37	Biased assessment of optional sites										*						The assessment parameters used for the comparison of optional sites are clearly set out in Section 8.2 of the EA. Council does not believe the assessment was biased.
38	Visual impact will be much greater than indicated							*			*						A suite of view shed diagrams as well as views from key locations have been prepared for the development. This is included and discussed in Appendix G. It is relevant to note that the development site will be generally more than 4 kilometres distant from the nearest component of the development. Given the generally flat nature of land in the vicinity, even small trees of 3 metres elevation provide significant screening effect.
39	Noise and vibration assessment does not consider rural residential land to the south east of the site.										*						A small 'peninsular' of land that is currently zoned 7(c) Environmental Protection (Rural Living) lies within 500 metres of proposed quarry pit 101. This peninsular is approx 12 hectares in area and represents approximately 6% to 6.5% of the total zoned area. This land includes lots 179, 180 and 192 of DP 756035. A Development Application has been received and is being assessed for the creation of some 78 lots on existing lot 179. The nearest lot will be about 1,300 metres from Quarry pit 101. There is a natural ridge on existing lot 180 and between the proposed quarry and the proposed rural living lots that will provide some protection. Given the distance from any noise source and the existence of a ridge between the two points, Council does not believe that noise will be an issue for this development. For future development on existing lot 180, some consideration would need to be given to the effects of noise, at least during the life of quarry pit 101.

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																	Further information is contained in Appendix F .
40	Flora and fauna of Optional sites – probably not compared to lot 201. Should be re-done										*						Council believes that flora and fauna has been well considered and assessed for both the proposed development and the optional sites.
41	The majority of road works will be on the eastern side of the city and closer to Wambulgal.										*						This statement is based on selective data for 1 year only. In fact the Griffith CBD is quite centrally located within the total local Government area. Distances from CBD to Local Government Area boundaries vary from a low of 22 kilometres to the north east to 30 kilometres to the south. The objector has made reference to 4 road projects and states that 3 of the 4 projects are closer to Wambulgal than to Tharbogang. However, of these, only the Bealbangera project was a shorter haulage distance from Wambulgal. Further, there were other projects completed in the same year that were also closer to Tharbogang and involved expenditure of \$865,000. Thus, from a total expenditure of \$2,666,000, only \$341,000 or 13% would have achieved haulage savings from Wambulgal pit. To compare the 'catchment' of Wambulgal, Tysons and Tharbogang quarries, an arc/ circle was drawn around each site at a distance of 20 kilometres from the respective quarry sites. The area or proportion of the Local Government Area within that radial distance was calculated as follows: ➤ Tharbogang 104,747 Hectares = 65.9% ➤ Wambulgal 54,892 Hectares = 34.5% ➤ Tysons 60,874 Hectares = 38.3% It should be noted that haulage routes are rarely, if ever, direct. Heavy vehicles are not desirable on minor local roads and can cause considerable damage if a road is not constructed to carry heavy vehicles.
42	Groundwater study appears to assume that the landfill will move if the quarry moves to another location. It is most likely that the landfill would remain at Tharbogang site										*						The Groundwater study states that the groundwater impacts would most likely be similar at all sites (both quarry and landfill). This is a logical statement and remains sound. As the objector states, Council would need to reconsider the landfill component if the quarry was not approved and it is possible (even probable) that the landfill would remain at the Tharbogang site. If this were the case, the groundwater study – concentrating on the Tharbogang site would be equally valid for the landfill on that site, not less valid. Further information is contained in Appendix H of this Response to Submissions.
43	The proposed quarry 'will slice the top off the ridge which heavily influences local weather events.'										*						A totally unsubstantiated statement that is not true. The quarry will remain below the ridge line at all times. No part of the proposed excavation will cross the ridge line for the entire life of the project. See Section 7.12 of the EA and Appendix G of this Response to Submissions.
44	'We would say that both Wambulgal and Tysons pits are both modified areas, and that Lot 201 is an unmodified, natural, existing remnant vegetated area that does not fit this criteria.										*						The objector has repeatedly suggested that Lot 201 is 'unmodified'. This is NOT correct. The same prior usage occurred at Tysons, Wambulgal and Tharbogang sites – surficial gravel was removed and substantial clearing carried out on all sites. The majority of vegetation on all three sites is recent regrowth (within the last 20 years or so). The EA makes this abundantly clear

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																	as do the flora and fauna studies. The amended project description of only relates to development on Lot 202 and therefore this is a mute point.
45	Why were individual land owner's names removed from the final EA when they were included in the draft document										*						Following the objector's demands and the instruction from the Ombudsman, Council released a DRAFT copy of the EA as it was at that time. This release was made against Council's better judgement and on the assumption that the recipient, being involved in the legal profession, would treat a draft document with some respect. The individual names of landowners were removed from the final EA in order to protect the privacy rights of those landowners. Council considers their subsequent publication on the web and elsewhere by the objector as irresponsible behaviour.
46	'In my view every document that enables the EA to be peer review(ed) should be enclosed with the EA'										*						It would be impractical to include or attach every document accessed during the development of an Environmental Assessment. All documents that have been used or referred to in the EA have been referenced either in the EA or the Appendices. This is normal practice.
47	Extension of the quarry into Lot 201 will increase the area of land covered by a 'buffer' around the site and severely affect the development potential of 'my' land.										*						Should approval be granted to extend into lot 201 – either in whole or in part, there would be a corresponding increase in the area of land affected by the 'buffer'. The current application is for proposed quarry pits 101 and 103. It does not include pits 205 and 303. These are possible future pits should Council choose to seek further approval at some future date – probably in 20 or so year's time. Pits 101 and 103 are wholly contained within lot 202. As such, the current approval would NOT increase the buffer area around the quarry. It should be noted that a buffer area is NOT a prohibition of development but requires Council to consider the issues and make sure that there will not be an unacceptable conflict between the two developments and that adequate measures are incorporated to protect both developments.
48	'Our property ... is next in line to be developed along the McPhersons Range ridge line that proves to be the most popular and desirable location for residential housing.'										*						Council has not and does not consider the 'ridge line' a suitable location for residential housing. There a number of sections along the eastern and northern fall of McPherson's Range that Council's LEP identifies for large lot residential purposes, generally with some form of environmental protection. These are generally above about 125 metres elevation and below 135 metres elevation. This elevation envelope protects the integrity of the ridge line while affording reasonable views across the Wyangan depression. Almost the entire area of land owned by the objector falls below this envelope. The entire component of the land lies between the foot of the range and Tharbogang Swamp. This land has been identified as being of significant environmental value. Council has not agreed to rezone this land for residential or large lot residential development and does not anticipate doing so in the foreseeable future.
49	The disused pits may hold water and be a										*						The EA makes it clear that completed pits will be rehabilitated progressively. It also stipulates that each

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	danger to kids etc.																completed pit must be free-draining so water does not pond in the void.
50	A list of some 37 matters the objector considers should be addressed in this response										*						Many of these matters are addressed throughout this report: others are beyond the scope of this report: others are clearly impractical or inappropriate; while others relate to the objector's personal interests. Where ever considered appropriate, council has responded.
51	Dust generation from the expanded project has not been evaluated – only from the existing operations.										*					*	The dust report establishes existing conditions at the site and specifies NSW EPA guideline levels for 'background' and 'maximum increase' in dust deposition rates. The report finds that the current operations fall below the EPA goal of 4 g/m²/month. It is worth noting that sample point TA4 is located to the south west of the quarry and within a citrus orchard, yet it records the highest dust level of all by a factor of more than 140%. No explanation is given for this dramatic increase, but given the prevailing wind conditions, it may be indicative of dust generation levels associated with normal citrus orchard operations. DECCW ² have confirmed that they are happy with the dust assessment undertaken as part of the EA, but that they require a Dust Monitoring Plan to be developed and implemented. Council have committed to these measures which will include a raft of dust mitigation measures.
52	Groundwater data does not clearly establish direction of flow or possible contamination impacts on nearby users.										*						Groundwater that may be impacted by this activity is recognised as generally unsuitable for home and domestic stock uses. Please refer to the Response to Issue 26. The proposed landfill has been designed to minimise any risk to ground or surface water. Council accepts that strict controls will apply to the operation of the proposed landfill and will require the installation of leachate control systems and regular monitoring of downstream groundwater quality. Further information is contained in Appendix H.
53	There is no Section 5A Assessment of Significance in the flora and fauna sections and appendices										*						The EA is prepared under the provisions of Part 3A of the EPA Act 1979. This over-rides the requirements of Part 4. The EA has addressed flora and fauna issues in detail – particularly for lot 202 which is the land affected by this application. The lengthy duration of investigations for this project and the completion of a number of flora and fauna studies has provided a better-than-usual view of these issues. Changes and variations with time are rarely identified in such studies.
54	The definition of 'OFFSET' is a new planting.									*							The POEO Act 1997 defines a 'green offset' as follows: 1) A green offset scheme is a scheme established for any or all of the following purposes: (a) to carry out a specified program for the restoration or enhancement of the environment that is related to a licensed activity, (b) to prevent, control, abate, mitigate or otherwise offset any harm to the environment arising (wholly or partly) from any licensed activity, (c) to make good any environmental damage arising (wholly or partly) from a licensed activity.

² Email from Jason Price dated 2 February 2010.

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																	The Native Vegetation Regulation 2005 defines 'Offset' as: offset means any natural resource management action or work required by a PVP for the purpose of ensuring that broadscale clearing proposed by the PVP improves or maintains environmental outcomes.

The following table lists the issues raised by the Department of Planning in their letter of 15 December 2009 that require clarification or additional information. Where the issue is dealt with elsewhere in this submission, a reference to the applicable section is provided. Alternatively, responses are provided in **Table 3** below.

Table 3. Department of Planning – Further Assessment Issues

Issue No.	Issue	Response
1.	Project Description	
1.1	Be specific regarding the project scope and provide greater clarity about the nature and location of project elements for the 25 year project life	A detailed description of the revised project based on a 25 year time horizon is provided in Section 3 of this Response to Submissions.
1.2	The EA must ensure that each environmental issue is clearly presented and assessed accordingly for the 25 year project.	Due to the structure of the EA and the fact that the revised proposal only affects Lot 202, it is possible to ascertain the impacts of the 25 year project merely by ignoring the impacts relating to pits 205 and 303. The flora and fauna impacts have been described separately for Lot 202 and the vegetation impacts have been calculated for the revised project description as described in Appendix C. The noise and vibration study (see Appendix F) has been totally revised to accurately reflect the revised project description. An entirely new detailed heritage study covering both Aboriginal and historical heritage has been compiled and is included in Appendix D. The visual impact has been reduced due to the omission of pits 205 and 303, and further information has been provided as described in Appendix G. Groundwater, surface water, soil, air quality, traffic, socio-economic, incident and complaints and cumulative impacts remain essentially unchanged, although the Statement of Commitments (Appendix E) has been updated where required.
1.3	Include a summary table and plans clearly comparing the approved and proposed project detailed for a 25 year period only.	Landfill: The existing landfill operation was approved in 1984 to landfill the natural depression in the central section of Lot 202. Subsequent Protection of the Environment Operations Act licenses and amendments have governed the operations (see Appendix I of the EA). The next 5 yearly renewal of the license is due on 26 September 2013. While the landfill is operating well within the licence conditions in terms of waste types and volumes, and is complying fill the other conditions, the proposed project is required to facilitate a desirable final landform, The proposed landfill will be located within the existing quarry and will be developed as described in Section 3 of this response to submissions report. The layout of the existing and proposed landfills are shown in Figures 6.1, 6.6, 6.12 of the EA, while Figure 3 and 4 in Appendix J of the EA shows the proposed final profiles of the existing and proposed landfills. Quarry: Quarrying commenced in 1991 and is subject to the same Environment Operations Act licence and amendments as the exiting landfill. As documented in the EA, extraction is limited to 50,000 tonnes per annum. The existing quarry reserve is nearing depletion and hence the need to establish new quarries. The two new quarries are detailed in Section 3 of this Response to Submissions Report. The layout of quarries 101 and 103 is shown in Figures 6.5, 6.6 , 6.15 and 6.16 of the EA.
2.	Air Quality	
2.1	DECCW agrees that the air quality assessment is not sufficient and that potential impacts on neighbouring properties should be clarified.	The results of the dust monitoring undertaken by Coffey in 2007 indicated that the actual impacts of the quarry and landfill were within the NSW EPA Air Quality Guidelines of 4 g/m ² /month. It was therefore concluded that it was not necessary to conduct dispersion modelling. This approach was accepted by DECCW in their letter to the Department of Planning dated 9 October 2009.

Issue No.	Issue	Response
		Council acknowledges that operation of the quarry and landfill generate dust that and therefore is committed to implement a suite of measures to limit dust generation. DECCW supported these measures, but requested additionally that: - water sprayers must be used on the crusher whenever it is operating, - when the 10 minute average wind speed measured at the quarry exceeds 30km/hr from the north-east quadrant (between 0 degrees and 90 degrees) operation of the quarry must cease - when the average wind speed measured at the quarry in any direction exceeds 35km/hr (10 minute average), then all construction and operation of the quarry shall cease. - a Dust Monitoring Plan be developed and submitted to DECCW and the approved plan must be implemented prior to the new quarrying operations. Council has agreed to continuous water sprayers on the crusher, but has suggested that only high dust generating activities are ceased during periods of high wind. These will be described in detail in the Dust Monitoring Plan – see revised Statement of Commitments (Appendix E).
2.2	Consideration of all dust sources (eg landfilling, quarrying and traffic on unsealed roads) and potential impacts on surrounding sensitive receivers	The generation of dust is not constant but is influenced by weather conditions and the particular activities being undertaken. However, by undertaking dust monitoring over a month at the existing landfill and quarry, the dust study has considered all sources of dust. DECCW has confirmed that the dust study was undertaken in accordance with their guidelines. The impacts of dust on surrounding sensitive receivers has been considered and shown to comply with the requisite EPA guideline.
2.3	Consider any approved residential estates or subdivisions in close proximity to the site	The situation with residential estates or subdivisions is described in Section 3.7 of this Response to Submissions document. These will be taken into account in the formulation of the dust monitoring programme.
2.4	Suggest consultation with DECCW prior to undertaking any further dust assessment.	Consultation with Jason Price of DECCW on 1 and 2 February 2010 (as summarised in the email of 2 February 2010) confirmed that no further dust monitoring or modelling is required. However, a Dust Management Plan must be provided to DECCW prior to any expansion works, and this plan must include an adaptive dust monitoring program which includes cessation of high dust generating activities as wind speeds reach certain thresholds.
2.5	Update the Statement of Commitments to include all dust suppression measures being undertaken, including those suggested by DECCW.	The revised Statement of Commitments contained in Appendix E includes these measures.
3.	Noise and Vibration	
3.1	It would appear as if not all noise sources were considered in the EA. Clarify potential noise impacts from all sources, including landfill operations.	Agreed. The noise assessment has been revised to include the landfill operations and to reflect the revised quarry operations – see Appendix F .
3.2	Specify noise impacts from the 25 year project only. Include figures showing the ground elevation contours and location of nearby residents to assist with the assessment.	See Appendix F .
3.3	Demonstrate that noise emissions from landfill and quarry operations would meet the project specific noise limits throughout the life of the project.	See Appendix F .
3.4	Justify the assumed level of barrier attenuation discussed in the noise assessment.	Appendix F confirms the level of attenuation.
3.5	At year 25, heavy vehicle movements are predicted to be approximately 200 per day. The road traffic noise assessment should be recalculated for this number of	The noise has been recalculated to reflect the number of heavy vehicles predicted at full production in 25 years time. This is contained in

Issue No.	Issue	Response
	heavy vehicles.	Appendix F.
4.	Visual	
4.1	Clarify potential visual impacts specifically incorporating any likely or proposed residential developments near Lake Wyangang or along the eastern side of the project site. Include in the assessment any detailed mitigation measures to be undertaken on site in order to reduce visual impacts from existing and future surrounding receivers.	See Appendix G for further details of the visual impact.
5.	Ecology	
5.1	Provide a detailed discussion regarding the likely impacts on flora and fauna on Lot 202.	The ecology of Lot 202 and the impacts of the revised project description are described in Section 7.2 of the EA and in Appendices B and F of the EA. Furthermore, the updated areas affected and the associated vegetation required to be offset are described in Appendix C of this response to submissions report. The groundwater, surface water, soil, air, traffic and socioeconomic impacts will all be reduced compared to that described in the EA. However, the reduction will not affect the assessment of impacts or mitigation measures.
5.2	Recalculate the proposed offset areas to only include those necessary to offset the vegetation clearance in Lot 202.	The revised areas and offsets are described in Appendix C.
5.3	Provide details of flora and fauna present in the proposed offset areas and a justification for the use of this area as an offset. Further provide details of how the land identified in the offset would be secured and managed in perpetuity	The revised project has significantly reduced the area of disturbance to native vegetation. Council has re-assessed the area requirements for the revised project and these areas are set out in Table C1 of Appendix C. Table C2 of Appendix C indicates the dominant vegetation type for the various areas to be developed for vegetation offset and indicates their value and vegetation types following rehabilitation or improvement for offset. All these areas are currently owned by Council. A new LEP is in the process of preparation and will include the rezoning of these areas to Environmental Protection. Upon approval of this project, a comprehensive Environmental Strategy will be developed for the entire local government area and will include management practices for the ongoing (in perpetuity) management of these areas. It will also identify a Green Infrastructure for the entire city area. - See Appendix C.
5.4	Provide details of consultation undertaken and agreements made with owners of any land indicated as a proposed offset area	With the reduced limits of the operation, no land will be required from private land owners and hence no further consultation has been undertaken. - See Appendix C.
6.	Rehabilitation and Final Landform	
6.1	Provide additional rehabilitation and final landform information, including more detailed rehabilitation strategies and a figure showing the conceptual final landform of Lot 202.	Information on rehabilitation is provided in Sections 7.2.2, 7.5.2 and 7.12.2 of the EA. Council have committed to prepare a detailed rehabilitation plan for both the quarry and landfill components within 12 months of commencement of extraction and landfilling activities in accordance with the applicable guidelines and in consultation with DECCW (see Section 9.3 of the EA). Section 6.2 provides an overview of the proposed approach to rehabilitation and final landform. Section 6.3.6 of the EA describes in detail the rehabilitation and final landform for quarries 101 and 103, while Section 6.4.4 provides details for the proposed landfill site. In addition, further details are provided in the operational management plans for the quarry and landfill are contained in Appendix J of the EA. These operational plans contain a series of figures showing the conceptual final landforms. See also response to Issue Number 1.3 above.
7.	Aboriginal Heritage	
7.1	Include greater detail on the Aboriginal cultural heritage values in the proposed development area (see DECCW advice)	Additional studies have been undertaken as per the DECCW recommendations. See Appendix D.
7.2	Include details of the consultation undertaken with any local Aboriginal groups.	Details of consultation with Local aboriginals are included in the additional heritage studies at Appendix D.

Issue No.	Issue	Response
8.	Non Aboriginal Heritage	
8.1	Consider any possible historic heritage sites in the area and the likelihood of potential impacts occurring as a result of the proposed development (see Heritage Branch submission for further details).	Additional studies have been undertaken as per the DECCW recommendations. See Appendix D .
9.	Groundwater	
9.1	Include more analysis of groundwater flows and levels on site, including an assessment of groundwater along the western side of the ridge.	The report of 15 January 2008 from Coffey Geotechnics highlights the uncertainty associated with the groundwater flows and cautions that the interpreted groundwater flows are based on water levels in 5 boreholes located on the eastern boundary of the Lot 202. These results do not imply a general north to north-westerly groundwater flow across the entire 124 hectares of Lot 202. It is very expensive and time consuming to drill the number of bores necessary to obtain the requisite data to input into a three-dimensional model in order to derive an accurate understanding of the groundwater levels and flows across the entire site. Rather, Council acknowledged the lack of certainty in the groundwater and hence have committed to designing the landfill in such a manner as to minimise any potential risk of contamination. These measures include stormwater and surface water management to minimise infiltration and contamination of runoff from the site and creating a fully lined landfill with cell drainage and leachate collection systems to isolate the landfill material from the underlying soils and effectively prevent any pathways for leachate to enter the groundwater. The design of the landfill complies with the NSW DECC Environmental Guidelines for Solid Waste Landfills. Not with-standing the above, Council has committed to installing additional monitoring bores (including two to the west of the ridge) and implementing a groundwater monitoring program and groundwater protection plan. Council has therefore effectively engineered out any potential groundwater impacts and any further assessment or investigation is not required in order to inform a decision on the acceptability of the proposed landfill site. See Appendix H.
9.2	Are there any groundwater users surrounding the site? Consider how the project and any potential groundwater impacts could affect groundwater and surface water users in the area.	The local groundwater usage is detailed in Section 3.3 of Appendix E of the EA. Groundwater in the Griffith area is not generally used for domestic or crop purposes because of its high salinity levels. The proposed development is unlikely to alter this status. As detailed in the response to Issue Number 9.1 above, the risk to the groundwater has been effectively designed out and given the proposed monitoring and groundwater protection plan, no impacts on any potential users are predicted. A suite of management measures have been proposed to capture all potentially contaminated runoff from the site. This includes a system of diversion channels and holding dams with capacity to contain the 1 in 100 year 72 hour duration high intensity rainfall event. Surface water flowing west of the site is highly unlikely to be affected by runoff from the proposed landfill and quarries to the east of the ridge. Should the water management system fail or the rainfall exceed the design specification, runoff will drain towards, and during peak high flow events eventually discharge into, Tharbogang Swamp. In the rare event that this ephemeral feature contains water, any flows from the landfill will be extremely diluted. The water from Tharbogang Swamp is not utilised due to the very high salinity, and it is highly unlikely that any runoff from the proposed development will affect Lake Wyangan in any way.
9.3	Further investigations regarding the potential for leachate contamination must be undertaken for the existing landfill and the proposed. This must include a discussion of the groundwater contamination claims that were raised in the Mancini submission.	It is understood that the instance referred to occurred following a major bird kill associated with a bird disease outbreak some 10 years ago. Following that occurrence, Council undertook studies of the landfill and animal pit components of the development and constructed modifications to the site – including a cut-off barrier below the animal pit and installation of an impermeable membrane under the landfill area and installation of a lined leachate dam. No problems have been recorded since that time. The results of the water monitoring programme do not indicate any potential leachate contamination on or surrounding the existing landfill site.
10.	Monitoring and Compliance	

Issue No.	Issue	Response
10.1	Provide details of all complaints received regarding the existing landfill and quarry operations along with a discussion of measures taken to rectify the compliant and reduce further impacts.	See Responses to Items 26 and 27 above. Council has no complaints on record about the landfill. While there is no correspondence on record on this matter, there was some seepage of leachate from the animal pits into the property to the east of Lot 202 in the late 1990's. As a result, Council stopped Bartters Chickens from disposing of their dead birds at the landfill. A leachate inception wall was constructed to intercept any leachate run off from the landfill and pump it back up to the landfill (see Figure 6.3 in the EA). There has been no occurrence since of leachate leaving the landfill. In the late 1990s there was some concern from adjoining landholders about the smoke from the burning of the green waste. While Licence 5875 clause 09 permits this, Council decided at that time to cease the practice of burning green waste. Ceasing this practice has a financial cost as Council now contracts a company to chip the green waste.
11.	Waste	
11.1	Is there a waste strategy for the region? Were alternative sites considered? How is the project consistent with the NSW Waste Avoidance and Resource Recovery Strategy?	The Regional Waste Strategies are developed by the RIVROC Waste Committee. The Regional Waste Strategy for the financial year of 2008/2009 had fifteen milestones, each with a program and associated funding, namely: 1. Preventing, avoiding and recycling waste 2. More effective communication between councils and regional waste groups 3. Preventing and avoiding waste 4. Reduce contamination 5. Preventing and avoiding waste 6. Awareness raising 7. Collective tendering 8. Support for local waste programs and community initiatives 9. Increased resource recovery 10. Increased resource recovery 11. Building community capacity in waste avoidance 12. Professional development 13. Benchmarking 14. Preventing and avoiding waste 15. Increased resource recovery For each milestone there is a program which details the processes in achieving the milestone and against the milestone there is a funding component which is an estimate on what it will cost to achieve the milestone (hence the apparent duplication of some of the milestones).

Issue No.	Issue	Response
11.2	Provide plans indicating how and where the waste is handled including plans/elevations of any structures, stockpile areas, windrows/green waste areas.	The revised project description contained in Section 3 provides details of the changes to the proposed quarry operations and emphasises that all other aspects of the project remain substantively unchanged. Appendix J of the EA and Figures 21 and 22 provide details of the waste transfer station. Green waste laydown areas (together with stormwater management provisions) have been provided as part of the waste transfer station. The green waste will then be moved in bulk to the landfill site, chipped and used for daily cover in the active cell to promote bioremediation. Small amounts of suitable material will also be used as part of the site rehabilitation. Due to the small volumes of green waste and as Council cannot verify that it is free from contaminants, it is not envisaged that any organic material will be sold or leave the landfill site.
11.3	What are the expected diversion rates? Are there any education programs (or similar) in place to assist in diversion?	Kerbside recycling has been available to 75% of the residences in the Griffith Local Government Area (LGA) for a period of twelve months. The service provides a fortnightly kerbside collection of a 240lt bin. As shown in Appendix I there has been a total of 1806 tonnes of recyclable waste diverted from landfill in that 12 month period. The type of recyclable material collected and the individual tonnages for each type of recyclable material collected is also shown. While the total diversion of 1806 tonnes doesn't seem a lot, recyclable material is typically low in weight but high in volume. We also recycle steel and batteries from the landfill and for the same period a total of 192 tonnes was diverted from landfill. There are a number of waste education initiatives ran though RAMROC. Griffith City Council (GCC) sees the importance of providing waste education to the public. Specifically there is an education program that runs in parallel with the recycling service with ads placed in all types of local media, paper, radio and television. Also though RAMROC there has been a number of primary and infant school education initiatives, Waste Watches is one such program. The syllabus for this program focuses on current waste issues and recycling initiatives and is taught in class by contracted teachers. This was held in the Griffith region in early December.
11.4	How is the waste sorted?	The current landfill operation has 5 drop off stations located on the landfill site, these include: 1. Green Waste 2. House Hold 3. Concrete/Brick 4. Steel 5. Batteries The public is notified by the Weighbridge Operator as to the appropriate drop off station to use, this is then supervised by the on site landfill staff. The proposed onsite (as opposed to kerbside) recycling will take place at the waste transfer station as described in Section 6.4 of the EA and detailed in Appendix J of the EA.
11.5	Are the recycled products being classified by DECCW?	Types of recyclable materials collected by the contractor are listed below: • Recyclable Paper and Cardboard as defined below; • Liquid paperboard cartons; • Glass bottles and jars; • Aluminium rigid and semi-rigid packaging; • PET (1), HDPE (2) and PVC (3) rigid plastic packaging; • Other rigid plastic packaging including LDPE (4), PP (5), PS (6), Other (7); • Steel rigid packaging, including aerosol cans; and • Any other recyclables as agreed under this Contract. • Newspapers;

Issue No.	Issue	Response
		• Magazines; • Junk mail; • Stationery; • Office paper; • Envelopes; • Telephone books; • Cardboard. No compost is sold or leaves the landfill site.
11.6	Does the leachate collection system extend to the green waste area?	The engineering of the new landfill site will include leachate capture of all active landfill cells, which includes green waste. In the new landfill the majority of the green waste (grass clippings and small pruning's) will be included in the putrescible cell to actively aid the decomposition of the putrescible waste. The larger green waste will be used for mulching and utilised as cover. Green waste will be stockpiled at a location that will be integrated into the landfill designed leachate capture system. No green waste leaves the landfill; this is because a guarantee cannot be given whether the mulch contains contamination. An indication of the amount of green waste received at landfill is given in Appendix I.
11.7	What are the types and expected quantities of waste being received and stored? Eg. How many tonnes of tyres are to be stored on site?	An indication of the expected types and quantities of waste to be received at Tharbogang can be derived from considering the existing waste composition as shown in Appendix I . Further information is contained in Appendix J of the EA.
11.8	Further clarification is required regarding the leachate collection and treatment system, as well as the landfill gas collection and flaring system proposed.	Sections 6.4 and 6.5 of the EA, Figures 6.7, 6.11 and 6.12 of the EA and Appendix J of the EA provide details of the leachate and gas management systems. It is not possible to provide further details until detailed engineering design has been undertaken by an experienced contactor.
12.	Other items requested during the meeting of 15 January 2010	
12.1	Traffic study needs more detail of traffic volumes from all sources and at all locations and clearly needs to state the peak volume at 25 years development.	In discussions with Haley Rich of the Department of Planning on 2 February 2010 it was clarified that this related to the noise implications of the traffic. This issue is comprehensively discussed in Appendix F .
12.2	The water balance needs to include a graphical representation of water in vs water out.	Figure 10 and 11 in Appendix J of the EA illustrates the water balance for the quarry and landfill, while Figure 6.13 of the EA shows the water balance for the existing site. It shows that some 0.84 Megalitres per annum of potable water is used by the water cart for dust suppression, a further 0.7 Megalitres pa is used for dust suppression at the crusher, rock breaker and irrigation of the stockpiles, and some 0.6 Megalitres pa is used at the landfill site for amenities. The amount of water used by the water cart is not expected to change significantly as the area of unsealed roads and exposed areas will not increase compared to the current situation as there will be incremental clearing and rehabilitation. However, the volume of water used for dust suppression at the crusher and related activities will increase from 0.7 ML pa to possibly as much as 2.6ML pa due to Council's commitment to increased dust management measures and the increased amount of gravel extracted. As described in Section 6.5 of the EA, additional water will also be required for rehabilitation (irrigation of plants should there be insufficient rainfall during the establishment period) and possibly a small volume will be required to augment any shortfall in leachate required for recirculation through the landfill. It should be noted that all these volumes are estimates and that the actual volumes will vary significantly on a monthly and yearly basis depending on operating conditions, the stage of development of the site, the volume of material extracted and the prevailing wind and rainfall. The quarry operations are expected to have a negative water balance due primarily to the high evaporation and loss of water contained in the exported gravel. This water demand will be met by importing large quantities of water via the existing 100mm diameter potable supply line. The potable water usage may be reduced somewhat by using water from the settlement dam following periods of high rainfall. The amenities water consumption is not expected to change measurably over time as the number of people will not change significantly from present. The amenities water is disposed of via a septic tank. The landfill will have a neutral water balance with practically no water inputs

Issue No.	Issue	Response
		(with the possible exception of periodic augmentation of the leachate with potable water to facilitate bioreaction in the active cell) and no liquids leaving the site due to the leachate and stormwater management systems. All leachate generated by the landfill will be captured by means of drains and sumps and pumped to the holding tanks. From there the leachate will be reinjected into the active cell. Any excess leachate will be piped to the leachate pond where it will evaporate or be piped back for recirculation through the active cell. Stormwater runoff constitutes the largest volume in the water balance of the site. A system of cut off drains upslope of the landfill and quarries will divert surface runoff around the active areas. This will minimise erosion, sedimentation, operational problems, leachate production and potential surface and groundwater pollution risks. Due to the low rainfall and as the proposed sites are close to the ridge line, the catchment area up-gradient of landfill and quarries is relatively small and therefore the volume of runoff affected by the project will be low. The diverted stormwater will be captured in the stormwater detention dam. This high quality water will be used for rehabilitation and dust suppression. Rainfall falling directly on the quarry site will be pumped to the stormwater detention dam. The dam has been designed to contain runoff from high intensity 72 hour duration 100 year recurrence storm events and to provide sufficient residence time for settling of suspended solids prior to discharge in the case of an over-topping event. Only during abnormally high long terms rainfall will the dam over-top and water be discharged down the natural drainage course towards Tharbogang Swamp. Rainfall falling directly on the landfill site will enter the leachate management system. The final sealed and rehabilitated landform of the landfill site is configured to ensure that there is no surface runoff. Rainfall will be absorbed by a soil mulch layer and disposed of by evaporation. The leachate management system and upslope stormwater diversion and management systems will continue to operation after the landfill site has been rehabilitated, while a drain along the toe will be created to catch any runoff for diversion to the leachate ponds. On completion of extraction, each quarry pit will be reconfigured to be free draining to prevent pooling of water.

**APPENDIX A - Letter of Response following Community
Forum on 30 September 2009**

Tharbogang Quarry and Landfill Expansion – Community Forum

A community forum was held on Wednesday 30th September 2009 at 5:30pm in the Griffith City Council Chambers. This forum was arranged following a request at the first forum and discussion session in May 2008 that an opportunity be provided for the community to ask questions about the final Environmental Assessment when it was on exhibition.

A number of concerns were raised and discussed at this forum and persons who felt they had a concern about any aspect of the project were advised to lodge a submission to the Department of Planning. Council has requested that the Department continue to receive and process submissions lodged after the exhibition period for as long as is possible.

Contact details for lodging a submission are as follows:

- fax to: 9228 6466; or
- email to: plan_comment@planning.nsw.gov.au; or
- post to: Major Development Assessment, Department of Planning, GPO Box 39, SYDNEY NSW 2001.

The following comments may help to better understand some of the matters raised:

1. Buffer Zones.

Council's current planning controls include advice and guidance for buffering of certain developments. This is set out in Clause 28 and Schedule 4 of Griffith Local Environmental Plan 2002. Clause 28 and an extract from Schedule 4 are attached to the end of this letter.

The scheduled distances are:

- For a quarry 500 metres
- For landfill 500 metres from a residential zone
250 metres from a dwelling
200 metres for recycling and compost

Council 'must not' grant approval to a development unless it is satisfied any adverse impacts have been adequately addressed.

This buffer distance is a recommended distance if there are no measures suggested to minimise adverse impacts. Any person wishing to develop within these buffer distances can include as part of their development, measures that will reduce any impacts. These measures could include fencing, vegetation, mounding or anything else that can be designed. If such measures are provided and can be shown to work, Council can approve a development even though it falls within the buffer distance.

2. Land Identified for Offset.

The Environmental Assessment includes Section 9 – Statement of Commitments, which advises how Council intends to implement monitoring, protection and minimisation works for the development. In particular, the very first item listed in Table 9.1 is Flora and Fauna and states Council will 'Develop and implement a Griffith Biodiversity Management Strategy'. This is Council's first priority for managing the biodiversity impacts of the project.

Table 9.1 – Flora and Fauna - lists how this strategy is proposed to be applied.

Section 7.2.2 of the EA outlines more information about how the Offset Strategy will work. In particular, the following priorities are suggested:

- Protect remnant vegetation with a view to maintaining local connectivity and to protecting Bimble Box-Pine and Dywer's Red Gum-Currawang communities
- Enhance existing remnant Bimble Box-Pine and Dywer's Red Gum- Currawang communities through reestablishment of other species and structural components of vegetation
- Revegetate areas of cleared land to improve connectivity between remnant vegetation patches and to expand patch size
- Implement the Griffith LGA Environmental Strategy

In the paragraph following Table 7.1 the EA states '**The final selection has not yet been finalised due to Council's decision to undertake detailed flora and fauna assessment in the event the project is approved.**'

As discussed at the forum, the Environmental Assessment provides an assessment of the total project, HOWEVER, Council has advised the Department of Planning that this current application is for a period of 20 to 25 years only. Any continuation after that time would be dependant upon a re-assessment of the environmental issues and the issue of a new consent.

During the next 25 years, only two of the four quarry units will be extracted. This will reduce the 'offset areas' required from about 450 hectares to only 198 hectares. **Council anticipates that ALL of this area can be provided within land immediately associated with or adjoining the quarry site and currently owned by Council.** It is NOT anticipated that privately owned land will be needed to satisfy the offset requirements for this current application.

None the less, Council would anticipate initiating discussions with owners of additional land identified as potentially suitable for biodiversity enhancement. These negotiations will assist Council in its preparation of the Griffith biodiversity Strategy and will provide a base for any future continuance of this project after the anticipated 20 to 25 year operation covered by the application.

3. Inadequate notice given.

A number of persons attending the forum indicated that they had not been contacted or advise of the meeting.

The 2008 discussion instructed Council that this forum should be scheduled in the second half of the exhibition period so as to allow interested persons time to peruse the EA and sort out any questions they may have. Thus it was not possible to schedule the meeting until the Department of Planning confirmed the date and period for the exhibition.

Council issued notification to affected residents in two batches. The first batch was posted on 10 September to those within 2 kilometres of the quarry and

landfill site boundary. The second batch was issued on 18 September to those within a band approximately 3.5 kilometres wide from the northern end of the quarry to the northern city boundary.

The Department of Planning has confirmed that letters were posted to owners within 2 kilometres of the site on 3rd September 2009.

Public notice was placed in the Area News on two Fridays prior to the date of the forum.

As well as the above formal notifications, there were a number of articles in the paper either confirming that the forum was scheduled or putting forward an expression of concern by private residents.

Council remains of the opinion that adequate notice was given to all concerned.

4. Visibility.

Reference was made to Section 7.14.2 of the EA which states 'Strategic landscaping to minimise visual impacts will be a requirement of any new residential developments between the site and Lake Wyangan where the site is visible. Council is to ensure this requirement is incorporated into the development consent process for new residential development proposals'.

This clause is not intended to indicate that no dwelling could be approved without 'strategic landscaping', however, should Council consider rezoning land for residential purposes where the quarry and landfill site is visible, COUNCIL should ensure that adequate screening is included in any subdivision design for residential development.

Given that Lake Wyangan is more than 4 kilometres distant from the quarry and landfill site, and that the quarry face will be terraced and progressively landscaped as the quarry progresses, Council does not suggest that there is likely to be any impact on future residential zones close to Lake Wyangan.

It is certainly not intended that there would be any screening requirement for rural dwellings associated with farming, agricultural or horticultural development other than the normal landscaping consideration for any development application.

For further information in relation to the above matter, please contact me on (02) 6962 8150.

Yours faithfully

**APPENDIX B - Impact on Residential and Rural Residential
Development**

Existing, approved and proposed residential developments

Land zoned for residential and rural residential development is generally more than 3 or 4 kilometres distant from the site and is scattered from south of the site around to the north east.

The direction of future expansion suggested for the city's residential development is north from the existing town centre and to the east of the Lake Wyangan area. This land is generally more than 4.5 to 5 kilometres distant from the nearest point of the proposed expanded quarry.

The main centres or estates are indicated in **Table B1** below.

Table B1: Residential and Rural Residential Areas

Number	Location or Estate	Development Type	Distance (as the crow flies) - Kilometres
Existing Approved and Developed Estates			
	Tharbogang	Village	2.5
	Mallinson Road	Large lot residential	3.0
	Lake Wyangan	Village	4.4
	Nericon	Village	6.7
	Pelican Shores Estate	Large lot residential	3.7
	Lake Wyangan Estate	Large lot residential	4.8
	Fawcett Drive	Large lot residential	4.2
Proposed or Approved but not yet Developed Estates			
	Sunset Waters Estate	Large lot residential	4.8
	Wyangan Estate	Village	4.8
	Betts Estate	Large lot residential	1.5 ^(Note 1)

Notes:

1. Stage 1 of this estate is before Council for consideration and would create some 78 lots varying in distance from 1.5 kilometres to about 2.3 kilometres from the proposed quarry extension.

As well as the above existing or proposed estates, there a number of areas identified as suitable, zoned, or potentially suitable for residential development or large lot residential development around the Wyangan/ Lake Wyangan area (See **Figure B1**). These are identified under Griffith Local Environmental Plan 2002 variously as:

- 7(c) - Environmental Protection – (Rural Living)
- 1(d) - General Expansion – (Rural Residential)

- 1(i) - Investigation – (Residential)
- 1(c) – Rural Residential

At the time of this assessment, no applications or proposals have been received or registered for development of these areas.

New draft Local Environmental Plan

Zones under Griffith LEP 2002 are shown on Figure 2.1 of the EA and discussed briefly in Section 2.4 of the EA.

Griffith City Council has commenced the preparation of an amending Local Environmental Plan and Development Control Plan in accordance with instructions issued by the Department of Planning. This new LEP and DCP will follow the standard template issued recently by the Department of Planning.

The new plan will replace the Griffith LEP 2002 and will be a complete revision of the planning controls that apply to the city area. New zoning terminology will be used and many zones will be changed in line with the standard templates.

The draft zonings around the quarry and landfill site are shown in **Figure B2**. The purposes of relevant zones are set out in **Table B2** below.

Table B2: Proposed Zone under draft LEP

Code/ Tag	Zone Name	Zone purpose
E2	Environmental Conservation	Intended to protect land that has high conservation value. A number of land uses considered to be inappropriate for this zone will be mandated as prohibited uses.
E3	Environmental Management	Intended to be applied to land that has environmental or scenic values or hazard risk, but where a limited range of development including dwelling houses and other uses could be permitted. This zone might also be suitable as a transition between areas of high conservation value and other lands such as rural or residential.
E4	Environmental Living	Intended for land with special environmental or scenic values where residential development could be accommodated.
IN1	General Industrial	Intended to accommodate a wide range of industrial and warehouse uses. Council could choose to supplement the existing mandated industrial and warehouse uses by permitting heavy, and offensive or hazardous industries, if appropriate. This zone would be suitable where Council wishes to have only one industrial zone.
R5	Large Lot Residential	Intended to cater for development that provides for residential housing in a rural setting. The allocation of large lot 'rural' residential land must be justified by a strategy prepared in accordance with guidelines issued by the Department. This zone was formerly known as

Code/ Tag	Zone Name	Zone purpose
RE1	Public Recreation	Rural Residential zone. Intended for a wide range of public recreation areas and activities, including local and regional open space. Council may permit typical recreation uses in this zone. A range of land uses compatible with the recreation use of land should be permitted.
RE2	Private Recreation	Intended to cover a wide range of recreation areas and facilities on land that is privately owned or managed.
RU1	Primary Production	Intended to cover land used for most kinds of primary industry production, including extensive agriculture, horticulture, intensive livestock agriculture, mining, forestry and extractive industries. The zone is aimed at maintaining and enhancing the rural resource base.
RU4	Rural Small Holdings	Intended for land which is to be used for small scale rural and primary production. Land within this zone might also provide for emerging primary industries and agricultural uses. It is not intended that this zone be used for land that is primarily residential in function – the R5 Large Lot Residential zone should be used for that purpose.
RU5	Village	Intended to cover rural villages where a mix of residential, retail and other uses is to be established or maintained.
SP2	Infrastructure	Intended to cover a wide range of physical and human infrastructure uses such as transport (e.g. roads and railways), utility undertakings and works, community uses, educational establishments (e.g. schools) and hospitals.
W2	Recreational Waterways	Intended for waterways that are used primarily for recreational purposes such as boating, fishing and waterskiing, but which may also have ecological, scenic or other values that require protection.

Figure B2 identifies the indicative zones in this area. Changes could include the formalisation of much of the Investigation and General Expansion zones into Village, Rural Residential and the like. The Village zone around Lake Wyangan Village may be expanded significantly.

The land between Lake Wyangan and the proposed development site has been retained as Primary Production land and the area around Tharbogang Swamp and up to the proposed development boundary is confirmed as Environmental Conservation.

No land to the west of the site has been identified for Rural Residential, Residential or Environmental Protection except for some land to the north of the Warburn Swamp

(some 5 kilometres to the north-west) which has been identified for Environmental Protection.

There are no significant changes suggested that would change or increase the potential for the proposed quarry and landfill development to impact future developments.

Buffers

Council's current planning controls include advice and guidance for buffering of certain developments. This is set out in Clause 28 and Schedule 4 of Griffith Local Environmental Plan 2002.

The scheduled distances are:

For a quarry	500 metres
For landfill	500 metres from a residential zone
	250 metres from a dwelling
	200 metres for recycling and compost

Council 'must not' grant approval to a development unless it is satisfied any adverse impacts have been adequately addressed.

This buffer distance is a recommended distance if there are no measures suggested to minimise adverse impacts. Any person wishing to develop within these buffer distances can include as part of their development, measures that will reduce any impacts. These measures could include fencing, vegetation, mounding or anything else that can be designed. If such measures are provided and can be shown to work, Council can approve a development even though it falls within the buffer distance.

APPENDIX C - Revised Vegetation Offsets

REVISED VEGETATION OFFSETS

The most effective mitigation strategy is to avoid disturbing areas of native vegetation wherever possible. Appendix L of the EA highlights how the location of the pits has been informed by the significant vegetation communities and habitat features present on Lot 202. It also describes other mitigation measures such as collecting seeds, clearing vegetation outside of breeding periods and enhancing the vegetation on the site. Nonetheless, the PVP Developer tool concluded that off-site offsets would be required.

The Environmental Assessment report addresses the impacts of the proposed quarry development of pits 101 and 103 as well as the impacts of possible future extensions into pits 205 and 303. It finds that a total of 37.6 hectares of land will need to be cleared and some 443.5 hectares of land provided for offset to cover the vegetation impacts (current and possible future) of all four quarry pits.

The preferred proposal has been reduced to a period of 25 years only. This will reduce the quarry extraction area to pits 101 and 103 only. Quarry pits 205 and 303 will be deferred till a later date and will require reassessment and a new Application before the development proceeds further.

The footprint for the proposed waste landfill component is located within the existing quarry and associated disturbed areas and accordingly will not affect any native vegetation. The waste transfer station will affect some 0.7 hectares of vegetation.

Table C1 below sets out the offset area requirements for the preferred project and is based on Table 10.2 of Appendix L – Vegetation Offset Strategy, of the EA.

Table C1: Offset Requirements

Vegetation Community	Ratio	Preferred Project	
		Area Cleared (ha)	Offset Area (ha)
Bimble Box – Pine	1:12.5	12.2	152.5
Dwyers Red Gum-Currawong	1:10	3	30
Totals		15.2	182.5

Offset areas contained within or adjacent to the proposed development (ie on Lots 202 and 201) and currently in Council's ownership are as set out in **Table C2** below.

Please note that the numbering system used in this Appendix differs from that used in the Environmental Assessment. Offset areas have been rationalised to better represent their respective vegetation communities.

Table C2: Offset Areas in Council Ownership

Offset Area No.	Area No. as Shown in EA	Area (Hectares)	Main Vegetation Type	Suitability	Offset Area Available (hectares)
1.	25	101	Wilga	50% suitable for Bimble Box/ Pine	50
2.	26	103	Bimble Box/ Pine	Future quarry expansion areas have been excluded. 10% suitable for planting with Dwyers Red Gum - Currawong 90% suitable for Bimble Box/ Pine	10.3 92.7
3.	Part 26 and 29	22	Bimble Box/ Pine	Future quarry expansion areas have been excluded. 35% suitable for planting with Dwyers Red Gum - Currawong 65% suitable for Bimble Box/ Pine	7.7 14.3
4.	Part 29	25	Bimble Box/ Pine	Bimble Box/ Pine	25
5.	30, 31, 32	11.5	Bimble Box/ Pine	Suitable for planting with Dwyers Red Gum - Currawong, but recovery will be slow due to past clearing.	11.5
6.	34	13.6	Bimble Box/ Pine	Bimble Box/ Pine	13.6
7.		27.2	Bimble Box/ Pine	Bimble Box/ Pine	27.2

Offset Area No.	Area No. as Shown in EA	Area (Hectares)	Main Vegetation Type	Suitability	Offset Area Available (hectares)
Totals		324.8		Bimble Box Pine	222.8
				Dwyers Red Gum - Currawong	29.5

These areas exceed the requirement for Bimble Box/ Pine offset for pits 101 and 103 by 46% and is approximately equal to the area of Dwyers Red Gum/ Currawong required.

The Offset Strategy (Appendix L of the EA) includes a table titled Offset Actions for Tharbogang Quarry. This table lists all the areas or Lots that were examined as potentially suitable for vegetation offsets or for protection of native vegetation.

The total area of lands identified in the list is 2,521 hectares. The list was also prepared in recognition that Council plans to develop a Local Government Area-wide Environmental Strategy.

Figure C1 indicates the existing zoning of the offset lands and **Figure C2** the possible zonings under the new LEP.

If approval is granted for this development, Council will rezone the portions of Lot 202 and Lot 201 not required for the proposed development or future expansion of the quarry operations to E2 – Environmental Conservation, or E3 – Environmental Management. About 20 hectares of proposed Offset area No. 1 would be retained as RE2 Private Recreation to cater for the relocation of the Blue Dot Speedway.

An Environmental Management Plan would be prepared as a component of a positive covenant over the land. This would include maintenance in perpetuity of the land in order to achieve a long term net gain for conservation.

Over and above the protection and management of the identified offset lands, Council is committed to the preparation of an Environmental Strategy for the entire Local Government Area. This will take the form of a 'Green Infrastructure' Plan³ that will link the natural landscape and the community in a positive and productive way.

³ M.A. Benedict and E.T. McMahon – Green Infrastructure, The Conservation Fund 2006

FIGURE C1

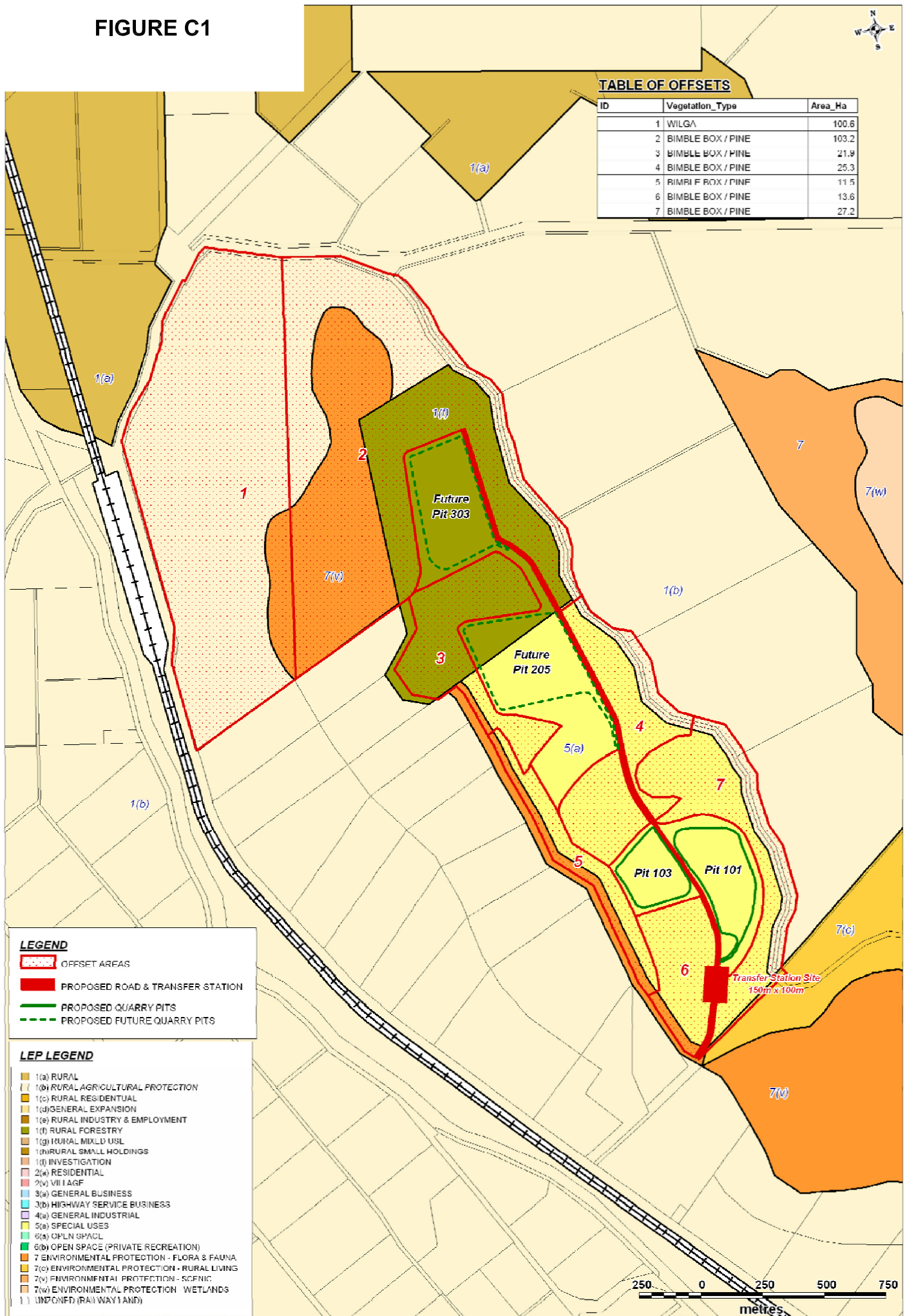
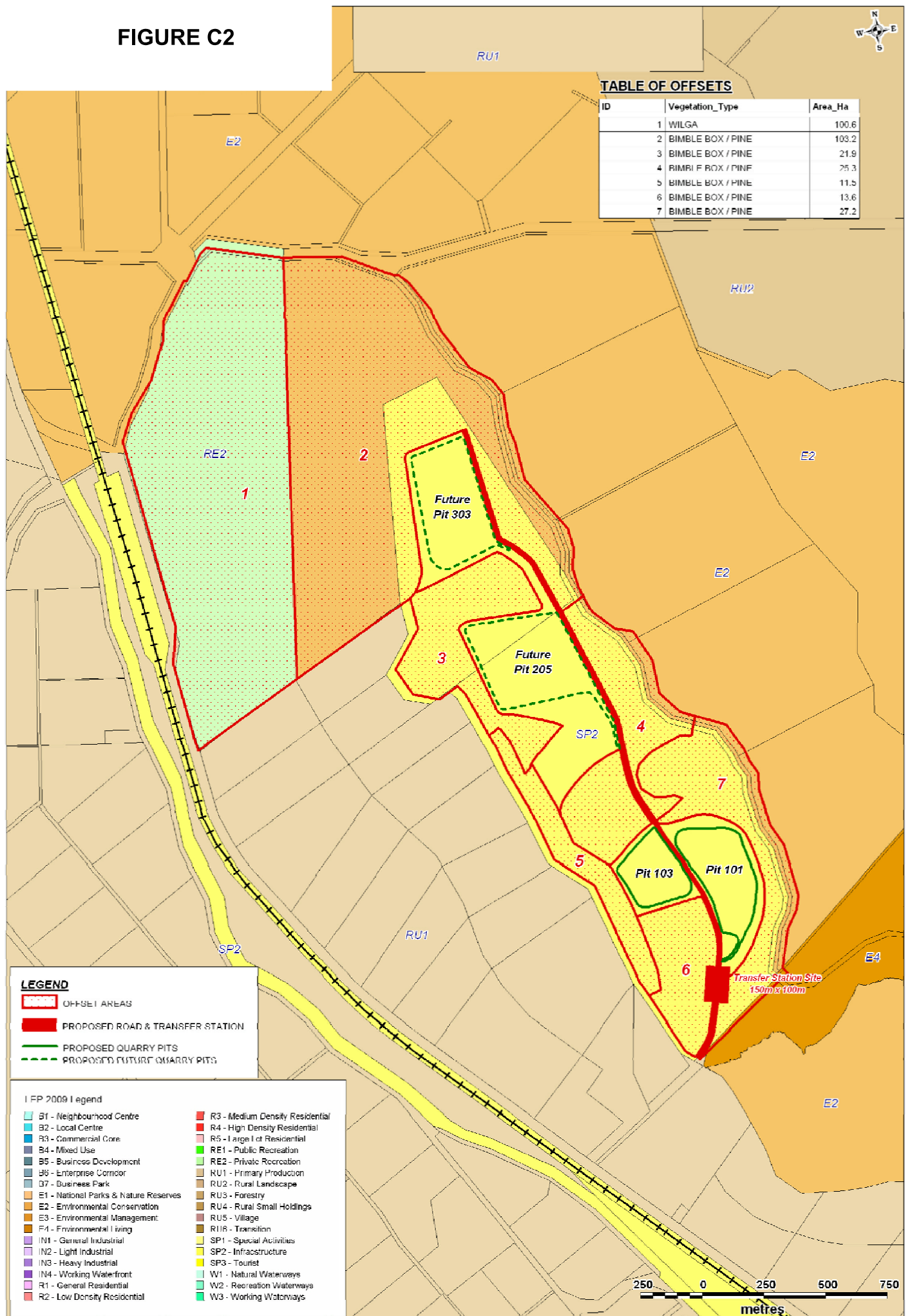


FIGURE C2



APPENDIX D - Supplementary Heritage Assessment

Aboriginal and Historical Heritage Assessment

Tharbogang Quarry and Landfill Expansion
Slopes Road, Lot 202 DP 756035, Tharbogang, NSW

REPORT

Prepared by
Dr Peter Kabaila
Archaeologist, Director, Black Mountain Projects Pty Ltd
For
Griffith City Council
February 2010

EXECUTIVE SUMMARY

Background

In December 2009 Black Mountain Projects Pty Ltd was commissioned by Griffith City Council to prepare an assessment of heritage impacts for expanding the existing Tharbogang road base quarry to the south (Pit 103, over a rubbish dump and caretaker's cottage, since removed, with some associated structures) and east (Pit 101, over the existing car race track). The landfill will be relocated into the existing quarry void once it becomes vacant. The development area is inside Portion 202, DP 756035, Tharbogang. This is understood as undertaking a heritage assessment and statement of heritage impact, as part of an Environmental Assessment prepared by Balance, consultants to Griffith City Council. The study area is located within boundaries of the Griffith City LGA.

The Griffith Local Aboriginal Land Council had previously been consulted and their report (2007) is attached. Fieldwork had been carried out over two days in August 2007 by the usual method of on-foot transects through the proposed expansion area. The report recommended that GLALC had no objection to the development going ahead. The report, however, cited three scarred trees that were outside the development area.

This consultancy was to provide recommendations for management of the tree scars and to assess any items of historic significance on the subject land. Vincent Sicari's section of the Heritage Branch, NSW Planning Dept had commented that the Review of Environmental Factors prepared by Balance P/L had not checked for items in existing heritage registers and that an historical heritage assessment had not been carried out.

As a response, this report has assembled the available history and assessed heritage values of cultural material found on the allotment.

The section titled **Aboriginal Heritage Assessment** relocated the scarred trees and recommends measures for protecting the scarred trees that have heritage significance. Two scarred trees of historic significance were found. The other tree scars were found to have been naturally occurring. No Aboriginal scarred trees were found.

The two areas of proposed development are Pit 103 and Pit 101. Each is shown on the Key Plan below and is assessed in the section titled **Historical Heritage Assessment**.

The Pit 103 development area had been scraped for gravel, and subsequently used as a surface garbage dump. It also contained a caretaker's cottage (since demolished) and several timber structures. These have been assessed as of low heritage significance.

The Pit 101 development area had been cleared, scraped for gravel, and then dynamited for car race track construction. The speedway signs were the only speedway structures that were assessed to be of historic significance.

The section titled **Recommendations to the Consent Authority** contain suggested conditions of consent or management policies regarding any items of heritage value that exist on the site and that might be discovered in the during development.

This document is required in order to provide a consent authority with the necessary information to assess the development application, in light of the archaeological and cultural heritage values of the study area.

Study Area

The Study Area is the existing quarry and landfill operation and proposed areas for expansion. These are situated within Portion 202, DP 756035, owned by Council and zoned for Special Uses (Quarry and Landfill) and Environmental Protection (Scenic).

The study area has an open pit quarry, landfill, excavations and structures associated with the landfill. Vegetated parts of the study area have a sparse cover of native trees and grasses with weeds and regrowth. This is because the study area has been highly disturbed by being previously scraped for road gravel.

A caretaker's cottage was located in the southern part of the allotment, approximately in the centre of one proposed pit (Pit 103), but was recently removed due to asbestos content.

A speedway track, fencing and sheds are located at the eastern end of the lot overlapping with the second proposed pit. The track covers a 12 ha area that is largely cleared of vegetation.

Proposal

The proponent, Griffith City Council, seeks to obtain consent for expanding the existing road base quarry to the south (Pit 103, over the site of the demolished caretaker's cottage) and east (Pit 101, over the existing car race track). The landfill will be relocated into the existing quarry void once it becomes vacant. The development area is inside Portion 202, DP 756035, Tharbogang. (Portion 201 DP 756035, to the north of the development area, is also held by Griffith City Council, but is not part of the current proposal).

Objectives and Tasks – Historical and Aboriginal Heritage Assessment

The client contacted Peter Kabaila, Director of Black Mountain Projects Pty Ltd, for a heritage assessment. Documents provided were the Environmental Assessment provided by Balance. The Minister of Planning is understood to be the consent authority for the project.

The objective of this study is production of a 'plain English' report that identifies Aboriginal and non-Aboriginal archaeological and cultural heritage values as well as areas of archaeological potential and constraints associated with the proposed project. The following tasks were undertaken in accordance with the brief:

This report considers the following issues:

- What is the possible heritage significance of the existing property?
- How will that significance be affected by the proposed development?
- Should the impact of the development upon heritage significance be mitigated and how should this take place?

The consultant's duty is to provide the highest quality heritage advice without fear or favour including an objective heritage assessment, impact statement and recommendations for the Consent Authority to consider.

Summary of cultural heritage listings within the study area

The following is a summary of various heritage listings in relation to the study area.

Register of the National Estate	There are no items within the study area listed on the Register of the National Estate.
National Heritage List	There are no items within the study area listed on the National Heritage List.
Commonwealth Heritage List	There are no items within the study area listed on the Commonwealth Heritage list.
Department of Environment & Climate Change AHIMS	No registered sites are situated within the study area.
National Native Title Tribunal	No claims are known within the study area.
NSW State Heritage Register	There are no items within the study area listed on the NSW State Heritage Register.
Local Environmental Plan	There are no items within the study area listed on the Local Environmental Plan.
National Trust of Australia (NSW)	There are no items within the study area listed on the National Trust Register.

Aboriginal Stakeholder Consultation

Aboriginal stakeholder consultation for the current project has been undertaken by Black Mountain Projects on behalf of Griffith City Council. The study area falls within the boundaries of the Griffith Local Aboriginal Land Council (GLALC).

The responsibility for management of Aboriginal heritage was transferred from the National Parks & Wildlife Service of NSW to the Department of Environment & Climate Change (DECC) in 2005, and was accompanied by the formulation of provisional guidelines for consultation with Aboriginal Interested Parties, arising from a decision in the Land and Environment Court in November 2004 in the case of *Williams v Director-General Dept of Environment and Conservation et al*. It suggested consultation with any interested Aboriginal person. A number of big development projects, including the Coolac Bypass, were then approached by ten or more separate groups of Interested Parties. However, the Court decision was subsequently altered on appeal, but this leaves the provisional guidelines in some suspense.

Aboriginal consultation for the current project was undertaken in accordance with Department of Environment and Conservation Interim Community Consultation requirements for applicants (2004). As the current study is not seeking a permit under Part 6 of the National Parks and Wildlife Act 1974 (NSW), an advertisement has not been lodged for the registration of Aboriginal interest. The scale of the area to be investigated was considered to be far too small to have called for advertising in the public media for Interested Parties, as followed by the developers of big scale projects. Instead the investigation has followed the spirit of the Provisional Guidelines by involving a representative of the LALC and an independent, Interested Party.

As such, the LALC and an experienced Aboriginal cultural sites representative of the local DECC office were provided with details of the current project and participated in the field inspection of the study area. A copy of the draft report was forwarded to these stakeholders for their input.

The stakeholder consultation log is attached. Written comment regarding the Aboriginal cultural resource will be attached upon receipt of the stakeholder input into the current study.

Site Survey

The re-inspection of scarred trees described in the previous report by GLALC was carried out over three days. The first day was a site inspection by Peter Kabaila and John Roser of Griffith City Council. The second day was a visit with council mapping staff to obtain GPS locations. The third day was with Leanne Johnson (GLALC) and Lawrence Clarke (DECC) to check which trees, if any, had cultural significance.

Three other site inspections were carried out by Peter Kabaila to locate and assess cultural material, including the caretaker's cottage, speedway and landfill features. Off-site investigations included discussions with surveyors, Lands Department Griffith Office and car club members.

Results

The survey resulted in no Aboriginal archaeological sites being recorded. The two surveyor trees and the *Bluedot Speedway* signs were assessed to be of local heritage significance. No other significant historical archaeological sites or places were recorded during the survey.

Significance Statement

The Tharbogang Landfill at Lot 202 DP 756035 756035 contains features that are examples of a quarry, landfill operation, speedway and surveyor blazed trees. For research purposes, these are considered to be fairly common structures. The blazed trees have moderate significance in the study of survey and settlement of the Murrumbidgee Irrigation Area. The surveyor trees are assessed to have local heritage significance.

The Tharbogang Landfill has an historical role in being part of the land surveyed for 20th century settlement of the Murrumbidgee Irrigation Area, but was subsequently only sporadically used for grazing. It has moderate to low historical significance as an area for gravel mining, car racing and landfill (rubbish tip).

The quarry and landfill are operations of a standard type. The two surveyor blazed trees are the most significant relics of the early irrigation period. The cypress log fence remains and stable outbuilding are of low historical significance as they have lost much of their original grazing land context, as the caretaker's cottage was relocated alongside these structures. Cypress log grazing lease structures are common throughout the region, as cypress was the vernacular material used in early fencing and owner-built outbuildings to c1960. Structures at the Bluedot Speedway are utilitarian. They date from 1984 and later and are considered to be generally of low historical significance. The Speedway development is similar to the existing race track on Scenic Hill.

The subject land has moderate level social significance to members of the local car racing club. The two Bluedot speedway signs are significant reminders of club members' efforts and sacrifices to build the speedway and its facilities. The speedway signs are assessed to have local heritage significance.

Predicted Impact

The heritage assessment has determined that the study area is not of state heritage significance, but that it contains four items that are of heritage significance and that should be protected (in the case of two surveyor scarred trees) or relocated for display or reuse (in the case of two Speedway signs). Consideration must also be given to the chance of finding Aboriginal stone artefacts, skeletal remains, and significant historical relics.

Recommendations to the Consent Authority

Recommendation 1

That the two surveyor scarred trees (shown as numbers 1 and 8 on the Key Map) be preserved and protected, entered into the local heritage data base, heritage listed in the LEP and that a 20m radius development exclusion zone be maintained around each tree.

Explanation: Heritage is a mandatory consideration for consent authorities under Section 79 C of The Environmental Planning and Assessment Act 1979 – NSW. Provisions for making an LEP allow for protection of items of heritage significance. The Surveying and Spatial Information Act 2002 – NSW (Section 24) provides some protection against removal of survey marks but may not protect the tree as well as a development exclusion zone marked on a plan.

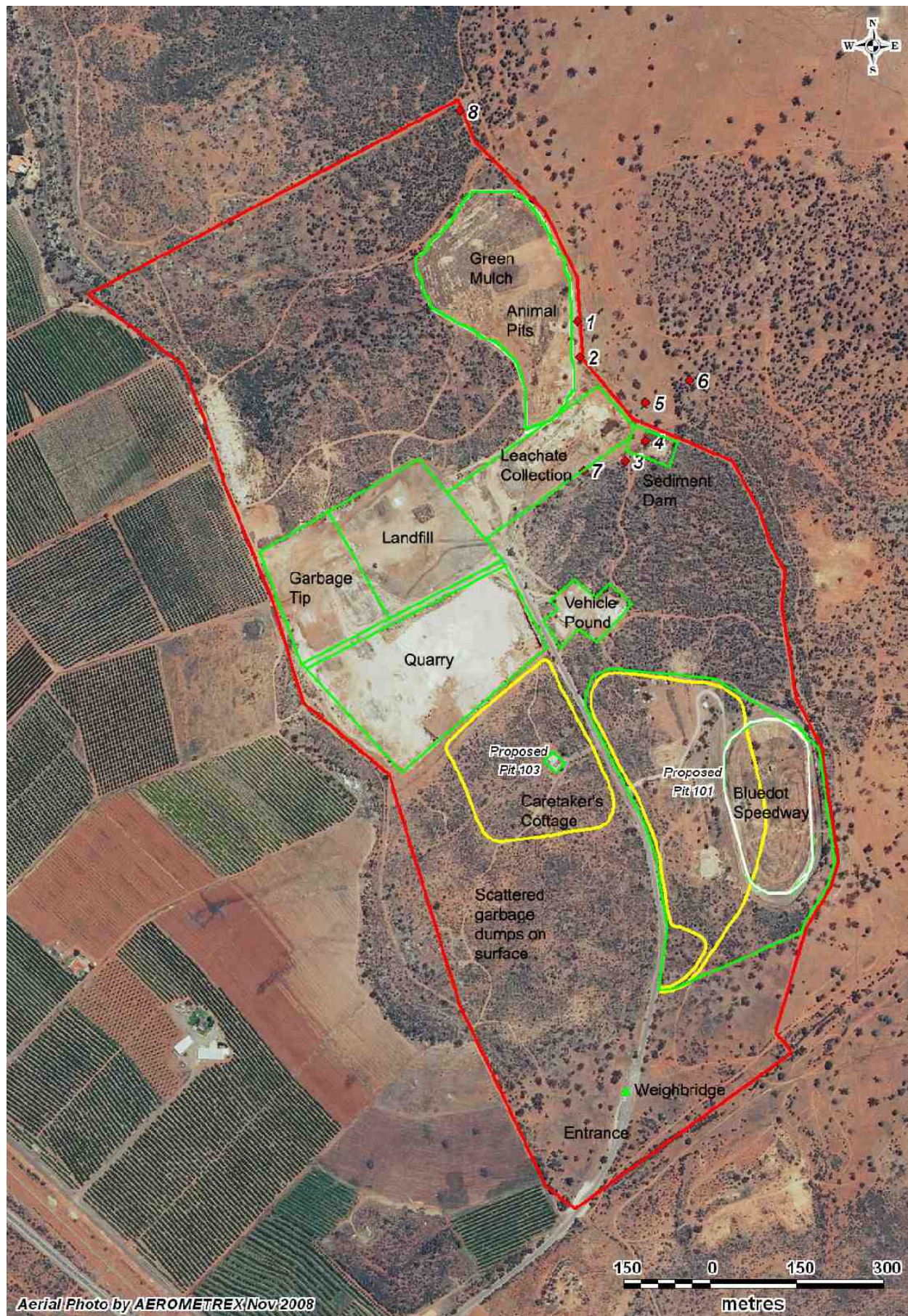
Recommendation 2

That the two Bluedot Speedway signs be carefully removed prior to commencement and handed over to the car racing club for safe-keeping, reuse or for negotiating as a display item with Griffith Pioneer Park Museum.

Explanation: Movable heritage is generally not able to be protected in LEP provisions; as such items can be relocated beyond the local government area.

Recommendation 3-9

These are standard recommendations relating to actions that should be taken should any Aboriginal cultural material or significant historical relics be found during development. They are described in detail in this report.



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Survey conclusions

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Other or former names
Address
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Designer
Builder
Year started
Year finished
Physical description
Physical condition
Modifications/alterations
Historical notes
Assessment of heritage significance:
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Authorship

The report was prepared by Black Mountain Projects Pty Ltd. Field work supervision and heritage assessments were carried out by Dr Peter Kabaila.

Acknowledgements

The input and participation of the following are gratefully acknowledged:

John Allen, Griffith City Council.

Roy Barker, Griffith DECC.

Lawrence Clarke, Griffith DECC.

Isabelle Collins (nee Johnson). isabellejohnson@hotmail.com 6259 0140, 0415 979 180. 5 Macqueen St Charnwood, ACT.

Gary Currie, Griffith DECC.

Dept of Lands (Griffith office) tel 6960 3600 katherine.mcmahon@lpma.nsw.gov.au

Gloria Goolagong, community elder, Three Way Aboriginal housing area.

Simon Greet, Mapping Staff, Griffith City Council.

Warren Ingram, Manager, Griffith LALC.

Michael James, Mapping Staff, Griffith City Council.

Leanne Johnson, Admin. Worker, Griffith LALC.

Michael Johnson, field worker, Griffith LALC.

Mavis Kilby (nee Monaghan).

Margaret King, former local studies librarian, Griffith City Council.

Scott McKinnon, Surveyor, Griffith City Council.

Fred Monaghan. fred@gugan-gulwan.com.au

Beverley Penrith, community elder, Three Way Aboriginal housing area.

Brett Polkinghorne of PHL Surveyors tel 6964 3192 brettp@phlsurveyors.com.au

John Roser, Griffith City Council.

Wilfred Shawcross, consulting archaeologist.

Isabelle Collins kindly provided some of her family photographs for the history.

Abbreviations

The following common abbreviations may be in use in this document:

AHC	Australian Heritage Commission
AHIMS	Aboriginal Heritage Information Management System (NPWS sites data base)
LALC	Local Aboriginal Land Council
BP	Before present
CHL	Commonwealth Heritage List
DAA	Department of Aboriginal Affairs of NSW
DCP	Development Control Plan
DECC	Department of Environment and Climate Change of NSW
DEWR	Department of Environment and Water Resources (formerly Environment and Heritage)
DP	Deposited plan
GSV	Ground surface visibility
HO	Department of Planning Heritage Office of NSW
IPO	Interim Protection Order
IHO	Interim Heritage Order
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local government area
LTO	Land Titles Office
NHL	National Heritage List
NNTT	National Native Title Tribunal
NSW	New South Wales
NT	National Trust of Australia (NSW Division)
PAD	Potential archaeological deposit
REP	Regional Environmental Plan
RNE	Register of the National Estate
SHI	State Heritage Inventory
SHR	State Heritage Register
EA	Environmental Assessment

LEGISLATIVE FRAMEWORK

Introduction

Aboriginal and non-Aboriginal cultural heritage in Australia is protected and managed under a variety of legislation. The following section provides a brief summary of the Acts relevant to the management of cultural heritage in NSW. It is important to note that these Acts are presented as a guide and are not legal interpretations of legislation by the consultant.

COMMONWEALTH LEGISLATION

Environment Protection & Biodiversity Conservation Act 1999 (EPBC Act)

The Commonwealth Environment Protection & Biodiversity Conservation Act 1999 (EPBC Act) took effect on 16 July 2000. Under Part 9 of the EPBC Act, any action that has, or is likely to have, a significant impact on a matter of National Environmental Significance (known as a controlled action under the Act), may only progress with approval of the Commonwealth Minister for the Environment. An action is defined as a project, development, undertaking, activity (or series of activities), or alteration to any of these. Where an exception applies, an action will also require approval if:

- ❖ It is undertaken on Commonwealth land and will have or is likely to have a significant impact;
- ❖ It is undertaken outside Commonwealth land and will have or is likely to have a significant impact on the environment on Commonwealth land; and,
- ❖ It is undertaken by the Commonwealth and will have or is likely to have a significant impact.

Under Section 28 subsection 1, "The Commonwealth or Commonwealth Agency must not take inside or outside Australian jurisdiction an action that has, will have, or is likely to have a significant impact on the environment inside or outside Australian jurisdiction." The EPBC Act defines 'environment' as both natural and cultural environments and therefore Aboriginal and historic cultural heritage items included on the Register of the National Estate are regarded as part of the cultural environment.

This heritage system was combined in 2003 with establishment of a National Heritage List (NHL) and a Commonwealth Heritage List (CHL).

The National Heritage List records places with outstanding natural and cultural heritage values that contribute to Australia's national identity. The Commonwealth Heritage List will comprise natural, Aboriginal and historic places owned or managed by the Commonwealth. The new laws provide changes that offer greater legal protection under the existing EPBC Act. Under the new system, National Heritage will join six other important 'matters of national environmental significance' already protected by the EPBC Act.

The three relevant Acts are:

- ❖ The Environment and Heritage Legislation Amendment Act (No. 1) 2003
- ❖ The Australian Heritage Council Act 2003
- ❖ The Australian Heritage Council (Consequential and Transitional Provisions) Act 2003

Approval under the EPBC Act is required if you are proposing to take an action that will have, or is likely to have, a significant impact on the National Heritage values of a National Heritage place or any other matter of national environmental significance. This action must be referred to the Australian Government Minister for the Environment and Heritage. The Minister will decide whether an action will, or is likely to, have a significant impact on a matter of national environmental significance.

The heritage provisions of the EPBC Act allow for a transition period whilst the National and Commonwealth Heritage Lists are finalised. During this transition period the Register of the National Estate acts in conjunction with the formative National and Commonwealth lists to provide full coverage for items already identified as having cultural heritage significance.

A search of the database for the Register of the National Estate, Commonwealth Heritage List and the National Heritage List revealed the following:

Commonwealth Listings
There are no items within the study area listed on the Register of the National Estate, the National Heritage List or the Commonwealth Heritage List.

Native Title Act 1993 (Amended)

The Commonwealth Native Title Act of 1993, as amended, recognises and protects native title, and provides that native title cannot be extinguished contrary to the Act. The National Native Title Tribunal (NNTT) is a Commonwealth Government agency set up under this Act to mediate native title claims under the direction of the Federal Court of Australia.

The National Native Title Tribunal maintains the following registers:

- ❖ National Native Title Register
- ❖ Register of Native Title Claims
- ❖ Unregistered Claimant Applications
- ❖ Register of Indigenous Land Use Agreements

The objective of a search of the NNTT registers is to identify possible Aboriginal Stakeholders that would not perhaps receive representation as part of the Local Aboriginal Land Council or elders' groups.

National Native Title Tribunal Registers
No claims are known in the study area.

STATE LEGISLATION

National Parks and Wildlife Act (NSW) 1974

The National Parks and Wildlife Act 1974 provides for protection of Aboriginal objects (sites, relics and cultural material) and Aboriginal places. Under the Act (Section 5) an Aboriginal object is defined as:

any deposit, object or material evidence (not being a handicraft for sale) relating to indigenous and non-European habitation of the area that comprises New south Wales, being habitation both prior to and concurrent with the occupation of that area by persons of European extraction, and includes Aboriginal remains

An Aboriginal place is defined under this Act as an area that has been declared by the Minister administering the National Parks and Wildlife Act as a place of special significance for aboriginal culture. It may or may not contain physical Aboriginal objects.

Under Section 90 of the Act it is an offence to knowingly destroy, deface, damage or desecrate, or cause to permit the destruction, defacement, damage or desecration of an Aboriginal object or place, without written consent from the Director-General of the NSW Department of Environment and Climate Change (DECC). In order to obtain such consent, a Section 90 Consent Application must be submitted and approved by the DECC director-General. In considering whether to issue a section 90 Consent, DECC will take into account:

- ❖ The significance of the Aboriginal object(s) or place(s) subject to the proposed impacts;
- ❖ The effect of the proposed impacts and the mitigation measures proposed;
- ❖ The alternatives to the proposed impacts;
- ❖ The conservation outcomes that will be achieved if impact is permitted; and
- ❖ The outcomes of the Aboriginal community consultation regarding the proposed impact and conservation outcomes.

It is also an offence, under Section 86 of the Act, to disturb or excavate land for the purpose of discovering an Aboriginal object, or disturb or move an Aboriginal object on any land, without first obtaining a permit (Preliminary Research Permit, Excavation Permit, Collection Permit or Rock Art Recording Permit) under section 87 of the Act. In issuing a Section 87 Permit, DECC will take into account:

- ❖ The views of the Aboriginal community about the proposed activity;
- ❖ The objectives and justifications for the proposed activity;
- ❖ The appropriateness of the methodology to achieve the objectives of the proposed activity; and
- ❖ The knowledge, skills, and experience of the nominated person(s) to adequately undertake the proposed activity.

Under Section 91 of the Act it is a requirement to notify the DECC Director-General of the location of an Aboriginal object. Identified aboriginal items and sites are registered with the NSW DECC on the Aboriginal Heritage Information Management System (AHIMS).

NSW DECC AHIMS Listings

No registered Aboriginal sites are situated within the boundaries of the study area.
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The Heritage Act 1977 (NSW) (Amended 1999)

The Heritage Act 1977 is the primary piece of State legislation affording protection to all items of environmental (i.e. natural and cultural) heritage in NSW. 'Items of environmental heritage' include places, buildings, works, relics, moveable objects and precincts identified as significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. A 'Place' is defined as an area of land, with or without improvements and a 'relic' is defined as any deposit, object or material evidence that relates to the settlement of the area that comprises NSW, not being Aboriginal settlement, and that is 50 years or more old.

The Heritage Act 1977 also established the Heritage Council of NSW, to provide advice and recommendations to the NSW Minister for Planning relating to conservation and management of items of environmental heritage. The Heritage Council is also required to maintain a database of items of State heritage significance, the State Heritage Register (SHR). Also a database of items of both State and local heritage significance, the State Heritage Inventory (SHI).

If the Heritage Council believes that a heritage item or place needs to be conserved, then it can make a recommendation to the Minister, who decides whether to place protection on that item. There are two types of protection available: interim heritage orders (IHOs) and listing on the State Heritage Register. These forms of protection are 'binding directions', which means that the heritage item that is protected in one of these ways cannot be demolished, redeveloped or altered without permission from the Heritage Council.

The Heritage Act 1977 does not apply to Aboriginal 'relics' (any deposit, object or material evidence). These items are protected under the National Parks and Wildlife Act 1974; however, some aspects of Aboriginal cultural heritage management and protection are covered by provisions of the Heritage Act 1977.

The Director-General of DECC can recommend that the Minister of Planning make Interim Protection Orders (IPOs) to preserve areas of land that have natural, scientific or cultural significance that can include land with aboriginal places or relics on it.

Particular Aboriginal places and items that the community has formally recognised as being of high cultural value can also be listed on the State Heritage Register. This provided an extra level of protection in addition to that provided by the National Parks and Wildlife Act 1974.

A search of the database for the NSW state Heritage register revealed the following:

NSW State Heritage Register listings.
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There are no items within the study area listed on the NSW State Heritage Register.

Environmental Planning and Assessment Act (NSW) 1979

The Environmental Planning and Assessment Act 1979 ensures that environmental impacts are considered prior to development taking place. This includes impacts on Aboriginal and non-Aboriginal cultural heritage items and places. The Act also requires that each Local Government Area prepares a Local Environmental Plan (LEP) and Development Control Plans (DCPs) in accordance with the act to provide guidance on the level of environmental assessment required. LEPs often list locally significant heritage items.

Section 79 (C) *Evaluation*, subsection 1 *Matters for consideration*, makes reference to the requirement for councils to consider 'environmental' and 'social' impacts when assessing Development Applications:

In determining a development application, a consent authority is to take into consideration...

(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality...

The LEP is the principal planning instrument for the LGA. The LEP guides what development is permitted in different parts of the LGA through zoning of each parcel of land. The NSW Planning Department provides a standardised clause (the LEP 'template') for objectives and provisions of the LEP in relation to heritage conservation.

A search of the heritage schedule of the LGA revealed the following:

Local Environmental Plan
There are no items within the study area listed on the LEP.

Non Statutory Listings

The National Trust of Australia (NSW Division) is a community-based organisation with independently constituted Trusts in each state and territory. The NSW National Trust compiles a heritage list primarily of historic places, but they also include some Aboriginal and natural places. Listing helps to provide recognition, and promote public appreciation and concern for local heritage. The National Trust Register has no legal foundation or statutory power, but is recognised as an authoritative statement on the significance to the community of particular items, and is held in high esteem by the public.

A search of the National Trust Register revealed the following:

The National Trust Listings.
There are no items within the study area listed on the National Trust Register.

Summary of cultural heritage listings within the study area

The following is a summary of various heritage listings in relation to the study area.

Register of the National Estate	There are no items within the study area listed on the Register of the National Estate.
National Heritage List	There are no items within the study area listed on the National Heritage List.
Commonwealth Heritage List	There are no items within the study area listed on the Commonwealth Heritage list.
Department of Environment & Climate Change AHIMS	No registered sites are situated within the study area.
National Native Title Tribunal	No claims are known within the study area.
NSW State Heritage Register	There are no items within the study area listed on the NSW State Heritage Register.
Local Environmental Plan	There are no items within the study area listed on the Local Environmental Plan.
National Trust of Australia (NSW)	There are no items within the study area listed on the National Trust Register.

ABORIGINAL HERITAGE ASSESSMENT

Procedure followed

The Griffith Local Aboriginal Land Council had previously been consulted and their report (2007) is attached. Fieldwork had been carried out over two days in August 2007 by the usual method of on-foot transects through the proposed expansion area. The report recommended that GLALC had no objection to the development going ahead. The report, however, cited three scarred trees that were outside the development area.

This consultancy was to provide recommendations for management of the tree scars. Two scarred trees of historic significance were found. The other tree scars were found to have been naturally occurring. No Aboriginal scarred trees were found.



Leanne Johnson (Griffith LALC) and Lawrence Clarke (Griffith DECC) at site inspection.

The two areas of proposed development previously surveyed by the GLALC were Pit 103 and Pit 101.

The Pit 103 development area has been scraped for gravel, and subsequently used as a surface garbage dump. It also contains several timber structures. These have been assessed as of low heritage significance.

The Pit 101 development area had been cleared, scraped for gravel, and then dynamited for car race track construction. The speedway signs were the only speedway structures that were assessed to be of historic significance.

A site inspection was carried out by Leanne Johnson (Griffith LALC) and Lawrence Clarke (Griffith DECC) in the company of the archaeologist on 4th November 2009. Some three hours of time on site were devoted by these Aboriginal consultants and the archaeologist to examine the scarred trees.

This report was then forwarded to the LALC as a key stakeholder. A stakeholder response is to be attached when received from the LALC.

Previous and Current Archaeological Investigations in the District

Recent or on-going archaeological investigations in the district include work in the Benerembah Irrigation District, survey at Barrenbox Swamp and commercial archaeology for the Pelican Shores and Sunset Waters subdivisions at Lake Wyangan.

Prior to the Pelican Shores archaeological report, there had been two previously recorded sites in the general vicinity. An artefact scatter (NPWS #49-2-016) was located on the western side of the northern

lake of Lake Wyangan (about 3km east of the Tharbogang Landfill). The artefacts were situated 20m from the water's edge and extended for about 1km along the shoreline. The site contained silcrete, quartzite and quartz artefacts and hammer stones. The density of the site overall was approximately one per 15 sq m, with one particular area of 2 sq m containing 6-12 artefacts.

An extensive artefact scatter was also recorded at Warburn Swamp (about 2.5km west of Lake Wyangan). The site was recorded by Max Harris and consisted of thousands of artefacts, including hammer stones, scrapers, waste flakes, a grinding pestle and pebble choppers. The site was concentrated around the swamp margins (NPWS site card).

Max Harris had told Mathew Barber that human remains were uncovered at Lake Wyangan in c1935. Apparently the police were informed at the time. A crime investigation was not, however, carried out as the remains were thought to pre-date European occupation. Max Harris was not clear on the location of the burial but thought that it on the eastern side of the southern lake. The location of the remains is now unknown but it is possible that they were reburied. This discovery indicates that human burial preservation conditions are good in the local area and that vigilance should be exercised when excavating in the vicinity of Lake Wyangan.

Although no formal archaeological surveys have previously been undertaken close to the study area, a number of surveys have been completed within the wider Griffith district. These surveys can assist in identifying types of sites and their locations that may be expected within the present investigation.

Edmonds has undertaken a number of studies within the Benerembah Irrigation District (BID), a 44,000 hectare area 20km west of Griffith (1990, 1992, 1996) and 1350ha within Wyvern Station on the western boundary of the BID (1995). Edmonds has recorded a range of sites from these studies and as a result has constructed a model of site location for the area.

The four surveys carried out by Edmonds recorded a total of 25 scarred trees, 8 artefact scatters, and 6 campsites, as well as isolated finds and hearths. Edmonds concluded that site types and locations were related to landform types.

The 1990 and 1992 surveys carried out by Edmonds within the BID recorded 13 scarred trees, 3 artefact scatters, 4 hearths, 2 of which were in association with artefacts and a campsite (1996: 11). Edmonds differentiated an artefact scatter from a campsite by the presence of implements such as grindstones and the presence of hearths (1995, 1996).

The study assigned six types of landforms to the riverine plains (prior stream depressions, elevated lands, alluvial plains, linear depressions, alluvial floodplain and occluded depressions). Edmonds noted that two of these were archaeologically sensitive, that is linear depressions and prior stream formations (1996: 11).

A further survey by Edmonds of Wyvern Station recorded ten scarred trees, an artefact scatter and four campsites, with two of scarred trees being in association with campsites (1995). Edmonds then added occluded depressions as landforms with high archaeological sensitivity.

All scarred trees were Black Box trees, irrespective of the scar type. Canoe scars, shields and carrying dish type scars were all found on the Black Box (*E. largiflorens*) species. This tree is generally found in association with current or former creeks, such as linear depressions and around occluded depressions. The surveys of the BID and Wyvern Station noted that these landforms contained 100% of the scarred trees recorded.

In 2008, Michael Johnson was employed as an Aboriginal sites field worker by DECC. Michael was involved in archaeological survey at Barrenbox Swamp and recollected its rich archaeological record. (The project was a joint venture of DECC and Murrumbidgee Irrigation to revive the swamp water levels). Barrenbox indicates the important role that swamp margins played in the lives of hunter-gatherers.

Barrenbox is practically a continuous stone artefact scatter. Raised areas that used to be islands contain clusters of hearths. Stone artefacts found at Barrenbox include chert flakes, volcanic pebble axes, large stone dishes, cores, grindstones (nardoo stones), hammer stones and broken grindstones. Broken grindstones significant because there is some ethnographic evidence for grindstones being broken up when their owners died (Michael Johnson, pers. comm. 2009).

In 1998 a surface survey at Lake Wyangan by Matthew Barber found four sites (Barber 1998). All were artefact scatters and ranged in size from a single artefact up to 38 artefacts:

- Site LW1 was an edge ground axe situated on the edge of the drainage outlet channel from the wetland. It was unclear where the axe had originated.
- Site LW2 was a large artefact scatter that was found on the lunette. The site extended over parts of the lunette crest, fore slope, back slope and on the edges of the depression at the base of the lunette. The complete extent of the site was 192m x 50m. The density of the site across the lunette varied, but was generally a factor of visibility.
- LW 3 was a small scatter of artefacts on the southern end of the lunette. The site consisted of six artefacts in a small erosion scar. The site area had suffered some minor disturbance associated with construction of the boundary fence. It was considered that the site was likely to be larger.
- Site LW 4 contained three artefacts and was found on the edge of a dam. The site was unusual in some respects by being found in the lower lying drainage depression. However, given the disturbance of the area from the dam construction, it was not clear if the artefacts were in-situ or where they had come from.

Two archaeological assessments have been carried out for subdivisions at Lake Wyangan. A report for the Pelican Shores subdivision was prepared by Matthew Barber (2000). Sub-surface testing was carried out but only small numbers of stone artefacts were recovered. A report for the Sunset Waters subdivision was prepared by Jamie Reeves for Biosis (2007).

In 2000, a series of test pits, dug by mechanical excavation and by hand, for the Pelican Shores development survey. It was in the archaeologically sensitive area of a ridgeline (sand lunette) on the shore of Lake Wyangan. The resulting report was prepared by Matthew Barber (*An Archaeological Subsurface investigation at Lake Wyangan, Griffith, NSW*. Report to Griffith Local Aboriginal Land Council, Southern Cross Heritage Solutions, June 2000). It is the only local archaeological excavation to date.

The hand excavated test pits were dug with a shovel in 10cm spits and the soil sieved through a 5mm sieve. Any artefacts or other cultural material recovered was bagged and tagged and retained for later analysis. Artefacts were then measured and tabulated for analysis. Attributes recorded were artefact dimensions, shape, flake and core platforms, level of preparation, flake terminations, type of retouch, use wear and cortex.

Area A was the lunette, approximately 300m long in a north south direction and about 50m wide, curving slightly around the lake foreshore. The dune was elevated about 2-3m at its northern end above the low-lying ground of the swamp. For the survey, 12 test pits were dug, with almost 4 cubic metres of sieved material. Very little charcoal was found and a very low number of artefacts were recovered (35 in area A, or 9 per cubic metre). Four raw material types were noted: silcrete, quartz, fine grained volcanic, and quartzite. Archaeological significance of area A was rated as high.

Area B was the main ridge. For the survey, 13 test pits were dug, with almost 1 cubic metre of sieved material. A few artefacts were recovered (the number is unclear in the report, but is noted as very few). Archaeological significance of area B was rated as low.

The result of the excavations was that the whole lunette was recorded as a site.

The excavations demonstrated that there was potential for cultural material to be present up to 700mm below the surface.

Importantly, there is still the potential for Aboriginal burials to exist within the lunette. The possibility of burials was noted. This site type is especially sensitive to Aboriginal people. But it is impossible to predict where such burials may exist.

Following the Pelican Shores subdivision, the next large subdivision at Lake Wyangan was Sunset Waters.

The environmental assessment report prepared by Nathan Szymanski (by E.A. Systems P/L, 2007) noted that the AHIMS database contained 6 sites within 3km of Sunset Waters.

The BIOSIS Research report for Sunset Waters (2007) by Jamie Reeves found 11 new isolated finds within the Sunset Waters subdivision area. It recommended that a S87 permit be sought for sub-surface

investigation of the southern portion of the subdivision area, which was identified as having high archaeological potential.

Pre-European land use

The identification and delineation of tribal boundaries is a European notion and not necessarily one that comes from the Aboriginal viewpoint. However, the general territory of a group can be identified more accurately using language as a basis for comparison and separation between groups.

Lake Wyangan and the Griffith region are within an area identified as part of the Wiradjuri language group. This is an assemblage of many small clans and bands speaking a number of similar dialects (Howitt 1904, Tindale 1974, MacDonald 1983). In pre-European times, therefore, the study area was part of the territory ranged by Wiradjuri hunter-gatherers. This was a linguistic unit (group of dialects or “tribe”) that occupied a large part of central and western NSW. In the 1930s, the anthropologist Norman Tindale (1974) mapped an estimate of the pre-European geographic extent of Wiradjuri people (later called a “nation” in the 1980s and 1990s). The geographic extent was later re-mapped by David Horton (1994) and others.

The Wiradjuri language group was the largest within NSW before European invasion and covered an extensive area of the state. The borders of the group were not static; rather they were fluid, expanding and contracting in time to the movements of smaller family and clan groups. It was the small family unit that was the basis for hunting and gathering life. The immediate family group camped together and found food together. The archaeological manifestations of their activities are likely to be small campsites, thought to be marked by small artefact scatters and hearths. These small units were part of a band, which comprised a number of families. They moved within an area defined by their particular religious sites (MacDonald 1983).

Such groups might come together on special occasion for ceremonies or when their paths happened to cross. They may also have joined together at particular times of the year when certain resources were abundant at a known location. The legacy of these gatherings is thought to be sites that are larger than the small family camps. They may include large hearth or oven complexes, contain a number of grinding implements and a larger range of stone artefacts and raw materials. The identification and differentiation of such sites is sometimes difficult in the field. A small group occupying a particular campsite over a long period of time, or with many return visits, would leave a similar pattern of discard to a large group over a short time. Nevertheless, it is important to note that there were variations in the camping patterns of the Wiradjuri people.

Physical description and recent land use history

Refer historical notes in the European heritage assessment below

Expected site types

The most common sites in the local area are open scatters (usually thought to be camping areas), scarred trees and hearths. A more detailed breakdown of likely site types in the region is as follows:

Occupation or base camps.

These were the focus of many activities for a major duration of the day, such as eating, sleeping, tool making, and social intercourse, centred on one or more hearths. These can be rock shelters or open sites (perhaps with the temporary protection of a wind break or bark hut). They typically show a wide range of tool types and much waste (around 90% of stone artefacts) from tool making.

These have been called the Small Tool Assemblage, because there tend to be a large number of small, thin stone flakes. If well preserved, say underground, these sites would also contain camp debris and hearth charcoal. Such a camp could be regarded as the nucleus of a home range of country. The stone tools would suggest that there was plenty of time spent at these sites both to fashion stone tools with care and to apply them to manufacture and maintenance of wooden implements.

Special activity or satellite sites.

These are locations within the home range which were used for a short duration at anyone time for procuring certain resources, butchering or even simple meal breaks. They typically display few if any stone tools and little waste from tool making. These have been called the Large Tool Assemblage, because there tend to be only a small scatter of large tools such as cores and thick flakes (often up to 20 or so). Such sites suggest that little attention was given to tool making at that spot.

Axe-grinding grooves.

These grooves were created where basalt pebbles have been ground to an edge on suitable sandstone surfaces. Proximity to water (e.g. small rock pools, creeks) would have been desirable to provide lubrication.

Hearths

Such sites typically contain baked clay and charcoal, scattered around a ground oven or fireplace site.

Scarred trees.

Scarring remains where bark has been removed to make baskets, shields or canoes. The underlying wood is smooth and undamaged and the bark regrowth from either side is expected to have been slow.

Burials.

Skeletal material does not long survive in acidic soils, but one burial place in alkaline (saline) deposits in Lake Wyangan is known from a press report.

Art sites.

Such sites typically include engravings on open rock platforms, as well as ochre paintings and charcoal drawings on cave walls.

Stone arrangements.

A limited number of stone arrangements have been found in south-eastern Australia, generally of bare rock on ridge tops where large stones have been placed strategically, presumably for ceremonial purposes (e.g. bora or corroboree grounds).

Basins on rock surfaces.

These basins are usually shallow and circular, often associated with rock engravings and axe-grinding grooves. This frequent association raises the likelihood of deliberate workmanship, possibly by exfoliation through repeated firing of wetted rock.

Quarries.

These are locations where raw material for toolmaking or ochre has been extracted.

Exposure type

Graded road and quarried road surrounds.

Detection limiting factors

Excavated/eroded ground and densely vegetated creek banks.

Degree of disturbance

High.

Geomorphological regime

Stable. Red sandy loam soil, possibly with calcified clay below 600mm.

Surface visibility

Good over most of the study area due to arid conditions and almost no grass cover. High surface visibility on vehicle tracks.

Overall survey size (area)

Lot 202 DP 756035 covers 122.4 Ha. The survey area covered only the development area and areas previously reported to contain scarred trees.

Slope

Moderate.

Landform element

Low ridge.

Former vegetation type

Cypress, Bimble Box woodland.

Existing vegetation disturbance

Cleared native vegetation with cypress regrowth (trees mainly 3-10m high) and white gum trees (mainly 10-15m high). Total clearance and high disturbance in vicinity of landfill.

Scarred trees

A search of the study area was made for scarred trees. Most of the surrounding area has been cleared by European pastoral settlers. Trees in the immediate vicinity appear to be re-growth that is too young (too recent) to show signs of having been utilised for their bark by Aboriginal people employing hunter-gatherer subsistence. Two surveyor marked trees were found. One ring-barked tree (assessed to be of low significance) was found. Five scars on trees were found that all appear to date from the late 20th century and that are not associated with any known Aboriginal settlement (camp or reserve) of the historic period.

Three trees recorded as scarred trees were found on the subject property in 2007 and briefly described in a letter by the Griffith LALC.

A re-survey was carried out on 14th October 2009 by Dr. Peter Kabaila to confirm the location of any scarred trees. The location was then visited by Council mapping staff and GPS readings taken, and revisited by a GLALC representative and an Aboriginal cultural sites officer from DECC – Griffith Office. The scarred tree locations are shown on the site plan.

Trees with scars were located as follows:

Tree No.	Description	Notes, Conclusions	Image (enlarged in following pages)
1	Surveyor's scar 1050mm long x 300mm wide on 10-15m high gum tree, 700mm above ground. Tree located on closed crown road, 150m north of sedimentation pond. Chiselled lettering "BM G2". Metal axe marks. Tree type is Black Box.	This surveyor's blazed tree, c1915, was identified by surveyor Brett Polkinghorne as an old Water Resources Bench Mark for when the irrigation area was set up.	

2	Scar 2000m long x 400mm wide on 10-15m high gum tree, 1400mm above ground. Tree located approx. 2m from existing fence line. Several branches have sprouted from the scarred area. No metal or stone axe marks. Tree type is Black Box. Scar does not have a southerly orientation.	Scar consistent with tree damage by parrots (natural scar). Depth of the scar is superficial (approx 25mm) and bark has not healed over the scar.	
3	Scar 900mm long x 250mm wide on 10-15m high gum tree, 1200mm above ground. Tree located 10m east of drainage trench next to sedimentation pond (next to cactus). No metal or stone axe marks. Depth of the scar is superficial (approx 25mm) and bark has not healed over the scar. Tree type is Black Box. Scar does not have a southerly orientation.	According to Lawrence Clarke (DECC), the continuation of the scar in a vertical line above and below the main scar is consistent with damage caused by a lightening strike.	
4	Scar 550mm long x 200mm wide on 10-15m high gum tree, 2000mm above ground. Tree located within sedimentation dam. Sharp damage to bark (no axe marks). Depth of the scar is superficial (approx 25mm) and bark has not healed over the scar. Tree type is Black Box. Scar does not have a southerly orientation.	According to Lawrence Clarke (DECC), the depth, size and location of the scar are consistent with damage by a bucket from mechanical excavation of the adjoining dam.	

5	Scar 1700mm long x 800mm wide on 10-15m high gum tree, 2500mm above ground. Tree located 4m from creek. No metal or stone axe marks. Tree type is Black Box. Scar does not have a southerly orientation.	According to Lawrence Clarke (DECC), the depth, size and location of the scar are consistent with damage by parrots.	
6	Ring-barking scar around circumference of 10-15m high gum tree, 800mm above ground. Tree located 40m south of creek. Metal axe marks. Tree type is Black Box.	Scar consistent with typical ring-bark clearing of pastoral or early irrigation period (pre 1950). This was common in the local area and throughout south eastern Australia.	
7	Scar 700mm long x 150mm wide on 10-15m high gum tree, 2500mm above ground. Tree located 5m south of drainage trench to sedimentation pond. No metal or stone axe marks. Tree type is Black Box. Scar does not have a southerly orientation.	According to Lawrence Clarke (DECC), the depth, size and location of the scar are consistent with damage by a bucket from mechanical excavation of the adjoining drainage trench.	
8	Surveyor's scar 1500mm long x 400mm wide on 10-15m high gum tree, 700mm above ground. Tree located on closed crown road, 150m north of sedimentation pond. Chiselled text: arrow symbol, 201, 202. Galvanised clout above arrow. Metal axe marks. Tree type is Black Box.	This surveyor's blazed tree, c1915, was identified by surveyor Brett Polkinghorne as a reference tree placed to define the portion boundary between portions 201 and 202. The tip of the "Broad Arrow" in the photo being the reference point.	

Lawrence Clarke, Aboriginal site officer with Griffith DECC, accompanied Leanne Johnson (Griffith LALC) and Peter Kabaila to re-locate scarred trees previously reported in 2007 by Griffith LALC, by a previous cultural sites officer.

Lawrence Clarke's comment was that Aboriginal bark removal was typically close to the southern (shady) side of the tree trunk, as bark that is less dried out by the sun is easier to remove. None of the scars faced south and they were variously identified by Lawrence Clarke as tree damage by lightning, mechanical excavation machinery and parrots.

A discussion regarding the surveyor's blazed trees is included in the historical heritage assessment.

Stone materials

Most stone in the area is sandstone conglomerate.

Ethnographic outline and oral history - Aboriginal settlements of the Griffith region

There is no 'definitive' history of 20th century Aboriginal settlements. This history is necessarily incomplete because, rather than attempting the impossible task of recording the stories of every family with a connection to each settlement, it seemed far more relevant to gain an in-depth understanding of some individual stories.

This led to a series of difficult decisions about how to select these individuals. While young people have a story to tell, I have opted to speak to community elders, who are able to dip into a well of old memories. Elders are not necessarily political leaders, because small community politics is very fluid: one year's community leaders can become the next year's outsiders, alienated from the main group. Furthermore, the people who were interviewed relied on memory to tell their story, potentially raising points that are contested by other family stories. Yet I believe there was a sufficient common narrative to make this approach the most viable way to construct a social history.

Aboriginal people began moving into the developing town of Griffith as fruit pickers from about 1940. They formed the camp at Frogs Hollow and later the Three Way reserve. The original families of Frogs Hollow still formed the prominent Aboriginal family networks of Griffith in 2010. Warangesda mission descendants at Darlington Point formed a related (but distinct) community.

Leeton and Griffith were planned irrigation towns mainly constructed in the 1920s. Leeton's small hills each were topped by a water reservoir. In order to contain the spread of cannery workers camps, a camping reserve was established at Wattle Hill, within walking distance of the factory, but on the edge of the small town. During the male labour shortages that coincided with the First World War, many of the white campers were replaced by Wiradjuri families. The severe labour shortage of the 1940s also meant happy absorption of new Aboriginal families into the camp. The shire council actively pursued clearance of the camp during the 1960s for conversion of Wattle Hill into suburban housing.

The earliest shanty town around Griffith was Bagtown, built by white construction workers in Hanwood in 1911. In the low lying and flat land of Griffith town, the camp of Bagtown was resurveyed as planned streets and a network of canals. Overseas migrant fruit pickers camped on the edges of properties. Aboriginal households that joined them lived in small, temporary camps such as 'Condo Lane' adjoining the Hanwood winery, a group of shacks in the narrow strip between the road and canal. Everywhere through Griffith town, little temporary camps lined the network of canals in which people washed, and obtained their barely drinkable water.

By the 1950s Griffith had grown and the Aboriginal camp households gathered in a field on the edge of town at 'Frogs Hollow', loaned to them by a sympathetic farmer. With support from townspeople, and despite opposition from some, a reserve was established across the canal at Three-Way.

While only 20 minutes car drive apart, Griffith and Darlington Point remain distinct and contrasting communities. Aboriginal families at Darlington Point are bound into a tightly woven community, largely descended from families that lived at Warangesda Mission and Darlington Point reserve over at least four generations from 1880 to the 1950s, and extensively intermarried with white families from the 'Point', as Darlington Point is locally known. Even when these families physically move into Griffith, they retain their primary connection with the Point.

By contrast with the Point, Griffith is remembered for the extent of its Aboriginal resettlement. As the town grew over the 1920s and succeeding decades, it drew a wide mix of both Warangesda descendants and people from places as far flung as Robinvale, Condobolin, Wilcannia and the NSW south coast. In a sense, the post-war seasonal work drew a 'multi-cultural' Aboriginal community, as they were from various former language areas ('tribes').

The largest Aboriginal settlement near Griffith was, and still is, the Three Way housing area set up in

the 1950s. As in the 1950s, in 2010 it remained a separate Aboriginal precinct in a town where non-Aborigines still predominate in the business and professional classes.

Griffith Town Camps

Through much of the region, Aboriginal families doing station work or seasonal picking had travelled and camped along river courses, from where they got their drinking water, and in which they swam and washed clothes. In Griffith, instead of a riverbank, there was a whole series of artificial 'rivers' laid out in straight irrigation lines around the town. Beside each irrigation channel was a narrow strip of 'no-man's land' to the access lane, sometimes wide enough for a small hut.

Clancy Charles' parents moved from Darlington Point at the end of the Second World War to follow seasonal work in Griffith. They camped in various places.

We were quite happy at the Point but on the off-season there wasn't much work there. My father began to get jobs closer to Griffith like got shearing at Hillston and at Tabbita [on the Hillston road]. We first moved to Hanwood [winery village on the outskirts of Griffith] to the Willows for the grape picking. There were camps at places like Hanwood Lane and the Pines down near the rice mill. There were also camps over the hill near the old golf course at the bottom of Scenic Hill, where Wade High School is now, and at the old tip. At that time most of the Aboriginal families were all attached to different farms. Families came here for the orange and grape picking season [October to April], and they'd be living and working at these separate farms mostly all year round and only got together when they went into the town. We stopped at the channel [at the Willows] and built our humpy from any materials we found lying around. There was a game of two-up and card games every week there.

There was also a hut camp down at Condo Lane. That's where the Aboriginal families from Condobolin had their humpies. It wasn't far from McWilliams, where I used to do grape picking as well. McWilliam was a bastard of a boss: he'd blow the starting whistle at 7.30 in the morning and if you weren't there on the dot you were sacked for the day. But I guess families at Condo will tell you about Condo Lane and the grape picking

—Clancy Charles, *Three Way*.

Laurie Ingram's family stayed for a time at the Pines for the seasonal work.

At Griffith we were with a group of Aboriginal families down at the Pines. There were just tents and little goundjis [humpies] where the Woolworths store is today. Our families like the Charles, Williams, and the Murrays were there and I think there were white people there as well. There was an orange juice factory there where we used to go as kids. Then another year we went down to the flats near Three Way [Frogs Hollow Marsh]

—Laurie Ingram, *Narrandera*.

Griffith town camps were small and shifted as the town grew. The ones that people remembered were:

- The Pines. Near Wickham's hill, at the rice mill, between Jensen and Harris streets.
- Old Tip. Present day suburb of Collina. Next to the former council tip at the junction of rifle range road and Clifton Boulevard.
- Golf course. Present day golf course and raceway (opposite side of the Hill from town).
- Scenic Hill. Foothill slopes between present day McNabb Crescent and Scenic Drive.
- Wakaden Street. Present day Catholic High School oval at Macarthur St.
- Tharbogang. Railway fettlers camp, situated near Tharbogang railway siding.
- Condo Lane. Present day Leonards Road, off Hanwood village. Alongside an irrigation canal near the McWilliam vineyards.
- The Willows. Present day entrance to Greenacres property, with extensive avenue replantings of willow trees. The area was reached by the present day canal bridge. Nearby was the former a line of willow trees alongside the Mirrool Creek branch canal. It was far removed from Griffith town, but only a five kilometre walk to the Hanwood shop.
- Mayfair area, between the town and Frogs Hollow. This was formed by seasonal workers who had places such as Condo Lane in Hanwood.

Some of the permanent residents of the developing town opposed the camps, or profited by supplying the campers with wine. Yet many of the townspeople had themselves started out as seasonal workers living in camps on farms. Town descendants, who came to regard themselves as 'real' locals, would look upon the next group to arrive as 'foreigners'. One descendent of local grape growers and Indian families recalled the way that some townspeople viewed the itinerant campers of the 1950s.

There were a lot of different groups in Griffith, not just the fruit pickers. Originally they had wagons

and moved around pretty continuously. Then many settled along the irrigation canals and built those huts made of flattened fruit tins. There were drovers with Irish Catholic names who brought their Aboriginal women, who were then called gins, who mostly didn't have children with them, and kept house. Usually the drovers had a horse and sulky, and when they settled they got odd jobs like chopping firewood. They were basically alcoholics and drank heavily. I know because my father was a winegrower and used to take their wine to them. A common way of dying in Griffith was to drink too much one night and then fall backwards into a channel and drown. There were also railway fettlers' camps spaced at pretty regular intervals out along the railway line. Every railway fettlers' camp basically worked pretty continuously on maintaining their own stretch of railway. They included huts with some Aboriginal families. Some white people in the town have a strange attitude. They say the Aboriginal people at Three Way are not 'real' Aborigines. It's hypocritical, because all these town people who consider themselves to be dinky-di are all descended from British, Italian, or other overseas migrants.

—Local resident, Yenda, 1996.



Bough shed at Frogs Hollow. Children with Christian activist Mary Kubank, c1957.

By the 1940s, many of the small household camps had collected into a larger community camp at Frogs Hollow. It was there that leading figures in the camp got involved with their supporters among the Griffith town community, white people who were in the service clubs and/or were Christian activists, to improve Aboriginal living conditions. At the cutting edge of this movement were the mission workers of the AIM. They organised camp residents at 'Christian conventions' under a bough shed (pole and tree branch shade structure). They also set up lines of communication between people of the camps and the town.

Frogs Hollow

The 1940s labour shortages brought about by the Second World War allowed many Wiradjuri families to get vegetable and fruit picking work. The fruit-pickers travelled in a circuit that included Shepparton and Young, with several seasons each year at Griffith.

Some decided to stay on between picking seasons and over the early 1950s about half a dozen families joined the Carberry household who had settled next to an irrigation canal at Frogs Hollow. It was on the western edge of the town (where Parkinson Crescent was later built). Clancy Charles moved there when he married in the 1950s. He remained there and at the adjacent reserve of Three Way for the rest of his life.

Frogs Hollow was all low-lying flats covered in [cypress] pine scrub. There were a few white chaps living in bag camps and tin humpies. I married Ethel [daughter of Tom Goolagong] from Condobolin and we moved into Frogs Hollow. I finished up shearing at Barellan with Kenny Goolagong [father of Evonne Goolagong] for about six years. My missus stayed at Frogs Hollow and I used to come back to Frogs Hollow when I got a break from the shearing. My wife and I were together for 37 years. When she died I took it very hard and drank pretty heavily for a while. I'd spent most of my life doing shearing and orange picking, and that was hard work. But even in the late fifties you weren't allowed in the pub unless you had a Dog Tag [exemption certificate] displayed on your coat or if someone brought the booze to you.

—Clancy Charles, Three Way, 1994.



Frogs Hollow 1950s. Gloria Fields stands in front of her hut holding baby Malcolm.



At Frogs Hollow in 1959 before moving to Three Way (left to right): Loma Murray, June Daley and Isabelle Johnson with young brother Keith.



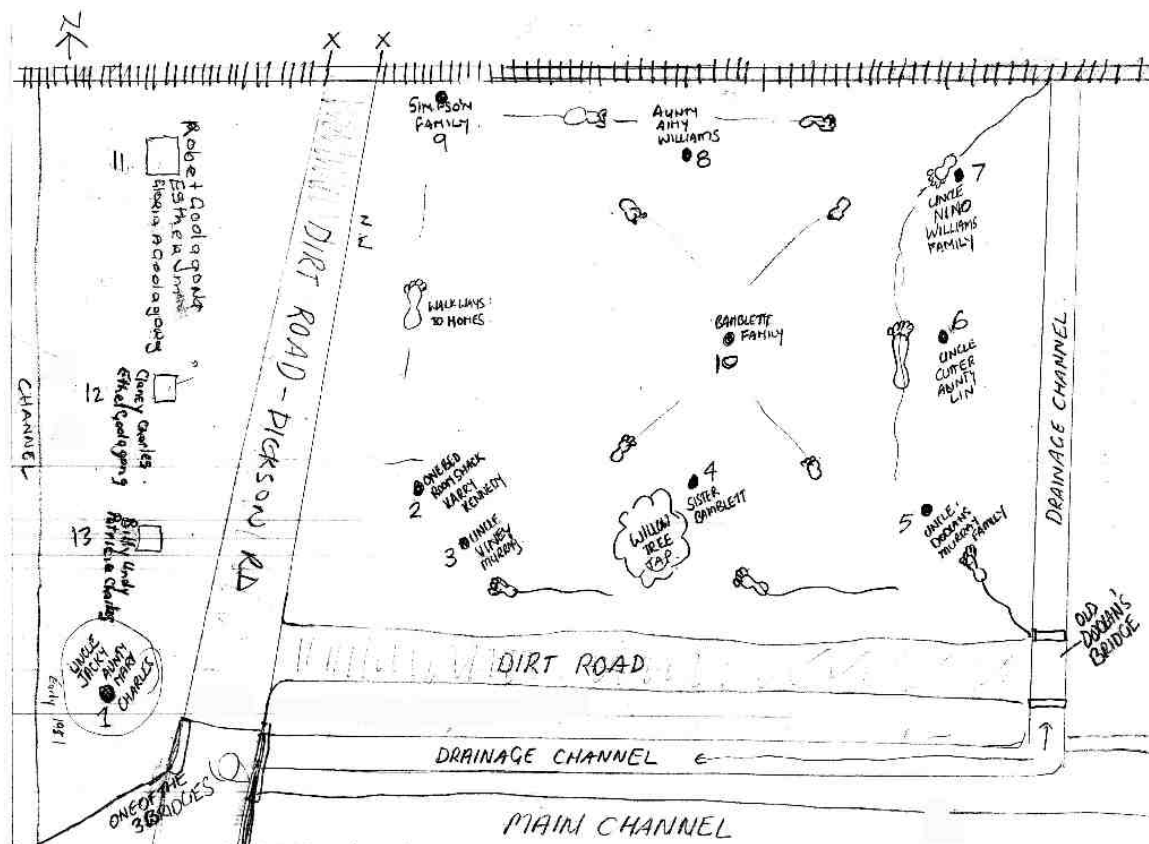
*Murray family home at Frogs Hollow, 1950s
Left to right: Doolan Murray, Bobby Charles, Michael Murray, Lynette Murray, Cyril Charles, Graham Murray, Ethel Murray. (source: June and Margaret Murray photo reproduced in WYK 2006).*

The huts were temporary structures. Beverley Penrith (nee Charles) had an early childhood recollection of the camp. The family hut was very small, with a main room for cooking, bathing and eating, a children's bedroom and parents bedroom.

I was born in 1946 in Cowra and my parents came here like all the other Kooris that came to Griffith. That was for the fruit season from October to April, picking peaches, apricots, prunes, grapes, apples; everything. They lived out at Hanwood along the lanes where the farms were. Places that were called Condo Lane, Cowra Lane and so on. I don't remember that and was only told about it.

My first memory was living just over the channel (from Three Way). Then we lived in Frogs Hollow till I was about ten. But my memories are childhood ones. My memories are all about my friends and cousins. I had a really good time growing up here. Child minding was shared around and we spent a lot of time with other families. We had to obey everyone. We were told to behave at school and not to bring notice to ourselves. We kept our heads down. I think that's so we wouldn't get attention from Welfare. Some even moved further out west. All the families here were seasonal workers and were probably moving around to avoid the Welfare. Every week we used to take the clothes down to an open fire to boil clothes in a metal drum and lay them out on the grass to dry. By the time we finished boiling, most of the clothes were dry. I think that most Koori camping grounds seemed to be called Frogs Hollow

—Beverley Penrith, Three Way, 2009.



Beverley Penrith's (daughter of Jacky and Mary Charles, household 1) memory sketch of Frogs Hollow camp in 1951. Beverley recalled her nearest of kin. They had moved from the reserve at Cowra as seasonal workers:

1. Jack Charles and wife Mary (nee McGuinness)
2. Auntie Carrie Kennedy (grandmother) and Gloria Kennedy (grand daughter) – from Ivanhoe or Hillston.
3. 'Viney' Murray (son of Doolan Murray) and wife May – from Cowra or Grenfell.
4. 'Sister' Bamblett (daughter of Uncle Cutter and Auntie Bamblett) and Jim Phillips, son Robert – from Cowra.
5. Uncle Doolan Murray and wife Hettie – from Cowra.
6. Uncle 'Cutter' and Lyn Bamblett – from Cowra.
7. Uncle Nino Williams and wife Auntie Dorrie – from Cowra, moved to Brungle.
8. Uncle 'Sparrow' Williams and wife Auntie Amy – from Cowra.
9. Reuben 'Slab' Simpson (from Cowra) and wife Doreen (from Condobolin).
10. Uncle 'Brickie' Archie Bamblett (from Warangesda, then Cowra) and Auntie Alma.

By 1964, people were moving across to Three Way. Gloria Goolagong only remembered hers and two other households at Frogs Hollow.

11. Bobby Goolagong and wife Gloria (nee Sloane-Smith-Powell), with Robert's sister Esther McGrath who was a

- widow, with children Tommy, Robyn and Leanette.
12. Clancy Charles and wife Ethel (Bobby's Goolagong's sister) with six children Wayne, Clancy, Beverley, Brenda, Josie, Leonie.
 13. Billy Undy and wife Pat, newly married, from Darlington Point.

Mavis Kilby remembered other families from Frogs Hollow. Mavis listed nine 'permanents': Williams, Monaghan, Bamblett, Murray, Johnson/Simpson (from Murrin Bridge and Cowra), Fields/Kennedy (from Ivanhoe and Hillston), Simpson, Thompson, Charles (from Victoria) and Firebrace (from Victoria).

The camp received a lot of help from white townspeople. Some time after a delegation of Aboriginal men from the camp had made a representation at Wade Shire Council, the Area News reported in June 1959 that a water line was to be supplied to the camp. The same article (by 'Nulla Nulla', probably an AIM missionary) contained a plea for citizens to attend a public meeting at the Council Chambers, to form a welfare organisation for improving conditions at the camp. Maude Little, who lived in a hut with her daughter and grandchildren, was quoted in the article. She contrasted the level of sickness among children at the camp with Brungle, where fresh water was available. At that time, the camp was known as Three-Ways Bridge Reserve, only later known as Frogs Hollow to differentiate it from the new Three-Way reserve.



*Sunday school at the camp in 1956.
Mission workers Miss Campbell and Helen Arnold (later Boxell) with children.*

The AIM (Aborigines Inland Mission) movement was most active in NSW up to about the 1970s. Mavis Kilby recalled Sunday school held on a ground sheet at the camp.

Miss Campbell was from Launceston and worked for many years in our communities. She had taught our parents Sunday school in Cowra. She already looked old when she arrived at Frogs Hollow, but she was very energetic. She lived in Cutler Street and used to come every Sunday to Frogs Hollow in the 1950s. She would throw a tarp under the pine tree there to hold Sunday school. Drilling the bible into us - Don't need to print that last bit! (laughter). She was friends with the Kubank family who were with the Baptist Church. Isabelle [Johnson's] brother Frank was sent at 16 to the bible college at Singleton to train as a pastor. He met and married another bible college student Rose Winmar from Western Australia. He is still in the ministry today. Later on I think the AIM changed to AEF or something like that.

—Mavis Kilby (nee Monaghan), Canberra, 2010.

Three Way

Three Way gets its name from the three-way irrigation canal bridge that was crossed to reach the reserve. From 1948 to 1953, delegations of town residents had complained to the Board that Aboriginal families living at Frogs Hollow were camping anywhere, their children 'running wild', and that living conditions for Aboriginal families were 'a disgrace'. The government response was to open Three Way reserve adjacent to the Frogs Hollow fringe-camp. The two hectares of land was formally established as an Aboriginal reserve in 1954. The people at Frogs Hollow relocated their shacks and moved across the irrigation channel into Three Way, but the reserve was under-financed and soon became overcrowded.



At Three Way c1962 (left to right): Robert Reid (son of Gwen Knight), Mavis Monaghan, Clive Briar. In front of Clive Briar's humpy, in the vacant area behind the 'mission' houses.

A town housing scheme was started in 1959 by a voluntary association of town residents from the growing professional and business class, first called the Aboriginal Assimilation Organisation, later renamed the Aboriginal Advancement Association. In an attempt at integration, a few houses were offered in the town as incentive for Aboriginal families to move off the reserve. Like other town housing schemes of the period, it was on a tight budget and offered housing to a few selected families. Families involved in the scheme did not fit the expected pattern of quiet town living amongst their all-white neighbours. The Association began to see that the attempt to socially integrate Aboriginal families by town housing had failed. It instead began to look at improving Three Way as an alternative means of raising the living conditions of Aboriginal families, and patching relations between the reserve community and the white sector in the town (Read 1988).



Tin houses at Three Way reserve. 1963 AWB visit.
(source: June and Margaret Murray photo reproduced in WYK 2006).



Three Way 1960s.

Michael 'Boy' Monaghan walks past one of the red huts relocated from Darlington Point reserve.

The NSW Aborigines Welfare Board had moved two tin huts from Darlington Point reserve and built six tin houses at Three Way for Aboriginal families in the early 1960s. Beverley Penrith thinks that people were hand-picked for first tin houses. Large and often crowded households were not always offered houses.

It wasn't 'first come best dressed' and large families weren't given preference. There were big households that didn't get a house. There was Uncle 'Lumpa' Gerald Bloomfield with his wife Blanche Charles (from Moama), and his daughters Tilly and Jean with their children. They were in a big sprawling place in the middle of the paddock at Three Way. Then there was my Mum, Mary 'I' Isabelle Charles (nee McGuiness, from Grenfell) and her family. 'Budda' Charles, who was the first selected for a house, wasn't even on the Association Committee. But he was known as a good man, a hard worker, a shearer and fruit picker. He mixed well with white people. 'Uncle' Doolan was the second selected to move in. He was older and well known. Everyone loved him. So they were selected for the first houses. I think my family were the first to move across from Frogs Hollow to Three Way, but we lived in a hut that a kind man from The Point (Darlington Point) built for us.

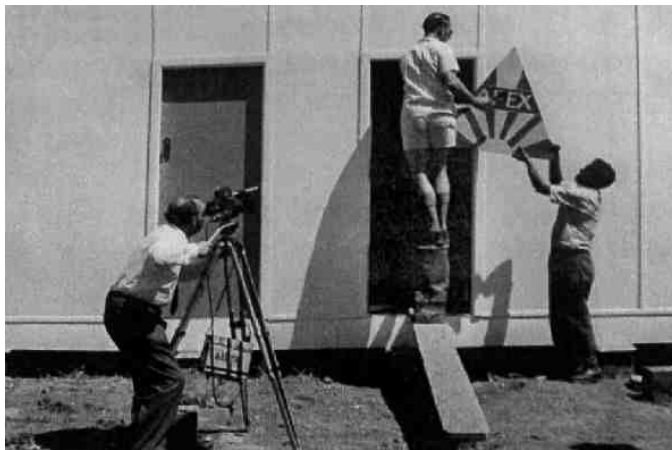
—Beverley Penrith, Three Way, 2009.



Three-Way reserve, 1960s.

Left to right: Robyn McGrath, and Johnson children Judy, Fred, Paddy, with Keith in front.

With the Aboriginal Advancement Association and service clubs (such as APEX, Soroptimist Club, Save The Children Fund) working together with the Aboriginal community, the community hall and pre-school were built.



*Three Way reserve c1960.
Doolan Murray hands Apex sign at finish of community hall construction.
(source: June and Margaret Murray photo reproduced in WYK 2006).*

After just a year of fundraising by community organisations, helped by a thousand pound private donation, the pre-school was established in the community hall on the reserve. It was officially opened by Mrs Mackay, NSW President of the Save the Children Fund in November 1964 (Dawn, November 1964). The community hall burnt down in the late 1960s and a new pre-school was later built at Blumer Avenue.

In 1970 the Lions Club organised a beach holiday for the Three Way children, and the Association obtained a school bus and helped with tutoring children's homework. The Council agreed to carry out sewerage and garbage collections for free but no single government body was willing to be responsible for the cost of bringing a sewer main out to Three Way. Eventually in 1977 the sewerage connection was built by a joint departmental funding effort (Kelly).

Shortly after, the tin houses on Three Way were redeveloped as a suburban Aboriginal housing estate. Roy Kennedy and Gloria Goolagong were representatives to Griffith City Council during the period of redevelopment and two streets are named after them. Three Ways was developed into 16 houses, a football field and a park.



*At Three Way c1950s (from left to right): Lulu Bowden, Mickey Monaghan.
Gwenie Knight visiting from Condobolin.*

One of Three Way's most noticeable features has been its segregated nature. Until the late 1990s, the approach into Three Way from the town centre was still marked by the change from bitumen to gravel road. It has remained a distinct Aboriginal housing precinct.



Gloria Goolagong

Three Way has had many long-term residents, such as Gloria Goolagong. Gloria is occasionally utilised by the local council and other organisations to carry out duties as a ceremonial elder, to welcome people to Wiradjuri country at public gatherings. Gloria first came to Griffith to live with her new husband and his parents at the camp beside the railway at Tharbogang, later settling at Three Way.

I stayed with my adoptive parents till I was 18 then came to Griffith where I met my husband Bobby Goolagong in 1960. We lived with his parents out at the camp beside the railway track at Tharbogang. Tharbogang was a mix of whites and Kooris. For some, you couldn't really tell whether they were white or Koori. Like 'Pearly Shell' Miller. Some were poorer than us. One family lived in the open, in amongst their furniture on the ground. All of the Tharbogang people are living in town now.

—Gloria Goolagong, *Three Way*, 2009.

Gloria then moved to Frogs Hollow and Three Way. Gloria recalled the move from the camp at Frogs Hollow and the consolidation of life at the Three Way reserve.

My original surname was Smith. My parents were only 15 years old when they had me at Wellington. The Welfare were onto their case, so Dad gave me to Harold and Dulcie Powell at Peak Hill, to raise as their own. I was fair-skinned and the Welfare might have taken me.

I moved into the camp at Tharbogang to join my new husband Bobby Goolagong and his parents. His Dad was a fruit picker and Bobby worked with him. His Mum died first and his Dad died a year later. We moved to Frogs Hollow in 1961. It was thinning out as people moved to camp across the channel at Three Way [because it had been lent or gifted to the Aboriginal community by the lessee]. There were just three households then. There were still a lot of people who lived out in the mallee [bushland]. Like there was Mr and Mrs Cummings, an elderly Aboriginal couple who lived out in the mallee near Lake Wyangan. They used to visit Three Way in their horse and sulky.

There were also people who came to the Three Way just to do the fruit picking. They would take over any hut that was vacated. We didn't have a lot of prize possessions at that time – mainly blankets and clothes – so moving was easy.

There was also a camp out at Mayfair [adjoining suburb] and people moved into Three Way from there. People started off camping in town and were gradually moved on by the Council. They kept on moving until they got to Three Way. A bloke who owned the abattoirs with his brother, Mr Condon, owned Three Way and gave the lease over to the people. I don't know his first name. We gave him respect by calling him Mister.

There were only about ten huts at Frogs Hollow and Three Way was being set up. The Aborigines Welfare Board moved two small red huts from Darlington Point Reserve. Then the first four houses were built by Colliers and Millers (a building company). They were tin houses with three rooms, better than what we were used to living in. Later there were two more tin houses built.

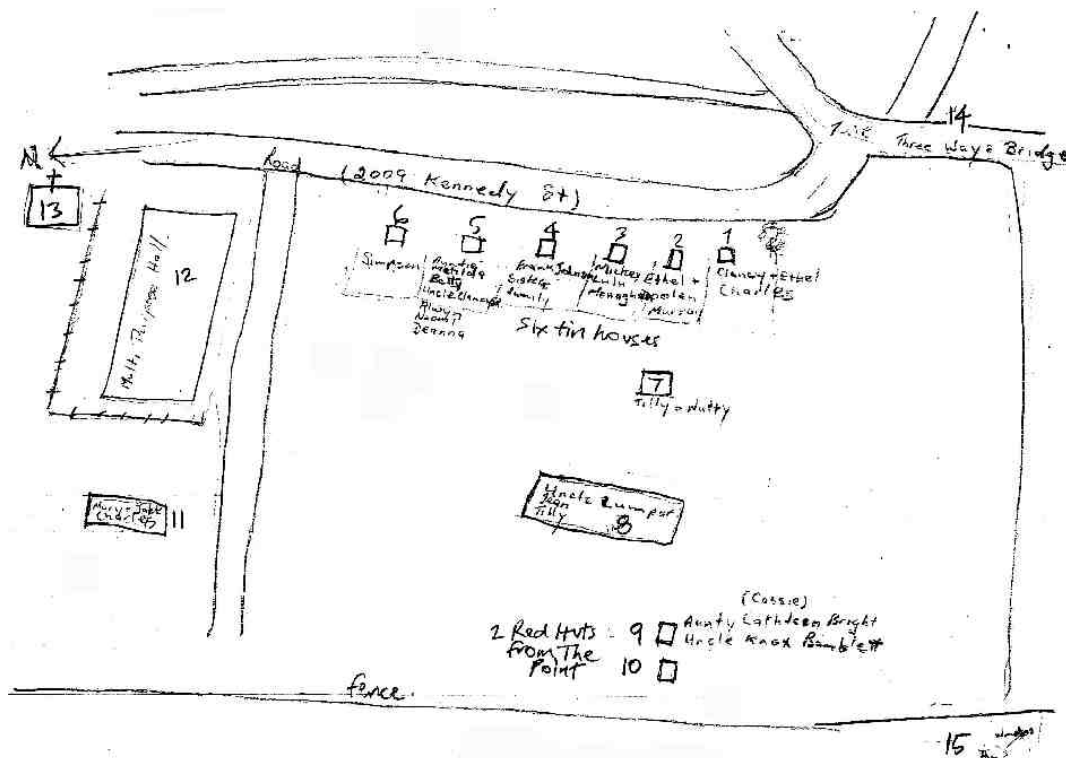
Clancy, my brother-in-law, and Ethel Charles went into the first house. Doolan and Ethel Murray moved into the second. Mickey and Lulu Monaghan moved into the third and Clancy's Mum, Matilda Charles, moved into the fourth.

Three Way had a pre-school built by the Save The Children Fund. We had a mix of whites and Kooris, and had a minimum proportion of Koori kids in order to keep funding. We had about ten Koori kids and five white kids on average. I worked for 19 years at the pre-school as a teacher's aid, cook, driver and anything else. Then the pre-school went to the Girl Guides Hall for two years. Then it went to Jenny and

John Hewitt's house for a year. Jenny put her life into the pre-school. Then it went to the current pre-school off Blumer Avenue, now called Wiradjuri Pre-School.

The pay wasn't much, but I retired after 19 years. I got an OAM in 1976 for my work at the pre-school. Save The Children Fund nominated me for that. I still go there once a week to help. I just love it.

—Gloria Goolagong, Three Way, 2009.



Gloria Goolagong's memory sketch of Three Way in 1960. It shows eleven households, some of whom had moved into the six tin houses built by the Board.

1. Clancy Charles (jnr, from Cowra) and wife Ethel (nee Goolagong, from Condobolin) and seven children.
2. Doolan Murray (from Cowra) and wife Ethel (nee Bamblett) with children Viney, Laurie, Hazel, June and Margaret.
3. Mickey Monaghan and wife Lulu (nee Bowden) with eight children Gracie, Mavis, Josie, Anna, Michael, Bernie, Fred, Michelle, Kevin.
4. Frank Johnson and wife 'Sister' Bertha (nee Bowden) with children Frank, Judy, Patricia, Isobel, Keith, Laurie, Ernie, Vincent.
5. and wife Matilda Charles (widow of Clancy Charles snr) with daughter Betty and her children Alwin, Naomi, Deanna and Dot.
6. Reuben Simpson and wife Doreen (nee Johnson) with nine children.
7. 'Nuttie' Bloomfield and wife Tilly (nee Carberry) with one child Gerald (grandson of 'Lumpa' Carberry).
8. 'Lumpa' Carberry (from NSW coast) and wife Blanche (nee Charles) with two daughters Jean, Tilly.
9. Knox Bamblett and wife Cathleen Bright.
10. Unknown.
11. Jack Charles (from Cummeragunja) and wife Mary (nee McGuinness). The hut, in which Beverley Penrith lived, had been built for the family by a white resident of Darlington Point.
12. Hall (including Save The Children Fund pre-school) built by Aboriginal Advancement Association, community service clubs and Aboriginal community.
13. Church built by AIM.
14. Three Way canal bridge.
15. Dam and windmill.

Fred Monaghan (b1950s) grew up in Three Way and recalled the unhealthy relationship between a local winery and the Aboriginal community.

In the 1970s and 80s we would go to the winery and be given a refund on any empty wine flagons. Our people would take an empty flagon and get it filled with the wine that was not labelled. It wasn't good wine. You would often find dregs swishing round in the bottom of the flagon. The Three Way people's bank account key cards would be stored under the counter and the winery owner would just take the money out of their accounts. It's very sad because we lost a lot of people [through alcoholism] that way.

—Fred Monaghan, Canberra, 2010.



Fred Monaghan

Beverley Penrith (nee Charles) also had lived in Three Way for most of her adult life:

People were moving across to camp at Three Way when it was given to us. That's when Welfare brought two red huts from Darlington Point reserve in about 1955, before the houses were built. The Dawn magazine was given out to people on the missions and that was our main source of information on what the Welfare were doing in other reserves. Then there was a newspaper called the "Abo Call". It was a one-sheet newspaper and when I think back on it, fairly racist. But we read the whole paper anyway. The little Three-Way bridge is important to us. When the Council came to demolish it, we had no consultation. But Billy Calabria, who grew up in a tin house near the bridge and near the Kooris, kept the demolished bridge and gave it to us. The bridge is probably as significant to him as to us. It is in the park now.

—Beverley Penrith, Three Way, 2009.



Beverly Penrith

Every family at Three Way had been touched by the child removal policy of the Aborigines Protection Board of NSW. Everyone knew of children who had been taken away by the Board to be trained in a home. Beverley Penrith told of the three generations of child removal in her immediate family.

Before, [1920s-1930s] if the wife died then the Board would take the kids. My mother [Mary McGuinness] was taken to Cootamundra when her mother [Rachel Murray] died. She used to say how in those early years if a girl misbehaved – spoke Aboriginal words or whatever – they got their mouths washed out with soap or were hosed down with cold water.

My brother Ernest [b1946] used to cart the water for Mum every day. Then, every day, he would get the 'cuts' at school for getting there late. He took that punishment daily. Some teachers used to enjoy doing it. Then one day, in second grade, he didn't come back from school. By the time he would have come back from school, he was on the train and half-way to the children's home. There were papers signed by the magistrate to say that he was neglected and not attending school. But he did go to school. My mother didn't understand why they didn't take all of us.

My sister Glenda had a baby when she was 14 years old. The father, Fred Carberry, was 16 years old. That was in 1959. Welfare just went into Griffith District Hospital and took the baby. They didn't take babies from the other teenage mothers. Glenda turned her life around, hoping she would get that girl

back. She later married the father. We never had any contact and the welfare wouldn't tell us where she was. Glenda grieved all her life. And she was a very gentle person. She gave up in the end and said 'I will never see her before I die'. Glenda died of breast cancer ten years ago. The only thing the welfare had told her daughter Donna was that her mother's family name had been Charles and that she was born at Griffith Hospital. And then, just a couple of weeks ago, Donna found us on Facebook. She was looking for the Charles family on Facebook and found us. That's amazing, isn't it?

—Beverley Penrith, *Three Way*, 2010.



Isabelle Collins

Isabelle Collins (b1944) grew up in Griffith and related how several generations of her family had been taken to children's homes, including one sister who was never found.

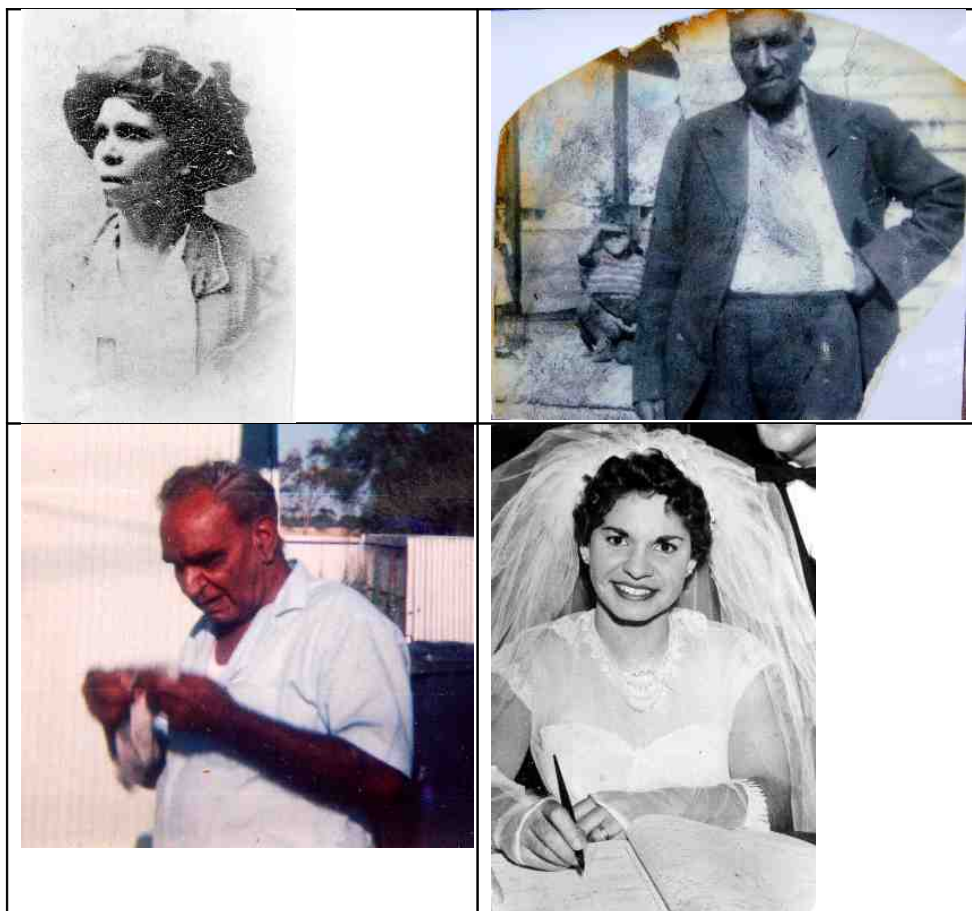
My mother Bertha Bowden (b1920) and her sister Lulu were taken from Erambie mission in Cowra in 1929 with seven others of her brothers and sisters. We still can't find the youngest one today (Florence Bowden). Both Mum and her sister did their employment after training at the home and returned to Cowra, where they got married and moved to Griffith. Mum came back to Cowra and married Dad (Frank Johnson) and ended up at Condo Lane (the camp adjacent to McWilliams vineyard).

Mum was taken in 1929 and aunty Lulu was a year or two younger. Lulu was taken as well. Our grandmother Florence McLean was married to Ernie Bowden and when the children got sent away, my grandfather went bush with the youngest child, which was Uncle Leonard. Then she got together with a Williams in Cowra and had George and Alec who was sent away, and Isabelle who wasn't sent away. When that marriage broke up she got together with Cecil Coe and had Florence, Cecil and Stan. All of them took the name of Bowden.

My grandmother (b 1898) died in 1941. Then the Welfare took the kids, Mum's brothers and sisters (Cecil, Stan, Isabelle and Florence). They went to Bomaderry home first, then to the Cootamundra and Kinchela homes. Grandmother's third husband Cecil "Hooky" Coe went to the Second World War. When he came back he found his kids at Bomaderry and Kinchela. He asked to get his kids back, but was only allowed to make visits. The army had taken his old life away and the government took his children. He got no help from either. He became an alcoholic and died at Cowra reserve.

We lost contact with Aunty Flo (Forence Bowden). Coral Edwards and (historian) Peter Read started Link-Up (a state funded Aboriginal family reunion organisation). Coral tracked Flo to Lithgow, but we have not heard from her. One time I was with Mum, getting some things at the shop at Mayfair. We saw a woman with two kids. Just standing on the other side of the road, staring at us. And Mum said 'That looks a lot like Flo'. When we went out into the street, she had left. We never saw her again. But I am hoping that Flo's children decide to contact us one day.

—Isabelle Collins (nee Johnson), *Canberra*, 2010.



A history of child removal (clockwise): Florence Bowden, born Warangesda 1898, 9 children taken 1929-1941; Florence's first husband, Ernest Bowden, who saved the youngest child Lenny from removal by 'going bush'; Leonard Bowden, who was saved from child removal by his grandfather; Florence Bowden, taken from Erarnbie reserve 1941 and lost to her family.

Mavis Kilby (b1945) remembered how groups such as the AIM and service clubs played an important bridging role between the town and Aboriginal communities. Aboriginal people also lobbied for services.

The AIM built the little church on the mission (Three Way). That was Ben Mason and David Kirk. They were the Aboriginal AIM pastors at that time. My father Mickey Monaghan was working as a labourer on the Yoogali Club building. My father was illiterate, one of those who would sign their name with an X. Through work, he met Mr Linicker, who helped him learn to read by lending him school reader books. Mr Linicker was with the Soroptimist Club and the club helped our people by building the hall at Three Way. The pre-school was established in a part of the hall. So that people wouldn't have to cart and drink the raw water from the channel, a group of three men, that was my father Micky Monaghan, with Clancy Charles and Doolan Murray, went to speak to the council so that a water tap would be put on at Frogs Hollow.

—Mavis Kilby (nee Monaghan), Canberra, 2010.



Mavis Kilby

Beverley Penrith also remembered the AIM workers at Three Way:

I was 14 when two [Aboriginal] Christian lads, built the little tin church. They were with the AIM. A lot of our people got their religion from that mob. Mostly the AIM [white] missionaries were travelling people, and used to visit. But there was one, Miss Campbell, that followed certain families and stayed in a house nearby. She had a very old car, like a model T Ford. She used to take us out to Les Kubank's property every year for a plane ride. That was for being good for the whole year I suppose [laughing].

—Beverley Penrith, *Three Way*, 2009.

Whatever the complexities of local community politics, the people's attachment to place developed and remained strong:

I met my husband Bobby when I came here for two weeks. I have now been here for 48 years. Most people who got houses in Three Way stayed here until they passed away. Only then did their families move into town. But at least half of our families have stayed.

—Gloria Goolagong, *Three Way*, 2009

Alice Williams (1940–2008) recalled the development of Three Way. Recovering from throat surgery and speaking through an electronic voice box, Alice wanted to place on record her community's response to town settlement and government management policies. Alice expressed misgivings about the move from government settlements and camps into suburban towns over the 1960s to 1980s period.

You see our parents taught us not with books, but through their lives. If they couldn't live it then they couldn't teach it. We had to know things and not fool ourselves. They said this is a white man's world, so learn to live with them. We lost of our language because of it. If we were caught talking in our lingo, we'd be prime suspects to be sent away by the Welfare, and put out on stations to work. That's why we haven't taught our own language. Which is sad because our grandchildren are looking for it today and we can't give it.

And yet my father, [John Charles, who came from Cummeragunja] knew his own language, but wouldn't pass it on to us. I heard him say to an old man one day 'No, we don't speak your language, we have the Murray River words', so I don't know what language it was and we weren't taught any of it. We were taught just to live with people, get on with people and work for what we wanted. Don't take handouts if there was no reason for it. If the work was slack, and you couldn't get a job, then to have a handout was all right, but not if there was work around.

We just travelled following the fruit and learning to get to know our relations. Some were in Victoria, and some in NSW. We worked as we went. But Mum and Dad finished living in Griffith when I was about ten because there was plenty of work.

There was no schooling because if you went to school and you were given a hard time. It's a bad thing to say but facts are facts. You got picked on in the school ground. Nobody listened to your side of the story, and then you got punished every time. So one day I walked out of the school ground and never returned. Two weeks of schooling I had. Not much, but two weeks.

People used to come from everywhere. People came from Shepparton and Moorabbin where the fruit and canneries were. I think they all came to Griffith to meet each other. There were many camping grounds around Griffith. There was what we called the Pines, on the other side of town. There was a camping ground way out past the cemetery near the old tip and saleyards. Some lived around the hill and at the train line at the next little siding at Tharbogang. Up here in what they called Frogs Hollow. It is now called Parkinsons Crescent and Lawson Crescent. And then the Council kept telling us to move back, and so we ended up over here. They'd say there were houses to put up and we'd have to move back. So we'd pull down our little tin huts and then we'd move back and build again. Then there was the generosity of one kind old man, Compton I think his name was. His words were 'move into my cattle paddock and let no one move you out. Live there from generation to generation.' He must have had a long lease on that land I suppose, I don't know. That's the land that is Frogs Hollow. I was about 14 then. But as soon as that happened it was revoked, when the government strikes it off, with a pen. I don't understand those things. We were seen as not being able to handle valuables or property.

Then there was a committee called the assimilating and advancement committee or something like that. They built four homes and put four families into them, and I think the AP Board put their hand out with money for those houses. The rest of the families stayed in their tin huts and camps. It is not a very pleasant situation, never was, and probably never will be. Councils are now suspicious because the way they see it, 'the big land grab' is on. They say 'What are you looking for?' Are they going to come in and take the land?' Probably thinking along those lines.

Most people carted their washing and drinking water from the channel. And every year the channel used to go right down. There used to be green slime on the bottom. The kids would run through there, and being kids, catching fish and killing them. Mum used to go every year and take up a petition

amongst the people. She'd say 'Sign the petition so we could get drinking water.' Some that stayed in the town wouldn't make any waves. They wouldn't sign any of the petitions and would say, 'Go away from here, Mary. You'll have our kids taken off us.' She used to say to them 'If you don't get any decent drinking water, you might not have any children to be taken off you.' This happened year after year.

You see people lived in fear of the Child Welfare Services or whatever it's called now. It's always changing its name. A lot of people still carry that fear. They won't stand up to their rights because they are afraid. That fear has come from right back. The child welfare would come and take your children. And this was a fact.

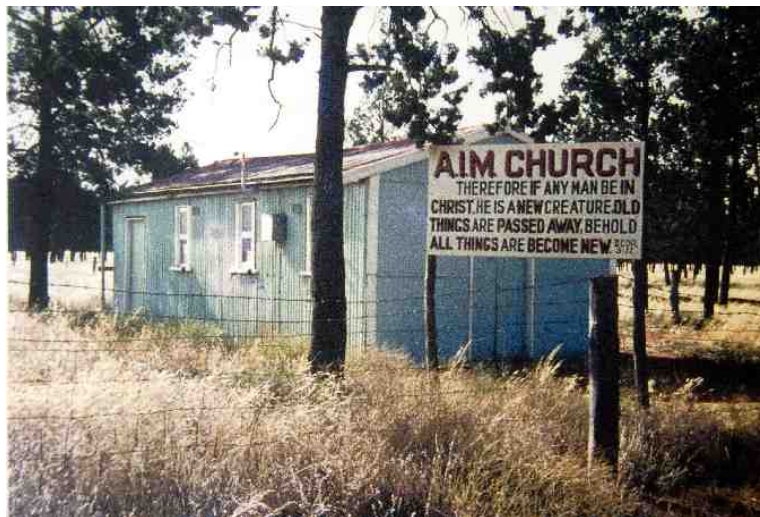
The Kooris lived wherever they could camp. They didn't have a mission with the advantages and privileges that places like Brungle had, where they had their own wheat and dairy, where you had only to walk down the hill and you were sitting down to the river fishing.

At Darlington Point they've always got on with each other, blacks and whites. When I got out here, I was called blackie, and I came home and I asked Mum and Dad 'Why do they keep calling me blackie?' And then they told me I was an Aboriginal. The black and white communities were very separate here in Griffith, although some of the young ones are now marrying across their communities.

Today an Aboriginal man came and spoke to us and said 'The Blackfella never had it, the white man did. Because it was in his genes. His genes got him educated and got him jobs'. He was really putting the Koori down, and he's a Koori himself. But I know a boy who's become a Koori Sister [male nurse]. And he's got Koori genes. There's a couple who are lawyers including one that I've watched grow up and I can tell you: he's Koori through to the backbone. You've got to be educated to live in this world. I'd rather live the way I was created. But that's gone out.

I used to say to my child, 'What did you do that for? I never did that when I was a kid'. And then I woke up to myself one day. I heard myself saying it and stopped because those kids have got more things to fight today than we ever had to in the past.

—Alice Williams, *Three Way*, 1994.



Three-Way 1960s. Church built by Aboriginal AIM pastors.

Discussion

Experience tells us that Aboriginal artefacts may be expected throughout the landscape, and particularly, close to wetlands. So it is necessary to consider why no finds were made at the study area.

Before the arrival of European settlers, most of the area now called Griffith was either part of the lands ranged by small, mobile and sparsely populated Wiradjuri groups. The likelihood of finding traces of Aboriginal use of landforms can be inferred from the nature of food resources, both plants and animals, found within them, and from the suitability of the terrain for camping.

In ecological terms, the greatest diversity of animal species is likely to occur at transition points between environmental zones, such as wetland margins. In these areas, species characteristic of both wet and arid environments are likely to be found.

Ecotones, or boundaries between two vegetation types, such as trees and grassland, were likely to occur at places such as the study area, where cold air drainage could create frost fans with grassland areas. Such small areas of natural pasture would have been grazed by macropods.

Hunter-gatherers knew intimately the seasonal round of changes in the environment, in much the same way as, for example any person in a city knows which bus to catch and what its number and frequency is.

Swamps were important to Aboriginal people as a water source and food resource. Ridges above the swamps are very dry and the swamps were where the greater diversity of life was located. That is where the wildlife would go. Wildlife would be gathered around the swamp margins as they came down to drink. Edible plants also grew in some swamps.

Local swamps provided a seasonal or ephemeral water source. Sources of water would have been part of the Aboriginal sacred landscape. Like many peoples, Aboriginal hunter-gatherers knew that humans lived on the ground, but that their spirits and creators lived both above the ground in places such as rock outcrops or mountains; and came up from the underworld through water soaks and springs. Human access to this spiritual world was therefore provided by special places in the landscape. The amount of physical evidence left as stone flakes at such places is uncertain.

The prehistoric landscape setting of Griffith would contained a variety of local resources associated with the Aboriginal way of life: special places for ceremonies, sources for body paint and ochre paint, places for burial of the dead, raw materials for tool manufacture, and plants with a rich range of uses. Like all peoples, Aborigines used the land and its natural resources for daily necessities. Gathering from nature should leave visible marks on the landscape in the form of quarries and scarred trees, and the refuse from daily living is expected to be found at sites, notably small stone artefact scatters.

A reasonable model (for the purposes of archaeological investigation) of pre-historic Aboriginal land use of the region was that of seasonal occupation. The Murrumbidgee River, with its large supply of permanent water, was relatively densely settled.

In certain seasons, say in spring if fresh water appeared in the lakes and swamps, people would split off from the large Aboriginal camps along the Murrumbidgee River. They would fan out in smaller, single household groups into the surrounding hinterland. At these times of plenty, there would have been small camps established around Lake Wyangan and the swamps.

This phenomenon of instability of large social groups and the need to split off into household camps for seasons is a well known hunter-gatherer pattern. Lee and DeVore (1968) referred to it as social “fusion” and “fission”. Kabaila (1999) has hypothesised that this pattern continued into historic period Wiradjuri use of Aboriginal reserves. Large communities were continually splintering into households that would travel away and set up camps elsewhere, returning to visit the larger settlements at towns and Aboriginal reserves.

Hunter-gatherer life was thus a pattern of living in small foraging groups (‘bands’), which move around. This explains much of the operation of Wiradjuri communities and sheds light on their difficulties of settling into towns.

Each group operated from a camp, where collected food was shared out. Whilst the women and children were based around the camp, men travelled further to hunt. Food supply maintained the local group size at about 25 to 50. Groups tended to be spread out as sparse populations, around 1 person per square mile (approx. 260 hectares), and in the range of 1 to 25 persons per 100 square miles (approx. 2,600 hectares). Each group moved around in order to hunt and gather, so personal property was at a very low level, maintained at a minimum by a generally egalitarian system.

Groups came together on a seasonal basis, which divided the year into times of fusion into large groups (‘public’ periods) and fission into separate household camps (‘private’ periods). Larger groups, sometimes called ‘tribes’, were of about 500 people, the manageable size for everyone to know everyone else. Groups were not bound by any necessity of maintaining property. They did not maintain exclusive rights to any parcel of land, because they frequently visited other groups. The hosts of one season become the guests of another, so that reciprocal obligations were built up between groups. In this way the population was kept circulating between permeable and shifting group territories (Lee and De Vore, 1968).

In the period after European settlement, Aboriginal household and clan groups lived in a series of town and bush camps in the Griffith area. These camping places still figure prominently in the oral history of the local Aboriginal community. There were no known Aboriginal camps in the study area. The closest camp would have been the mixed race ‘bag camp’ along the railway tracks at Tharbogang.

One factor seems to have operated against the survival of artefacts on surface of the ground at the study area. It was noted above that there was extensive bulldozing of surface gravel including removal of trees. This would have removed any surface scatters.

The second factor operating against the survival of relics of Aboriginal occupation in the study area is the distance from water sources. Lake edges would be expected to be of high archaeological potential but on dryer ground such as at the study area, foraging activity may have been reduced.

When these factors are considered, it is no longer surprising that any signs of Aboriginal occupation in the study area have been disturbed beyond recognition.

Survey Conclusions

The highly disturbed nature of the study area has created unsuitable conditions for preservation of surface stone artefacts. No Aboriginal stone, bone or scarred tree artefacts were found. The LALC letter stating the local Aboriginal response will be attached to this report when received.

The highly disturbed nature of the study area has created unsuitable conditions for preservation of stone artefacts on the surface.

Both stone artefacts and skeletal material (bone relics) have been found in the region.

It should be carefully explained to all workers on site that a person responsible for wilfully disturbing relics could be liable to heavy penalties under the relics provision of the NSW Heritage Act (1977).

If any stone artefacts or human remains are found during construction, then all excavation must cease until NPWS, assisted by a qualified archaeologist and Aboriginal community members, investigate the find and make a recommendation.

HISTORICAL HERITAGE ASSESSMENT

Name of the item

Tharbogang Quarry and Landfill

Other or former names

Tharbogang landfill.

Address (and legal property description if available, i.e. lot and dp number)

Lot 202 DP 756035, Tharbogang.

DESCRIPTION**Designer**

Not applicable.

Builder/maker

Griffith City Council.

Year started

Early twentieth century.

Year finished

Current.

Physical description

The quarry and landfill operation and proposed areas for expansion are located on McPherson's Range, near Tharbogang, a locality ("village") near Griffith.

Quarry, landfill, speedway and associated structures are located on former grazing land that has been cleared and surface scraped for gravel.

Bluedot Speedway.

Car race track and burn-out pad operated by amateur racing club, managed by trust. This is a temporary facility that has been located next to the landfill since c1980. It is serviced by several sheds and includes a fenced unpaved racetrack.



Bluedot Speedway

Existing Landfill

This is situated in a little valley (natural depression), not a quarry site. It was established c1970, and is situated north of the existing quarry. The landfill is to be capped and sealed off. It is to be covered with a metre or so of fill, and planted out, then left to decompose and consolidate for the next 40 years. Then it is anticipated to possible future use as grazing land.



Landfill

Leachate pond

This open earth dam collects any liquid that soaks out of the landfill that is contaminated. The liquid is normally pumped back on top of the landfill to aid decomposition. Due to the arid climate of the subject location, the dam is usually dry.



Leachate pond

Sediment pond

This open earth dam collects rainfall runoff from the quarry and from any disturbed areas that are not part of the landfill. It is fed by several drainage trenches. The dam allows runoff to settle before re-use for dust control spraying. Dust control spraying is done by truck over the roadway and over any areas of dust generated by traffic. Due to the arid climate of the subject location, the dam is usually dry.



Sediment pond

Animal pit

The current animal pit (approx. 10m x 10m x 4m deep) is one of a series of temporary excavations which are filled with carcasses then covered with soil. As each pit is filled another animal pit is excavated and filled in the overall animal pit location. As a result, there are a series of animal pits in the vicinity of the landfill which involve disturbance to the natural soil and strata. In theory, the animal pit is only used for large animals, such as horse, cows and sheep, but in practice it is often used for domestic animals. Domestic animals (dogs and cats) are also delivered as household waste to the general landfill. Animal pits were previously used at the landfill for dead birds from Barrters' Poultry Processing Plant. This was stopped in 1995 when Barter began to convert the dead poultry to fertiliser. There is also a local story

that a large animal pit was used to bury diseased chickens during the bird flue outbreak. Hundreds of thousands of birds were buried, and as this was emergency work, the pit was not lined with a waterproof membrane. As a result the escaping leachate caused complaint from neighbouring property owners.



Animal pit

Weighbridge and access roads

The weighbridge and access roads form part of the quarry and landfill operational structures. These were constructed in 1984 and are of standard design.



Weighbridge

Caretaker's Cottage (recently demolished)

The cottage was a standard building type common in the district. It was relocated by Council to its current site to operate as a caretaker's cottage (caretaker to the landfill). Only one caretaker is known to have lived in it, and it was subsequently used as a rental cottage. Cottage of early twentieth century type: timber framed, fibrous cement cladding with iron roof. Recent fencing and colourbond garage of standard design. Cottage 9.5m x 12m. Garage 6.5m x 6m. The ridgeline around the caretaker's cottage has been used for surface dumping of household and farm waste.



Caretaker's cottage

Stable and cypress fence

Small stable and fence constructed of cypress logs, wire and corrugated iron. Stable size 6m x 3m. These items are relics of earlier land use by the previous lessee who had established several small outbuildings at that location.



Stable and cypress fence

Existing Quarry – proposed to be an extension to the existing landfill

The existing quarry is an open pit excavation of sandstone and conglomerate used for road base and other engineering construction purposes (i.e., as foundation material). The existing quarry has two levels at present and the extension to the existing quarry is to excavate all to the lower level. This is anticipated to provide enough landfill for the next 20 to 40 years.



Existing quarry

Surveyor's blazed trees

Two surveyor's blazed trees (tabled as scarred tree no 1 and scarred tree no. 8 in the Aboriginal heritage assessment) are located outside the development area but within the boundaries of the subject land. They are discussed in further detail in the historical notes below.



Scarred tree no. 1 (left) and scarred tree no. 8 (right).

Extensions to existing Quarry

Extensions to the existing quarry are proposed at Pit 103 (over the surface dump around the caretaker's cottage) and Pit 101 (over the Bluedot Speedway). There is no proposed use of these pits for landfill at present.

Possible future quarry pits

Pits 205 and 305 are possible future pits are located in portion 201, an adjoining land parcel to the north of the development area that is also owned by Council. Portion 201 does not form part of the current development application, and therefore was not assessed for heritage values.

Physical condition

The entrance weighbridge and access roads into the landfill are of recent construction and are well maintained. By contrast, physical condition of the speedway area is poor. The surveyor's blazed trees and speedway signs are undisturbed and intact.

Modifications/dates

Little modification of the original layout of the landfill and speedway has occurred, as no new structures have been added.

Land use history

The study area of 123 hectares was surveyed as Portion 202 Tharbogang (Lot 202 DP 756035), also noted as Irrigation Farm number 1589, in 1918.

The two surveyor's blazed trees date from that period. They were interpreted for this study by local surveyor Brett Polkinghorne and Council surveyor Scott McKinnon. Both trees were noted on the 1918 portion plan for Lot 202. Typically, such surveyor's trees had a scar or blaze a metre or so above the ground, so that they could be easily seen by people on foot or on horseback.

Tree no. 1 is a Water Commission bench mark. BM usually was chiselled for "bench mark", followed by the initials of the surveyor and a number. The Water Commission marked these trees as part of their survey of levels through the area for subdivision into irrigation farms. Typically, a right angled shelf was cut into an old tree root at ground level and the level marked with a wooden peg. This bench mark was a height marker only (pers comm: Council surveyor, 2009).

Tree no. 8 is a reference tree for a lot boundary. Typically, such trees showed a point of reference (chiselled arrow tip or wooden peg) with a bearing and offset to a corner of a boundary. In other words, this type of blazed tree is a position marker only (not a level marker) It located a lot corner position on a horizontal plane, rather than a height. The tree type, bearing and offset were then recorded on a portion plan. The fact that there is a clout nailed into the tip of the arrow and a painted roofing nail fixed into a chiselled tree root of this particular tree shows that a later surveyor had relocated the survey mark (for a later subdivision or boundary survey).

The 19th century practice of digging lock spits (rock filled trenches 1' deep x 18" wide x 6' long in a right angle at either side of the tree, in case the tree dies or is struck by lightning) was discontinued by the time the irrigation surveys were being carried out in the Murrumbidgee Irrigation Area.

The portion plans are of historical value. They often indicate conditions that were present earlier in the history of, or prior to, European land uses. In the case of Portion 202, the surveyor has marked stunted gum timber across the centre of the lot (approximately where the present landfill and quarry are situated) and marked rocky hills (approximately where the caretaker's cottage was situated). The "rocky hills" on the subject land are identified in the 1918 portion plan for the adjoining portion of 201 as part of McPherson's Range.

From 1918, there was limited grazing, as the area only had occasional grass cover. It was later cleared and scraped for surface gravels. Stratified archaeological deposits would have been destroyed.

There is no oral account or other indication of Aboriginal people having camped within the study area in the period after European settlement. Aboriginal families, did however, camp in local areas of mallee within reach of water, such as Lake Wyangan, and in residue land near water channels, such as along the railway tracks at Tharbogang. There were also many town camps that eventually led to the formation in the 1950s of Frogs Hollow and in the 1960s of the Three Way Aboriginal reserve.

An ethnographic account of Aboriginal settlements of the Griffith region is **attached**, featuring conversation notes with Gloria Goolagong and Beverley Penrith, two long-term residents of the Three Way Aboriginal housing area.

Council's tip at Collina was being de-commissioned in 1977 and so Wade Shire Council made a proposal to acquire Portion 202 at Tharbogang for a new tip. In 1981, it was purchased from the owners, Richard Jack Fawcett and Agnes Patricia Fawcett for \$200 (Griffith Lands Dept records).

The adjoining lot, outside the development area but also acquired by Council, had been leased in 1949 by Mr J. Young as a 20 year lease for grazing. It was leased for grazing until 2005 when Council

purchased the lot for \$265,589.73. The change in land value of local portions from \$200 in 1981 to \$265,000 in 2005 suggests a huge rise in local real estate values over the 1980s and 1990s.

Lot 202 land was gazetted as a reserve for a garbage depot in 1984 and Council relocated a c1920s fibro cottage to the site as a caretaker's cottage. This was located in an area which had a few farm structures that were built by previous lessees (such as the Betts' family), who had a farm lease from the Crown. The stable and remnant cypress log fence appear to be remnants of these structures.

The Bluedot Speedway track was established c1980.

The Griffith Off-Road Club had recent involvement in the Speedway and was looking for extending the lease or re-locating. Its President, Les Siviour, explained:

Regarding the Off-Road Club involvement, we have been running races for 25 years, and at the Speedway for six years. My wife and I have had some years off being involved in the NSW Off-Road Championships, but we are preparing for the 23-24 July 2010 NSW segment of the Australian Off-Road Championships, run by C.A.M.S. The Speedway lease is up in February so we have applied to Council for another paddock on the Hillston Road to run the NSW Championships.

- Les Siviour, conversation with Peter Kabaila, Oct 2009.

David Jackson (tel 0418 696 662, 02 6964 404) started racing in 1978. He recalled many of the important race events that the club has been involved in:

My first race car was a Mini. But we don't like to talk about that, because it was always breaking down. There was racing in Griffith as early as the mid to late 1960s, when the Griffith Motor Sports Club, which included cars and bikes built the Pines Speedway, (near the Golf Club). Jim Jackson and Ross Brown were racing then. The car part of the club split off from the motor bike group in the mid 1970s. The motor bike group still operates as the Griffith Motor Sports Club. It also still operates on the Pines Speedway, which is just for motor bikes.

We became the Griffith Speedway Club. We raced on Leeton's track and at Narrandera and at Temora in the late 1970s. After much lobbying in 1981 we got the block from the Council at Tharbogang. The club members begged borrowed and stole to build the club facilities. Everyone made sacrifices and chipped in, and we opened in 1984.

Raymond "Blue" Emery was a local businessman and Dorothy was his wife. They were very good supporters of the club and lent thousands of dollars. He had red hair and the temperament to go with it. Hence the nickname "Blue". They were the Bridgestone Tyre dealers in Griffith (located in Wakaden St). He retired from his business the day before he died. The club felt that Blue and Dot should be honoured and so the Speedway was named "Bluedot" after them.

One shocking accident at this event was when a bloke lost control at the straight. The flagman came running over to the scene of the accident, saw the driver standing at his vehicle with only one arm. The flagman just about fainted, but then the driver reassured him he was an amputee. We also ran the state titles for the ACT/NSW Board. We had quite a lot of high profile events.

We are actually running burn-out competitions there now. We run about 6 events per year. Also another race it being planned for March 2010.

We ran a series of big dinner dances to raise funds when the club peaked at about 200 members in the mid 1980s. At that stage we were running about 6-8 race meetings a year. One year in 1988 we ran the Limited Sprint Car event. This put Victoria's nose out of joint because the event had been started in Victoria. The way that it happened was we ran the Victorian title here and then we had the Australian title here. We had cars turn up from just about all over Australia.

- David Jackson, conversation with Peter Kabaila, Nov 2009.

Allan Bennett started with the Club in 1979. In 2009 he was its longest serving member. He recalled the sacrifices that the community had to make in order to establish the club:

We had to cut the track out of the side of the hill. It was not an ideal site. We used dynamite on some parts of the track to get rid of the rocks. Then we set about building the protective fence, toilets, showers and kiosk. Then we built the pit office and scrutineering shed. Then we built the little bar that we can't sell alcohol from.

*The list of structures is as follows:
Canteen, brick 10 x 10m including toilets
Commentator's box/tower on top
Protective fencing: timber plus concrete covered by tyres
Speedway
Three fences : cars, safety, spectator fence
Office, brick
Scrutineering shed: colorbond
Pit and paddock*

A lot of stuff got dumped out on our ground by people without permission. So there is a lot of junk around the speedway that has nothing to do with our activities.

We also did a lot of fundraising. We've done catering for the Australian off-road championship events for the last 25 years. We would camp out at the event and would cook a hot breakfast out at Rankins Springs for 100 people every morning. That raised about \$15,000 a year for our club. Then that event was stopped 3 years ago because of insurance problems. Because the off-road track runs through a lot of private land and owners could not be insured. The off-road event eventually moved from Rankins Springs into town.

Racing commenced at Bluedot in 1984. We got it all done with voluntary work and it took a few years. Our estimate to relocate worked out to about \$0.9M.

We know the whole area was skimmed for gravel before we got there. There was only 5 foot pine regrowth. Hardly any old growth. Realistically I would think that it was scraped for gravel in the mid 1970s, about 6-8 years prior to our arrival. There were little pits scattered through the area that we had to level out.

When we got the land we knew that it was proposed to be a rubbish dump. But all that seemed a long way off at the time. We used to have our own on-site caretaker. He lived in a van near the kiosk. He looked after our manicured lawns.

Council pump town water to settle the dust. We can't understand why they didn't connect to raw water, as the source is within easy reach of the landfill.

The track is on the side of the hill, so there are different feelings about it among drivers. It feels strange and it's quite unique.

We felt a decline in the club starting when the weighbridge went into the rubbish tip in about 2000. After that it became more difficult to reach the speedway and take part in events.

- Allan Bennett, conversation with Peter Kabaila, Nov 2009.

The landfill has been in operation from 1984, employing the cut and fill method.

In 1991 Council investigated quarrying the site for road base and other foundation material. The existing quarry has been in operation since 1991, using drilling, blasting, excavation and truck transport from the site.

In 2001 Council lodged an application to expand the quarry and landfill. That application was withdrawn for a few years. Council decided to progress with the expansion in 2005, which is essentially the current proposal.

Assessment of Heritage Significance

Structures and features on the subject land are neither locally nor State listed. Absence from such registers is as likely to be the result of haphazard coverage, as of the absence of a properly determined heritage assessment. Therefore the fit of the subject land to the State Heritage Register criteria needs to be reviewed to determine whether there is a case for treatment as a heritage item. The following standard criteria are set by the NSW Heritage Office. Significance under each criterion is rated as either high, moderate or low.

Criterion A: Historical Significance

An item is important in the course, or pattern, of NSW cultural or natural history.

Guidelines for inclusion are:

- Shows evidence of a significant human activity
- Is associated with a significant activity or historical phase.
- Maintains or shows the continuity of a historical process or activity.

Guidelines for exclusion are:

- Has incidental or unsubstantiated connections with historically important activities or processes.
- Provides evidence of activities or processes that are of dubious historical importance.
- Has been so altered that it can no longer provide evidence of a particular association.

The Tharbogang Landfill at Lot 202 DP 756035 has an historical role in being part of the land surveyed for 20th century settlement of the Murrumbidgee Irrigation Area, but was subsequently only sporadically used for grazing. It has moderate to low historical significance as an area for gravel mining, car racing and landfill (rubbish tip). The two surveyor blazed trees are the most significant relics of the early irrigation period. The cypress log fence remains and stable outbuilding are of low historical significance as they have lost much of their original grazing land context, as the caretaker's cottage was relocated alongside these structures. The caretaker's cottage, though an early 20th century building, was of low historical significance as it had lost its original context, being relocated to the site in the 1970s and now demolished to remove asbestos hazard. The utilitarian structures at the Bluedot Speedway date from 1984 and later and are considered to be generally of low historical significance.

Criterion B: Associational Significance

An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW cultural or natural history.

Guidelines for inclusion are:

- Shows evidence of a significant human occupation
- Is associated with a significant event, person, or group of persons.

Guidelines for exclusion are:

- Has incidental or unsubstantiated connections with historically important people or events.
- Provides evidence of people or events that are of dubious historical importance.
- Has been so altered that it can no longer provide evidence of a particular association.

The Tharbogang Landfill at Lot 202 DP 756035 has a low associational significance.

Criterion C: Aesthetic/Technical Significance

An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.

Guidelines for inclusion are:

- Shows, or is associated with, creative technical innovation or achievement.
- Is the inspiration for a creative or technical innovation or achievement.
- Is aesthetically distinctive.
- Has landmark qualities.
- Exemplifies a particular taste, style or technology.

Guidelines for exclusion are:

- Is not a major work by an important designer or artist.
- Has lost its design or technical integrity.
- Its positive visual or sensory appeal or landmark or scenic qualities have been more than temporarily degraded.
- Has only a loose association with a creative or technical achievement.

The Tharbogang Landfill at Lot 202 DP 756035 is a common type of quarrying and fill operation of a rubbish tip. The excavation of the Bluedot speedway into the hillside and the surveyor's blazed trees are local examples of surveying and track building technology. Overall, relics at the landfill are of low aesthetic and technical significance.

Criterion D: Social Significance

An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.

Guidelines for inclusion are:

- Is important for its associations with an identifiable group.

- Is important to a community's sense of place.

Guidelines for exclusion are:

- Is only important to the community for amenity reasons.
- Is retained only in preference to a proposed alternative.

The Tharbogang Landfill at Lot 202 DP 756035 has moderate level social significance to members of the local car racing club. The two Bluedot speedway signs are significant reminders of club members' efforts and sacrifices to build the speedway and its facilities.

Criterion E: Research Significance

An item has potential to yield information that will contribute to an understanding of NSW cultural or natural history.

Guidelines for inclusion are:

- Has the potential to yield new or further substantial scientific and/or archaeological information.
- Is an important benchmark or reference site or type.
- Provided evidence of past human cultures that is unavailable elsewhere.

Guidelines for exclusion are:

- Has little archaeological or research potential.
- Only contains information that is readily available from other resources or archaeological sites.
- The knowledge gained would be irrelevant to research on science, human history or culture.

The Tharbogang Landfill at Lot 202 DP 756035 contains features that are examples of a relocated cottage, quarry, landfill operation, speedway and surveyor blazed trees. For research purposes, these are considered to be fairly common structures. The blazed trees have moderate significance in the study of survey and settlement of the Murrumbidgee Irrigation Area.

Criterion F: Rarity

An item possesses uncommon, rare or endangered aspects of NSW cultural or natural history.

Guidelines for inclusion are:

- Provides evidence of a defunct custom, way of life or process.
- Demonstrates a process, custom or other human activity that is in danger of being lost.
- Shows unusually accurate evidence of a significant human activity.
- Is the only example of its type.
- demonstrates designs or techniques of exceptional interest.
- Shows rare evidence of a significant human activity important to a community.

Guidelines for exclusion are:

- Is not rare.
- Is numerous but under threat.

The Tharbogang Landfill at Lot 202 DP 756035 contains structures and relics of low level of rarity. The surveyor marked trees, quarry, landfill, grazing lease structures, caretaker's cottage and speedway are typical of the Griffith region. The quarry and landfill are operations of a standard type. The caretaker's cottage was a common type of early irrigation cottage (timber framed fibro cladding with iron roof) . Many farms of the region have similar surveyor marked trees. Cypress log grazing lease structures are common throughout the region, as cypress was the vernacular material used in early fencing and owner-built outbuildings to c1960. The Speedway development is similar to the existing race track on Scenic Hill.

Criterion G: Representativeness

An item is important in demonstrating the principal characteristics of a class of NSW cultural or natural places.

Guidelines for inclusion are:

- Is a fine example of its type.
- Has the principal characteristics of an important class or group of items.
- Has attributes typical of a particular way of life, philosophy, custom, significant process, design, technique or activity.
- Is a significant variation to a class of items.
- Is part of a group which collectively illustrates a representative type.

- Is outstanding because of its setting, condition or size.
- Is outstanding because of its integrity or the esteem in which it is held.

Guidelines for exclusion are:

- Is a poor example of its type.
- Does not include or has lost the range of characteristics of a type.
- Does not represent well the characteristics that make up a significant variation of a type.

The Tharbogang Landfill at Lot 202 DP 756035 contains two blazed trees that are fine examples of early irrigation period historical relics. The cypress pine structures (fence and stable) date from a later period and are not notable examples of their type. Other structures and features of the subject property date from the 1970s and 1980s and are not significant examples of their type.

Integrity

An item has potential significance if it has a high degree of integrity (intactness).

The Tharbogang Landfill at Lot 202 DP 756035 contains some structures that are highly intact, including the Speedway structures, grazing structures of cypress log, and two surveyor marked trees. Of these, the most significant for their high degree of intactness are the surveyor marked trees.

SIGNIFICANCE STATEMENT

The Tharbogang Landfill at Lot 202 DP 756035 contains features that are examples of a quarry, landfill operation, speedway and surveyor blazed trees. For research purposes, these are considered to be fairly common structures. The blazed trees have moderate significance in the study of survey and settlement of the Murrumbidgee Irrigation Area. The surveyor trees are assessed to have local heritage significance.

The Tharbogang Landfill has an historical role in being part of the land surveyed for 20th century settlement of the Murrumbidgee Irrigation Area, but was subsequently only sporadically used for grazing. It has moderate to low historical significance as an area for gravel mining, car racing and landfill (rubbish tip).

The quarry and landfill are operations of a standard type. The two surveyor blazed trees are the most significant relics of the early irrigation period. The cypress log fence remains and stable outbuilding are of low historical significance as they have lost much of their original grazing land context, as the caretaker's cottage was relocated alongside these structures. Cypress log grazing lease structures are common throughout the region, as cypress was the vernacular material used in early fencing and owner-built outbuildings to c1960. Structures at the Bluedot Speedway are utilitarian. They date from 1984 and later and are considered to be generally of low historical significance. The Speedway development is similar to the existing race track on Scenic Hill.

The subject land has moderate level social significance to members of the local car racing club. The two Bluedot speedway signs are significant reminders of club members' efforts and sacrifices to build the speedway and its facilities. The speedway signs are assessed to have local heritage significance.

RECOMMENDATIONS TO THE CONSENT AUTHORITY

Introduction

The heritage assessment has determined that the study area is not of state heritage significance, but that it contains four items that are of heritage significance and that should be protected (in the case of two surveyor scarred trees) or relocated for display or reuse (in the case of two Speedway signs). Consideration must also be given to the chance of finding Aboriginal stone artefacts, skeletal remains, and significant historical relics.

Recommendation 1

That the two surveyor scarred trees (shown as numbers 1 and 8 on the Key Map) be preserved and protected, entered into the local heritage data base, heritage listed in the LEP and that a 20m radius development exclusion zone be maintained around each tree.

Explanation: Heritage is a mandatory consideration for consent authorities under Section 79 C of The Environmental Planning and Assessment Act 1979 – NSW. Provisions for making an LEP allow for protection of items of heritage significance. The Surveying and Spatial Information Act 2002 – NSW (Section 24) provides some protection against removal of survey marks but may not protect the tree as well as a development exclusion zone marked on a plan.

Recommendation 2

That the two Bluedot Speedway signs be carefully removed prior to commencement and handed over to the car racing club for safe-keeping, reuse or for negotiating as a display item with Griffith Pioneer Park Museum.

Explanation: Heritage is a mandatory consideration for consent authorities under Section 79 C of The Environmental Planning and Assessment Act 1979 – NSW. Movable heritage is generally not able to be protected in LEP provisions, as such items can be relocated beyond the local government area.

Recommendation 3

Consideration must be given to the chance of finding Aboriginal artefacts during construction.

The developer should continue to liaise with GLALC during the development period. Also the developer should inform all construction crews about the possibility of finding burials and develop a procedure for notification in case burials are found.

If any large stone artefacts e.g. axe heads, grinding stones or dishes and the like are uncovered during the development then they must be handed to GLALC for protection and preservation. These artefacts are highly significant to local Aboriginal people.

If a burial or any unusual bone materials (skeletal remains) are located during the development then works must cease immediately and GLALC and Griffith Office of DECC are to be informed of the discovery.

If any stone artefacts are found during construction, then excavation at the stone artefact location must cease until DECC, assisted by a qualified archaeologist and GLALC, investigate the find and make a recommendation.

Explanation: Under Section 90 of the National Parks and Wildlife Act 1974 (NSW), it is an offence to knowingly destroy, disturb or damage an Aboriginal object or place.

Recommendation 4

Any Aboriginal sites that are found must be registered on the DECC AHIMS database. (No sites were located during the current survey).

Explanation: Under Section 91 of the National Parks and Wildlife Act 1974 (NSW) it is a requirement to notify the DECC Director-General of the location of an Aboriginal object. Identified Aboriginal items and sites are registered with the NSW DECC on the Aboriginal Heritage Information Management System (AHIMS). Site cards would be submitted to the DECC by the person who located the sites.

Recommendation 5

A heritage constraint zone should be adopted for any sites of moderate to high archaeological sensitivity found. (No sites of moderate to high archaeological sensitivity were located during the current survey).

Explanation: Heritage constraint zones relate to areas of moderate to high archaeological sensitivity and should be mapped. The constraint zone would cover natural landscape which is highly likely to be associated with archaeological deposits and/or art.

Recommendation 6

Any identified heritage constraint zones be excluded from any development and/or impacts associated with the proposal. (No heritage constraint zones, **other than those around the surveyor trees cited above**, were identified during this survey).

Explanation: The objective of a heritage constraint zone is to provide protection to Aboriginal archaeological sites recorded and the area of archaeological sensitivity be identified by mapping.

Recommendation 7

An application be made for a Section 90 Collection Permit under Part 6 of the National Parks and Wildlife Act 1974 – NSW, for Aboriginal archaeological material such as isolated sites and isolated finds that would be disturbed by the proposal. As part of the Collection Permit, a Care and Control Agreement must be obtained from relevant Aboriginal stakeholder groups. (No isolated finds or other Aboriginal sites were located during this survey).

Recommendation 8

For any application for a Section 90 Collection Permit, that an advertisement be placed in the local print media for the registration of stakeholder interest in support of a Section 90 Collection Permit under Part 6 of the National Parks and Wildlife Act 1974 (NSW). (No Section 90 application was made during the current survey).

Recommendation 9

Consideration must be given to the chance of finding historical (non-Aboriginal) artefacts during construction.

In the event that any unexpected historical archaeological remains and/or deposits are encountered, works must cease immediately and the site secured. A qualified archaeologist will need to assess the find and liaise with the Heritage Office.

Explanation: Under Section 138 of the Heritage Act 1977 (NSW), a person must not 'disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit'.

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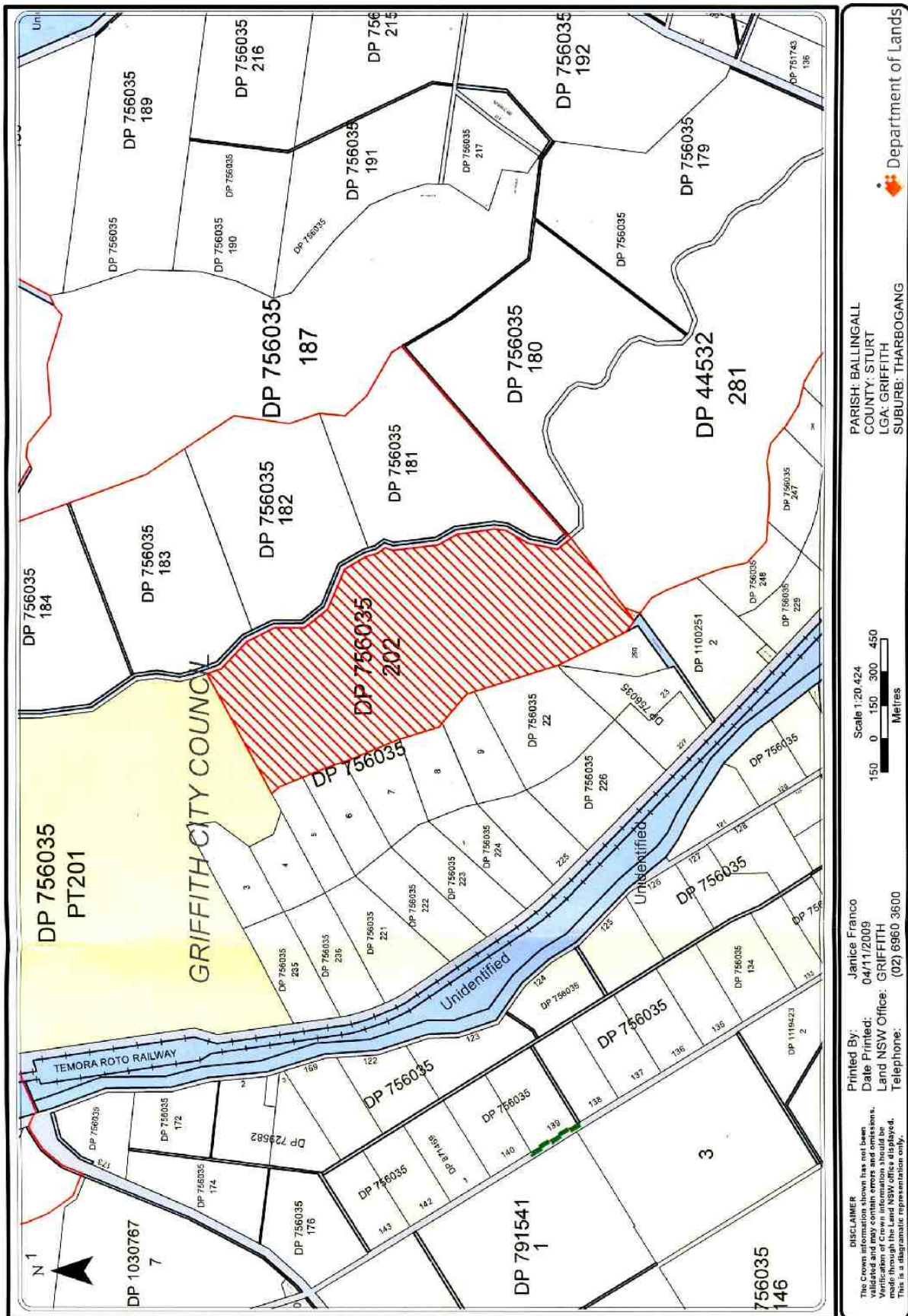
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MAPS



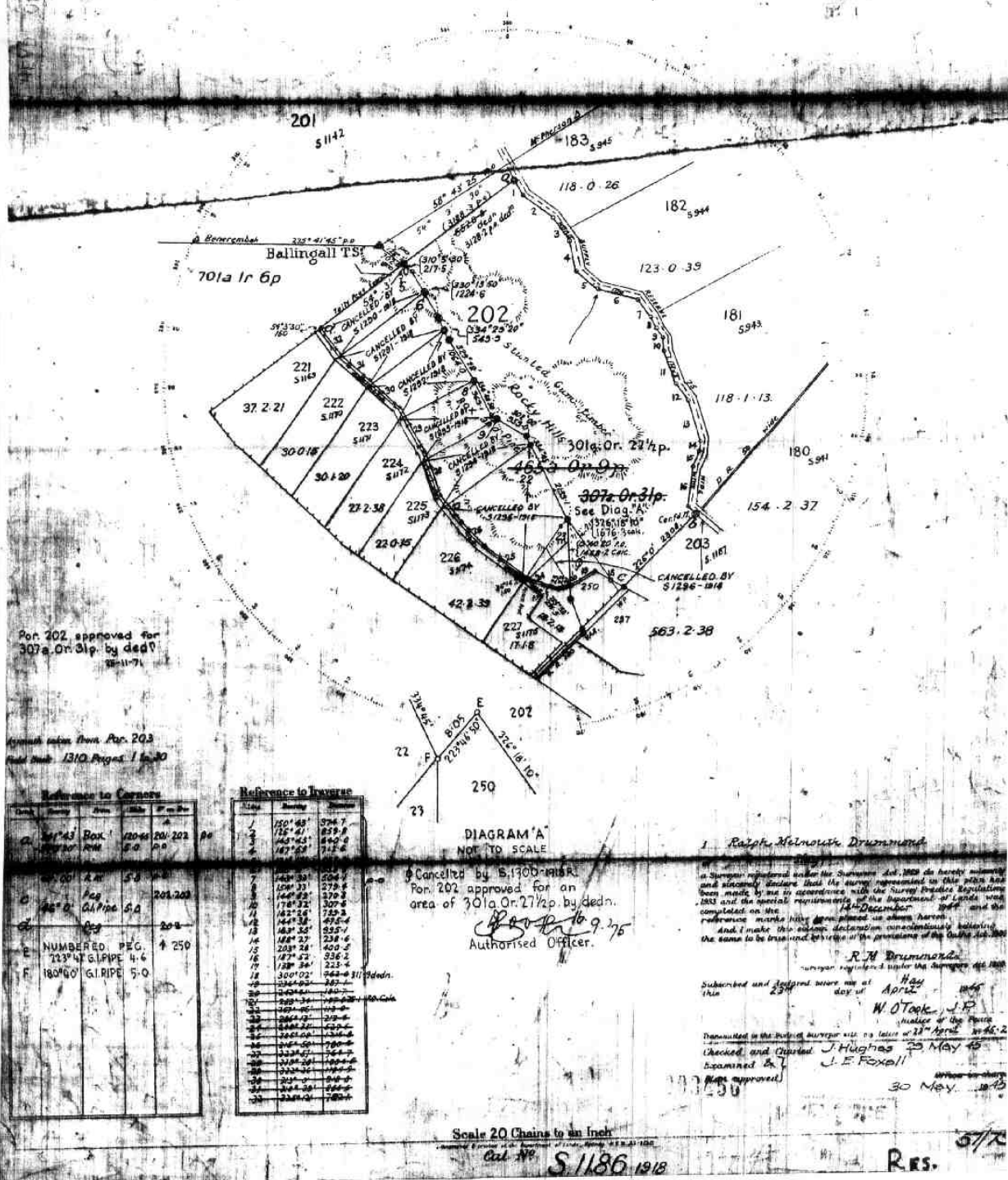
Map 1: Portion 202, hatched in red, contains the development area.

Cancels pt plan S. 1143. 1918
Main Murrumbidgee Northern Irrigation Area
Within Mirrool N.T. Irrigation Area (as varied) Prod. 11 August, 1930
Within B. 1208 fr. Dec. under M. R. or B.L. Note 14 June 1934.

Papers L.B. 44.257
Pks 45.2050

PLAN OF PORTION 202 Parish of Ballingall County of Sturt LAND DISTRICT OF MIRROOL LAND BOARD DISTRICT OF HAY WADE SHIRE

Applied for under the Section of the Crown Lands Consolidation Act 1913 by



PHOTOGRAPHS



1 Entrance sign to landfill



2 Weighbridge to landfill



3 Existing quarry (for extension of landfill)



4 Existing landfill



5 Animal pit



6 Animal pit



7 New soil cap over landfill (in foreground), quarry for extension of landfill in background.



8 Clubhouse and vehicle barriers at Bluedot Speedway



9 Bar at Bluedot Speedway



10 Clubhouse at Bluedot Speedway



11 Speedway sign



12 Speedway sign



13 Clubhouse, bar and track (to left) at Bluedot Speedway



14 Track at Bluedot Speedway



15 Caretaker's cottage, view from west



16 Caretaker's cottage, north elevation



17 Caretaker's cottage, south elevation



18 Caretaker's cottage, south (rear) yard



19 Caretaker's cottage, south elevation



20 Caretaker's cottage, east elevation



21 Caretaker's cottage, south elevation



22 Caretaker's cottage, garage north elevation



23 Stable (south of caretaker's cottage)



24 Stable (south of caretaker's cottage)



25 Scarred tree No 1. Surveyor's blazed tree.



26 Scarred tree no. 1.



27 Scarred tree no. 2.



28 Scarred tree no. 2.



29 Scarred tree no. 3



30 Scarred tree no. 3.



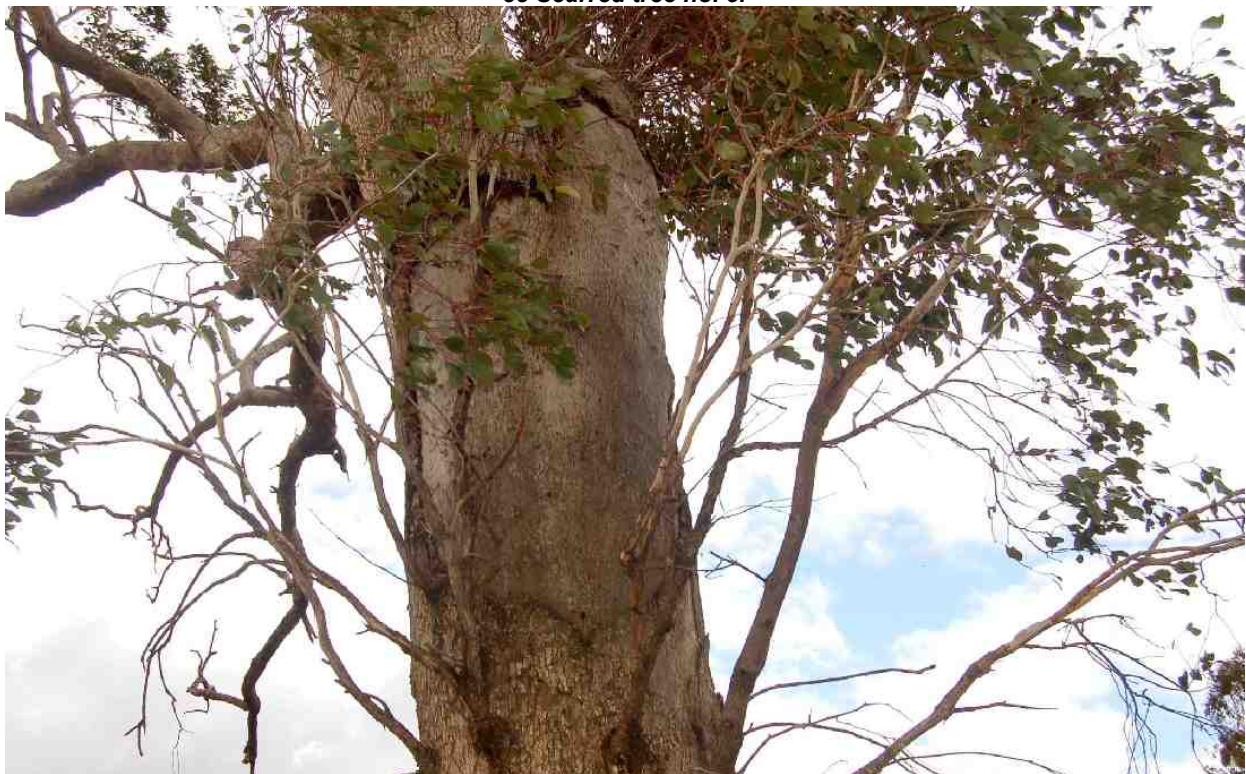
31 Scarred tree no. 4.



32 Scarred tree no. 4.



33 Scarred tree no. 5.



34 Scarred tree no. 5.



35 Scarred tree no. 6.



36 Scarred tree no. 7.



37 Scarred tree no. 8.



38 Scarred tree no. 8.



39 Leachate pond.



40 Sediment pond.



41 Speedway pit area and car dump.



42 Speedway sheds and entrance driveway

2007 REPORT BY GLALC

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GRIFFITH LALC

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THARBONGANG QUARRY and LANDFILL SITE.

Tharbongang landfill and Quarry site proposed development is located 20km west of Griffith on the Slopes Road.

The survey was to determine if there are any Aboriginal Cultural Material occurs in the proposed development area.

The inspection was undertaken on the 25-7-07 and 26-7-07.

The field study was carried out by on-foot lateral transects through the proposed expansion area to gain maximum coverage.

There are three scarred trees discovered during the survey. One scarred tree was located on the north boundary fence approximately 2 metres from the fence line.

The two scarred trees are located on the far west side of the survey area in the dried creek area.

The ground cover is very rocky with areas of small young pine trees. The whole proposed development area has been heavily disturbed with car tracks crossing the whole area. The scarred trees located are within the 50 metres easement around the proposed development area and will not be disturbed by the proposed development.

The scarred tree near the north boundary fence is a large white gum tree, the scar is 23cm wide and 900cm long, and facing southwest and the scar is 600cm from the ground.

The other scarred trees found near the creek. One of the scarred trees is located 40 metres east of the dam and the scar is 800cm long and 750cm wide on a large white gum tree approximately 11 metres tall. The other scarred tree located is 4 metres from the creek, and north of the dam.

There is no evidence of Aboriginal Heritage Cultural Material located in the proposed development area, found during the survey.

It is recommended that the Griffith LALC has no objection to the development going ahead.

With all developments if there are any Aboriginal artifacts uncovered all work must cease and the Griffith LALC and the National Parks & Wildlife Service contacted.

Thank You

Site Officer
G.J.LALC

(Provided by Griffith City Council)

STAKEHOLDER CONSULTATION LOG

Group	Person Contacted	Details	Date	Consult Rep.
Projects Planner City Development Griffith City Council	John N Allen 6962 8150 Mobile 0417 434 746	Requested previous archaeological reports on Sunset Waters and Pelican Shores developments.	07.09.09	Peter Kabaila
Griffith NPWS	Gary Currie, Branch Manager, DECC Griffith 6966 8100, Garry Currie 0417 270 415	Advised of the upcoming Aboriginal heritage assessment.	02.09.09	Peter Kabaila
Griffith TAFE Programs Co-Ordinator. Chair person, Aboriginal Advisory Board to Griffith City Council	Steve Meredith, 6962 0434, 0427 634 810	Advised of the upcoming Aboriginal heritage assessment.	02.09.09	Peter Kabaila
Griffith LALC	Warren Ingram, Acting Manager, 6962 6711, 6 Wiradjuri Place, Griffith.	Advised of the upcoming Aboriginal heritage assessment. griffilalc@bigpond.com.au	02.09.09	Peter Kabaila
Griffith LALC	Leanne Johnson, Admin Assistant, 6962 6711, 6 Wiradjuri Place, Griffith.	Advised of the upcoming Aboriginal heritage assessment.	02.09.09	Peter Kabaila
Murrumbidgee Irrigation Cultural Sites Officer	Steve Johnson 0424 686 808	Advised of the upcoming Aboriginal heritage assessment.	02.09.09	Peter Kabaila
Griffith DECC	Barina South	Advised of the upcoming Aboriginal heritage assessment. Request for copies of reports for Sunset Waters and Pelican Shores.	04.09.09	Peter Kabaila
Consulting archaeologist Lake Mungo specialist.	Wilfred Shawcross	General enquiry regarding burial preservation conditions around saline wetlands.	04.09.09	Peter Kabaila
Aboriginal Sites Officer, Griffith DECC	Lawrence Clarke	Advised of the upcoming Aboriginal heritage assessment. Request for copies of reports for Sunset Waters and Pelican Shores.	07.09.09	Peter Kabaila
Griffith LALC	Warren Ingram, Acting Manager, 6962 6711, 6 Wiradjuri Place, Griffith.	CONFIRMING REQUEST TO EMPLOY FIELD WORKERS Hi Warren Just confirming my earlier requests by telephone to employ field workers to help with archaeological assessment of two lots for my report to Griffith City Council. As discussed, I need a man to help walk the area with me and would like to do a couple of local history interviews, to put some local community history into the report. Names that were suggested to me in discussion with Steve Meredith and Steve Johnson were Michael Johnson, or Don Tomkins, and Gloria Goolagong (who I met at the Griffith Theatre during the visit to Griffith by Frank Sartor, Minister of Planning) or elders group. Could you or Judy Johnson give me a few names and	01.10.09	Peter Kabaila

		contact numbers? I can only do this fieldwork on Wednesday Oct 14th and would be very grateful if you could arrange for people to be available to assist on the day. I will be travelling the rest of October after today, but you can contact me on my mobile 0403727805. Kind regards Peter Kabaila		
Griffith LALC	Warren Ingram, Acting Manager, 6962 6711, 6 Wiradjuri Place, Griffith.	Phone call to request fieldworkers for Wednesday 14 October. Informed that general meeting of LALC will meet on Saturday 17 Oct to discuss.	12.10.09	Peter Kabaila
Griffith LALC	Warren Ingram, Acting Manager, 6962 6711, 6 Wiradjuri Place, Griffith.	Visit to LALC office.	14.10.09	Peter Kabaila
Aboriginal Sites Officer, Griffith DECC	Roy Barker	Discuss possible DECC Sites Officer verification of scarred tree sites.	14.10.09	Peter Kabaila
Griffith LALC	Warren Ingram, Acting Manager, 6962 6711, 6 Wiradjuri Place, Griffith.	Phone call. Informed that general meeting of LALC was broken up, but that need for fieldwork will shortly be resolved by discussion between Warren and LALC chairperson.	19.10.09	Peter Kabaila
Griffith LALC	Warren Ingram, Acting Manager, 6962 6711, 6 Wiradjuri Place, Griffith.	Phone call to request fieldworkers for Wednesday 4 November. Left phone message.	30.11.09	Peter Kabaila
Griffith LALC	Warren Ingram, Acting Manager, 6962 6711, 6 Wiradjuri Place, Griffith.	Arranged to contact Leanne Johnson the following day as LALC decision was that Leanne do the field work for the LALC.	02.11.09	Peter Kabaila
Griffith LALC	Leanne Johnson, Admin Assistant, 6962 6711, 6 Wiradjuri Place, Griffith.	Organised site inspections.	03.11.09	Peter Kabaila
Griffith LALC and Griffith DECC	Leanne Johnson (LALC) and Lawrence Clarke (DECC)	Conducted site inspections for Tharbogang Landfill and Lake Wyangan proposals.	04.11.09	Peter Kabaila
Griffith LALC	Warren Ingram, Acting Manager	Notified completion of survey, requested invoice, emailed report draft for stakeholder comment.	18.12.09	Peter Kabaila
Community elder	Isabelle Johnson	Phone call re amending history notes.	29.01.09	Peter Kabaila
Community elders	Isabelle Johnson, Mavis Monaghan, Fred Monaghan.	Meeting and interviews re amending history notes.	30.01.09	Peter Kabaila
Community elder	Isabelle Johnson	Copy family photos for history notes.	31.01.09	Peter Kabaila
Griffith LALC	Leanne Johnson, Admin Assistant, 6962 6711, 6 Wiradjuri Place, Griffith.	Discussed amended history notes for GLALC approval.	03.02.10	Peter Kabaila

STAKEHOLDER RESPONSES