

JOINT REGIONAL PLANNING PANEL (Region)

JRPP No	JRPP Reference Number
DA Number	DA13/0307
Local Government Area	Wagga Wagga
Proposed Development	Extension to Existing Tarcoola Quarry
Street Address	2 Gillard Rd EAST WAGGA WAGGA NSW 2650 Lot 4 DP 740222
Applicant/Owner	KR Tyson
Number of Submissions	6 public submissions 6 public authority submissions
Regional Development Criteria (Sched 4A of the Act)	Section 8 - Particular designated development Development for the purposes of (a) extractive industries, which meet the requirements for designated development under clause 19 of Schedule 3 to the Environmental Planning and Assessment Regulation 2000
List of All Relevant s79C(1)(a) Matters	See assessment report below
Recommendation	Approval with Conditions
Report by	Sam Robins

Assessment Report and Recommendation Cover Sheet

DESCRIPTION OF DEVELOPMENT

The applicant seeks permission for an extension to the operations at Tarcoola Sand and Gravel Quarry. The original operation was approved under DA292/88 on 23 March 1989.

The quarry has therefore been in operation at this location for some 24 years.

Recent issues have been raised with regards to the current operations complying with approved and licensed extraction limits and the approved extraction area. This application has been lodged in part to rectify these concerns and provide for the expansion of the quarry over approximately the next 15-20 years. The quarry is currently operating a scheduled activity without the appropriate licence from the Environmental Protection Authority. To gain the required EPA licence an updated development approval is required, hence the lodgement of the application.

The proposal involves increasing the extraction rate to a maximum of 150,000 tonnes per annum, progressively extending the quarry footprint to the north and west in a series of pits.

Stage 1 of the proposal includes the continuation of the existing operations to an area of approximately 5 hectares directly to the north of the existing operations. Stage 2 of the proposal will involve extraction activities to the west of Gillard Road with an overall area of approximately 7.5 hectares.

Quarrying at the site will involve the following 5 phases:

- Overburden removal and levee construction
- Extraction
- Screening, washing and stockpiling the raw material
- Loading, transport and distribution
- Rehabilitation (progressive and sequential)

The proposal includes 4 pits with the first 3 split into two cells and a sedimentation basin. Two pits currently exist on site. Two pits are proposed to be available for extraction at any one time with a 1:10 level AEP flood protection Levee constructed around the operational pits and the processing plant. Each pit will be split into two levels to allow for a range of material to be extracted as well as providing quarrying opportunities in times of high water table. The levee will be moved to protect each pit when opened for operation. Progressive rehabilitation of the quarry will be undertaken with rehabilitation of one exhausted pit undertaken concurrently with overburden removal and levee construction for the next pit to be incorporated into the operations.

The applicant has also proposed that a 'last bucket' extraction take place below the water table to enable access to some more economic gravel deposits. The applicant has proposed a maximum pit depth of 160 AHD, the current pit base is 169 AHD and the ground level is approximately 179 AHD. Excavation will be undertaken with the use of 2 excavators with material transported to the current processing area by dump truck.

The main products being targeted are materials such as loam, sand and gravel. The current and proposed gravel aggregates include:

- 20mm
- 14mm

- 10mm
- 5mm

The quarry is currently sub-let with 4 full time staff operating from the site and working hours proposed within this application are generally consistent with the previous approval being 7am – 6pm Monday to Friday and 8am – 6pm on Saturday. The information submitted suggests that the current operational arrangements will remain similar, with this application simply providing the option to quarry more material in line with market demand and for new pits to be opened when the current pits are exhausted.

Currently the majority of the material is distributed within the Riverina Region, supplying product to the construction industry as well as for flood mitigation works in more recent years.

The quarry requires water to operate and is proposing to operate within the water table at times. Water licences are therefore required from the relevant authorities. The relationship with the operations and water has been discussed in the body of this report.

If approval was to be granted for the expansion, a condition would be placed on the consent requiring the original consent to be surrendered, thus bringing the whole operation under the one consent. This would bring the current operations up to appropriate standards.

THE SITE & LOCALITY

The subject site being Lot 4 DP 740222, 2 Gillard Road is known as Tarcoola Turf and Quarries. The property is located approximately 3.5km east of the CBD. The site is located to the rear of the industrial land on the north eastern side of Koorringal Road and Hammond Avenue. The site is bound by the Murrumbidgee River to the north. Gillard Road dissects the subject site with the current quarrying operations to the east and the turf farm to the west.



Disclaimer: The City of Wagga Wagga does not warrant the accuracy or completeness of the information within this product. Any person using or relying upon this product does so on the basis that the City of Wagga Wagga does not accept responsibility or liability for any errors, faults, defects or omissions within this product.

Map printed: 9/01/2014

Access to the site is off the Sturt Highway and along Gillard Road which is sealed for the first 400m and then dirt leading to the reserve along the River. Gillard Road is currently in the ownership of Crown Lands and maintained by Tarcoola Quarry.

Tarcoola Turf and Quarries currently operate turf, weighbridge and quarry operations. The turf operations equate to approximately 80ha of the site (the majority of the site). The weighbridge is situated opposite the site office at the southern end of the site and is available to the public.

As mentioned the quarry has been in operation for 24 years, quarrying sand and gravel from the Murrumbidgee Flood Plain. The existing operations are located to the east of Gillard Road and consist of a northern and southern pit, screening and stockpiling facilities and a sediment pond located in the riverine corridor of the Murrumbidgee River. The quarrying operations currently equate to approximately 2ha of the site.

The surrounding land use is a mix of industrial land to the south and rural land with a mixture of uses surrounding the remainder of the site. These uses include a Paintball business to the south, Supermix Concrete and Quarry on the northern bank of the Murrumbidgee east of the subject site and a number of residences.

The supporting information identifies the residences by number, 1 through 5 for ease of assessment. The residences are located as follows:

- Residence 1 located approximately 300m to the south west of proposed operations
- Residence 2 located approximately 275m to the north west of proposed operations
- Residence 3 located approximately 200m to the south of proposed operations. This

- residence is located on the subject site and is Home to the owner of the land.
- Residence 4 located approximately 400m to the south of proposed operations
- Residence 5 located approximately 300m to the south east of proposed operations

The site is generally flat, contains substantial vegetation along the river and sporadic vegetation across the remainder of the site.

The site is considered bush fire prone and flood prone.

Numerous site inspections have been undertaken.

SUMMARY OF MAIN ISSUES

Impact on character of the area

Impact on amenity of adjoining properties

Flooding

Contamination

MATTERS FOR CONSIDERATION PURSUANT TO SECTION 79C(1)

For the purpose of determining this development application, the following matters that are of relevance to the development have been taken into consideration pursuant to the provisions of Section 79C(1) of the Environmental Planning and Assessment Act, 1979.

(a)(i) - The provisions of any environmental planning instrument (EPI)

Local Environmental Plan

Wagga Wagga Local Environmental Plan 2010 (LEP 2010)

The following provisions of the LEP 2010 apply:

Land Use Table

Under the LEP the site is zoned RU1 – Primary Production

The objectives of the zone that would be considered relevant are;

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource land*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- *To foster strong, sustainable rural community lifestyles.*
- *To maintain the rural landscape character of the land*
- *To allow tourist and visitor accommodation only where it is in association with agricultural activities.*

Under section 3 of Zone RU1 Extractive Industries are considered permissible with consent.

Extractive Industries area defined as follows:

extractive industry means the winning or removal of extractive materials (otherwise than from a mine) by methods such as excavating, dredging, tunnelling or quarrying, including the storing, stockpiling or processing of extractive materials by methods such as recycling, washing, crushing, sawing or separating, but does not include turf farming.

The Quarry has been operating in this location for the past 24 years and the proposed expansion is to ensure the quarry remains in operations for the foreseeable future. The principle of the quarry extension is not inconsistent with the objectives listed above and the forgoing assessment of this proposal has indicated that the proposal would have an acceptable impact on the character of the area and the adjoining land uses. It is therefore considered that the proposed expansion meets the objectives listed.

5.10 Heritage conservation

An Aboriginal archaeological assessment revealed the presence of an isolated Aboriginal object and therefore this clause applies.

The objectives of this clause are as follows:

- (a) to conserve the environmental heritage of Wagga Wagga,*
- (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,*
- (c) to conserve archaeological sites,*
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance.*

(8) Aboriginal places of heritage significance

The consent authority must, before granting consent under this clause to the carrying out of development in an Aboriginal place of heritage significance:

- (a) consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment (which may involve consideration of a heritage impact statement), and*
- (b) notify the local Aboriginal communities, in writing or in such other manner as may be appropriate, about the application and take into consideration any response received within 28 days after the notice is sent.*

The applicant has provided a detailed Aboriginal Cultural Heritage Assessment prepared by OzArk Environmental and Heritage Management. This report revealed the presence of one isolated Aboriginal object located within the proposed expansion area. The object is protected under the National Parks and Wildlife Act 1974 (NPW Act). The report has identified the need to obtain an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the NPW Act. The report also appropriately addresses mitigation measures based on the one item that was discovered. These include complying with the requirements of the permit and protocols compliant with the National Parks and Wildlife Act.

The application was referred to the Office of Environment and Heritage (OEH) who provided the following comments:

...The cultural heritage assessment and the process of consultation that has been undertaken for this development is consistent with OEH policies, and OEH is able to issue a Section 90 Aboriginal Heritage Impact Permit for the proposal subject to a number of

conditions.

The general terms of approval for this proposal are provided at Attachment A. If Wagga Wagga City Council grants development consent for this proposal these conditions must be incorporated into the consent...

As stated, the GTA's will be included on any consent granted. Compliance with conditions will ensure any additional objects uncovered will be protected to the relevant standards.

Part 7 – Additional Local Provisions

7.1A Earthworks

(1) *The objectives of this clause are as follows:*

- (a) to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land,*
- (b) to allow earthworks of a minor nature without requiring separate development consent.*

(2) *Development consent is required for earthworks unless:*

- (a) the work is exempt development under this Plan or another applicable environmental planning instrument, or*
- (b) the work is ancillary to other development for which development consent has been given.*

(3) *Before granting development consent for earthworks, the consent authority must consider the following matters:*

- (a) the likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality,*
- (b) the effect of the proposed development on the likely future use or redevelopment of the land,*
- (c) the quality of the fill or the soil to be excavated, or both,*
- (d) the effect of the proposed development on the existing and likely amenity of adjoining properties,*
- (e) the source of any fill material and the destination of any excavated material,*
- (f) the likelihood of disturbing relics,*
- (g) the proximity to and potential for adverse impacts on any watercourse, drinking water catchment or environmentally sensitive area.*

The earthworks require the consent of Council and will be substantial. Given the works involve large pits and levees there will be an impact on drainage patterns and soil stability in the locality. The proposed expansion is on relatively flat land in close proximity to the river. Although the drainage patterns will be altered they will have no impact on surrounding properties, the water will either enter the pits or river, both of which is considered acceptable with the exception of the water used for cleaning, this water will be appropriately bunded and managed as discussed in the body of this report.

The proposed levees will be conditioned to ensure that they are structurally sound. This will satisfy (3)(a) above.

The proposed earthworks will heavily impact the future use or redevelopment of the land, however the use as a quarry is permissible so no issues are raised.

The excavation is for quarrying purposes so will be utilised in the building and construction industry. The overburden will be kept on site and then returned to the pit once excavation is completed. This material may also be used in the construction of the levee or the battering of the pits. The quality of this fill therefore raises no issues.

The effect of the proposed development on the amenity of the adjoining properties has been discussed in detail throughout this report. The earthworks will cause noise, dust and flooding issues. By recommending approval the report has concluded that the impacts are acceptable.

The likelihood of disturbing relics has been discussed above and recommended conditions of consent will ensure that correct procedures are followed. The Aboriginal Heritage Study concluded that finds were not anticipated.

The Murrumbidgee River borders the site to the north and given the proposed activity there is high potential for adverse impacts on a watercourse. The extraction activities are approximately 80m from the top of the river bank at its closest point, however currently the site utilises a sediment dam in the riparian zone. The proposal is to rehabilitate this dam and construct a sediment basin in the eastern half of the existing southern extraction pit.

The sediment basin will receive all water from:

- Dewatering activities
- Extracted material processing
- Disturbed areas, stockpiles and access roads

Clean water will be directed around the operations and all dirty water will be directed with diversion drains to the sediment basin for managed use in the wash down process of quarried material. The EIS states that *'to enable the ongoing assessment of water discharged from the Tarcoola Quarry a monitoring program will be implemented including monthly sampling for Oils and Grease, Total Suspended Solids (TSS) and pH at locations within the quarry site and upstream and downstream of the release to the Murrumbidgee'*.

Further to this, the application is considered integrated development with the Environmental Protection Authority under the Protection of the Environment Operations Act 1997 (EPA). The application was referred to the EPA who provided the following comments relevant to this issue:

...The EPA has responsibilities for pollution control and environmental management under the Protection of the Environment Operations Act 1997. Following a review of the information provided, including the Environmental Impact Statement and all public submissions, we are able to issue our General Terms of Approval (GTA) for the proposed development...

The GTA's will be included in any consent granted. The GTA's include specific conditions

on the pollution of waters and concentration limits as well as monitoring, testing and recording. Compliance with the conditions and good management practices will ensure there is no adverse impact on the water course. The application proposes a 'closed' system where no water is directly pumped back into the River.

7.2 – Flood Planning

(1) The objectives of this clause are as follows:

- (a) to minimise the flood risk to life and property associated with the use of land,*
- (b) to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change,*
- (c) to avoid significant adverse impacts on flood behaviour and the environment.*

(2) This clause applies to:

- (a) land that is shown as "Flood planning area" on the Flood Planning Map, and*
- (b) other land at or below the flood planning level.*

(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development:

- (a) is compatible with the flood hazard of the land, and*
- (b) will not significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties, and*
- (c) incorporates appropriate measures to manage risk to life from flood, and*
- (d) will not significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, and*
- (e) is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.*

The subject site is considered flood prone as it is below the flood planning level, being 500mm above the 1:100 Average Recurrence Interval (ARI). Flooding of the site occurs directly as a result of channel overflow from the Murrumbidgee River as well as a drain (or flood channel) running to the south of the site. Predicted flood depths at the site range from 0.5m – 2.5m in a 10% ARI and in excess of 4m in the PMF. The application is therefore subject to assessment under this clause of the LEP.

The modelling indicates that the subject site floods in a 10% ARI and this was shown to be correct as the site flooded in the December 2010 and March 2012 events with substantial damage being done to the quarry and neighbouring land, following the failure of the levee in the most recent event.

The applicant has provided detailed flood modelling information in the EIS and supplementary report. The flood modelling was undertaken using an existing TUFLOW model developed by WMA Water with minor modifications to include the most recent 2012 flooding data.

The modelling included scenarios for progression of the quarry through the progressive pit sequence of the quarry. Levee banks are proposed to be created around each active pit and the processing area. Once exhausted the levees protecting that pit will be removed

and new levees constructed around the new pits. The levees surrounding the processing area will remain in place for the life of the quarry. The modelling was based on worst case scenario pit configuration for each sensitive receptor based on the proposed city levee upgrade being in place and a 10% ARI plus 0.5m free board levee being constructed.

Initially the applicant proposed to construct the levees at a 5% ARI level plus 0.5m free board. Given the impacts associated with this the applicant revised this to a 10% ARI level. The applicant removed the 0.5m freeboard to assist in addressing the concerns of the objectors. The levee heights will vary from 1.6m to 2.9m high across the site. The highest point of the levee will be along the southern boundary of stage 2. The aim of the levees is to minimise the disruption to operations associated with relatively frequent smaller flood events rather than to eliminate the potential for flooding of the pits in larger events.

For ease of explanation the results have been broken down into impacts on the following sensitive receivers:

- Residences 1 – 5
- Light industrial buildings on Hammond Avenue
- Paintball facility.

The modelling has shown that there will be an impact created from the proposed levee banks. These impacts are as follows:

- Residence 3 is the owner's residence and it is on the same site as the quarry. The impacts on this property can therefore be considered acceptable in the circumstance.
- The paintball facility would be impacted by up to an additional 50mm, however given the site is an outdoor recreational facility with no dwelling located on it and would already be subjected to flooding in a 10% ARI or less, there is no increase in the risk to life and negligible impact on property, the additional impact would therefore be considered negligible and acceptable.
- Residence 2 is located on the northern side of the river and downstream of the proposal. The information indicates that the dwelling site is located above the 1% ARI level. Given the property is located downstream and is already above the 1% ARI there will be no afflux impacts from the proposal on this dwelling.
- Residence 1 is located downstream from the quarry and the proposal will have no impact on increasing flood levels at this property. Furthermore the site of the dwelling is shown as being flood free in a 5% ARI event and given the levee banks are only proposed to be of 10% ARI protection the impacts will be nil.
- Whilst the modelling shows a possible maximum afflux of 25mm at the light industrial premises on Hammond Avenue this impact is considered acceptable given there is no increase risk to loss of life and for reasons identified below.

- Residence 5 is the property most impacted by the proposal given its location upstream from and in close proximity to the quarry. The model indicates that the maximum afflux at this property could be 25mm and this would be in 10% ARI and 5% ARI event. In a 1% ARI the afflux is a maximum of 10mm. Given this dwelling was approved via DA11/95 with a condition to have all habitable floor space 500mm above the 1% ARI level there would be no impact on the habitable floor space caused by this proposal. The impact would therefore be considered acceptable.
- Residence 4 is located directly south of the current operations and in close proximity to Hammond Avenue. The modelling shows that this property is flood free in a 5% ARI and therefore not impacted by the afflux from the proposal at this level of flood. Given this dwelling was approved via DA283/94 with a condition to have all habitable floor space 500mm above the 1% ARI level there would be no impact on the habitable floor space caused by this proposal. Furthermore the modelling then indicates that the afflux in a 1% ARI is a maximum of 10mm at this property. This would be considered negligible and acceptable given the scale of the event.

There are a number of other reasons why the impacts from flooding would be considered acceptable. They are as follows:

- The proposed model used is accurate to a level of +/- 0.25m. The greatest impact identified by this information is 25mm and therefore well within this variance range.
- 0.5m free board is considered appropriate protection to account for variations in the data, wave action etc when providing flooding levels. Again the most substantial predicted impact is well within the 0.5m
- The initial modelling undertaken for Wagga Wagga was conservative, the applicants used this data and were again conservative with regards to the following:
 - 1) using the proposed upgraded town levee information
 - 2) including the 0.5m freeboard on the levees for the modelling and not in construction
 - 3) Using worst case scenario pit configurations

NOTE: All of the above are predicted to increase afflux levels and therefore the applicant has used base figures that have more of an impact than the existing situation.
- The 25mm is a worst case scenario, this, if it were to occur at all, will be in close proximity too and upstream from the levee bank. The properties effected are at least 300m from the proposed levee and not directly upstream.
- Flooding is a natural phenomenon and whilst models are the most effective way of predicting levels and impacts they remain an educated prediction. The flood will never behave exactly in accordance with a model and therefore a degree of inaccuracy and variation should be expected.
- It can be seen on the afflux maps that there is no appreciable change in flood extent for any of the scenarios mapped.
- Flood storage as a result of the pits was not taken into consideration
- Impacts from vegetation requirements as part of any approval granted have not been considered.
- The subject site neighbours industrially zoned land. Any industrial development permitted on flood prone land is required to be protected to a 5% ARI level plus 0.5m free board, it could reasonably be argued that the same level of protection

should be afforded to the quarry operations, especially considering the resource it provides to the city and its economic value.

Further to the above, the levees will be conditioned to be structurally sound so they are not washed out in flood events. During flood events the quarry will not be in operation; however how the flood waters break in and out of the pits is an important consideration to ensure extensive damage does not occur with the washing away of large sections as has been previously experienced. To mitigate against this, the levees will be designed in such a way that controlled failure points will be incorporated into the design. This will be controlled via recommended conditions of consent.

A flood evacuation plan will also be required via condition of consent to be completed by the applicant prior to the operation of this consent.

The modelling indicated that the proposal will have no impact on the flood hazard in the area which is considered high in most events. Flood hazard is a measure of velocity and depth; however factors other than hydraulics may influence the hazard such as warning time and evacuation routes. It is considered that the minor increase in height, being a maximum of 25mm at sensitive receivers has no impact on the hazard rating given it is already high. This position is supported by Council.

The proposal will have additional flooding impacts apart from raising the height of flood waters. These include the levees impeding the natural path of flood waters and impacting on the back flow after the event and the levees changing the flow of the water, creating eddies or altering the location of eddies seen in previous floods.

The applicant will be required to lodge detailed drainage plans for the site prior to commencing operations. These plans will be required to show the natural drainage paths on the land and contours and the proposed drainage paths for all levee configurations. Whilst it is acknowledged that the proposal will alter the natural flow paths the applicant will be required to show that there is no additional impact on neighbouring properties. Given the size of the site, the natural drainage line that exists, the close proximity to the river and the relatively flat nature of the site and surrounding land this is not considered to be an issue. The drainage lines indicated will also address back flow after the event, with the same requirement that they cause no additional impact on neighbouring properties.

Whilst the construction of levees will change the flow of the water and create eddies or the like to a degree, modelling these would prove extremely difficult and is unlikely to produce valuable output. This is due to the amount of variables involved in flood modelling, variables such as where the river breaks its banks, vegetation, existing structures etc. As mentioned previously, each flooding event is a natural phenomenon and will react differently every time. It would be impossible to prove that a change in the location of an eddy or the like was caused solely by the proposed extension of the quarry and the levee banks.

Whilst it is accepted by the applicant and Council that the proposal will increase the impacts associated with flood waters this will not be to a degree that would be considered unacceptable. It should also be noted that the quarry supplies sand and gravel to the

construction industry and is an extremely important resource. The impacts of flood waters must also be considered against adequately protecting an important resource for the city as mentioned above.

7.3 –Biodiversity

This clause applies to land identified as “Biodiversity” on the Terrestrial Biodiversity Map. The application would be subject to assessment under this clause. The relevant sections for assessment are as follows:

(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority has considered the following matters:

(a) any potential adverse impact of the proposed development on any of the following:

- (i) a native vegetation community,*
- (ii) the habitat of any threatened species, population or ecological community,*
- (iii) a regionally significant species of plant, animal or habitat,*
- (iv) a habitat corridor,*
- (v) a wetland,*
- (vi) the biodiversity values within a reserve, including a road reserve or a stock route,*

(b) any proposed measures to be undertaken to ameliorate any such potential adverse impact.

(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development is consistent with the objectives of this clause and:

(a) the development is designed, sited and managed to avoid any potential adverse environmental impact, or

(b) if a potential adverse impact cannot be avoided, the development:

- (i) is designed and sited so as to have minimum adverse impact, and*
- (ii) incorporates effective measures so as to have minimal adverse impact, and*
- (iii) mitigates any residual adverse impact through the restoration of any existing disturbed or modified area on the site.*

The land indicated as biodiversity exists intermittently across the subject site with the larger areas along the river banks. The Tarcoola Quarry site has previously been cleared for agricultural activities and the existing quarry operations, with ground cover consisting of either pasture or commercially grown turf. Native woodland exists along the riparian corridor of the Murrumbidgee River and isolated paddock trees and sparse native woodland is located to the south of the site.

The vegetation community along the river is dominated by a River Red Gum community which is not considered threatened or endangered under state or commonwealth legislation. No other native vegetation was identified that could potentially constitute a threatened ecological community or threatened or endangered species.

The EIS includes a detailed Flora and Fauna Assessment in Appendix F. The report determines whether there is likely to be a significant effect on threatened species,

populations, or ecological communities, or their habitats by using the seven part test.

The study identified that the proposed development may impact on seven bird species listed as threatened under the NSW Threatened Species Conservation Act 1995 and one ecological community listed as endangered under the NSW Fisheries Management Act 1994. They are as follows:

- Brown Treecreeper
- Diamond Firetail
- Flame Robin
- Scarlet Robin
- Superb Parrot
- Whit-fronted Chat
- Little Eagle
- Lowland Murray River

Based on the results of the seven part tests the proposed development is unlikely to have a significant impact on any species listed and therefore a Species Impact Statement (SIS) is not required.

The study identified the proposed development may impact on three bird species listed as threatened under the EPBC Act or their habitats. Significance assessments were therefore undertaken on the following:

- Cattle Egret
- Rainbow bee-eater
- Superb Parrot

The assessment concluded that the proposed development is unlikely to have a significant impact on any species listed under the EPBC Act.

Given the proposed extension will be located some 80m from the Riparian corridor and will not remove any native trees and only remove a small section of foraging area that consists in the main of commercially grown turf, the impacts of the native vegetation, habitat and threatened species is negligible and therefore acceptable.

The application was also referred to the Office of Environment and Heritage who had the following comments regarding Biodiversity.

'Based on the information presented in the EIS and the proposed mitigation measures identified, we have no further comments in regards to the impacts on biodiversity.'

The DGR's for the flora and fauna assessment required consideration for an offset strategy and assessment of the impact any road would have. Given no native vegetation will be removed and the proposal will not have a significant impact on threatened species the EIS states that no offset planting would be required. Council agrees with this statement. However landscaping will be required to mitigate against a number of issues and rehabilitation will be ongoing throughout the life of the quarry. Both the landscaping

and rehabilitation of the site have the potential to improve the biodiversity values of the site compared with its current state, especially in the proposed wetlands.

7.5 – Riparian Lands and Waterways

This clause applies to land identified as “water” on the Water Resource Map. The application would be subject to assessment under this clause. The relevant section of this clause is as follows:

(1) The objectives of this clause are to protect or improve:

- (a) water quality within waterways, and*
- (b) stability of the bed and banks of waterways, and*
- (c) aquatic and riparian habitats, and*
- (d) ecological processes within waterways and riparian areas, and*
- (e) threatened aquatic species, communities, populations and their habitats, and*
- (f) scenic and cultural heritage values of waterways and riparian areas, and*
- (g) catchment protection to prevent increased sediment loads and stream bank erosion from entering lakes, rivers and waterways.*

(2) This clause applies to all of the following:

- (a) land identified as “Water” on the Water Resource Map,*
- (b) land identified as “Waterway” on that map,*
- (c) all land that is within 40 metres of the bank or shore (measured horizontally from the top of the bank or shore) of each waterway on land identified as “Waterway” on that map.*

(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority has considered the following matters:

- (a) any potential adverse impact on any of the following:*
 - (i) water quality within the waterway,*
 - (ii) aquatic and riparian habitats and ecosystems,*
 - (iii) stability of the bed, shore and banks of the waterway,*
 - (iv) the free passage of fish and other aquatic organisms within or along the waterway,*
 - (v) habitat of any threatened species, population or ecological community,*
- (b) whether or not it is likely that the development will increase water extraction from the waterway for domestic or stock use and the potential impact of any extraction on the waterway,*
- (c) proposed measures to ameliorate any potential adverse impact.*

(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development is consistent with the objectives of this clause and:

- (a) the development is designed, sited and managed to avoid any potential adverse environmental impact, or*
- (b) if a potential adverse impact cannot be avoided, the development:*
 - (i) is designed and sited so as to have minimum adverse impact, and*
 - (ii) incorporates effective measures so as to have minimal adverse impact, and*
 - (iii) mitigates any adverse impact through the restoration of any existing disturbed area on the land.*

The Flora and Fauna study identified aquatic species likely to occur and identified three threatened species:

- Murray Cod
- Silver Perch
- Trout Cod

The report discusses the impact of vegetation removal and earthworks on sedimentation and water quality concluding that a water management system has been developed for the control of 'dirty water' back into the sedimentation pond and the diversion of 'clean water' around the periphery of the site. Further to this conditions of consent will require monitoring on the water quality within the Murrumbidgee at certain locations to ensure any impacts from the quarry are recorded and kept to an acceptable level. As mentioned above the activities will take place some 80m from the Banks of the Murrumbidgee. The impact on the aquatic environment is therefore considered acceptable.

The application was referred to Department of Primary Industries Fisheries NSW. They provided the following comments:

'...Fisheries NSW do not consider that the works are likely to have significant adverse impact on upon threatened fish species, populations or the aquatic ecological community which reside in the river in this area provided the works are carried out as stated and all conditions are faithfully implemented.'

Fisheries NSW has reviewed the proposal in light of those provisions and has no objections, subject to the proponent meeting the General Terms of Approval that follow. As per s.91A(3) of the Environmental Planning and Assessment Act 1979, any consent issued by Council must be consistent with these GTA's...'

Having discussed these comments with fisheries it is considered that the application is not integrated development and the recommended GTA's should be used as conditions of consent only, if considered appropriate by Council. The conditions included in the Fisheries submission address the following issues;

- Sediment erosion and mitigation measures.
- Rehabilitation
- Location of machinery and works in close proximity to waterway
- Removal of material from waterway
- Removal of native vegetation
- Notification to fisheries of works commencing

These conditions will be included on any consent granted.

7.6 –Groundwater vulnerability

This clause applies to land identified as "Groundwater" on the Water Resource Map. The application would be subject to assessment under this clause. The relevant section of this

clause is as follows:

(3) Development consent must not be granted for development specified for the purposes of this clause on land to which this clause applies unless the consent authority is satisfied that the development:

- (a) is unlikely to adversely impact on existing groundwater sources, and*
- (b) is unlikely to adversely impact on future extraction from groundwater sources for domestic and stock water supplies, and*
- (c) is designed to prevent adverse environmental impacts, including the risk of contamination of groundwater sources from on-site storage or disposal facilities.*

The proposed expansion allows for two quarry pits of up to 5ha to be available at any one time. This will allow access to either shallow or deeper sand and gravel resources as each pit will be split into two levels. Shallow resources will typically be targeted during periods with a high water table and deep extraction during lower ground water. This operational system will allow resources to be targeted above the water table whenever possible to minimise pumping and dewatering requirements discussed below, thus limiting impacts upon groundwater drawdown in the area.

As discussed, the original sedimentation basin within the riparian zone will be rehabilitated and the eastern section of the existing southern pit will be used as the sedimentation basin. This basin will contain groundwater as its base will be below the water table. The groundwater will be utilised for washing down of sand and gravel in the processing facility. As discussed, all 'dirty water' will be directed to this pit. This water will not be pumped back into the river, the report suggests the basin is large enough to support the operational requirements with water lost through the processing operations, evaporation and infiltration back into the groundwater network.

An allowance for dewatering one active cell has been incorporated into the proposed water management system. This process involves pumping groundwater from one pit to another to gain access to sand and gravel deposits below the water table. The applicant has proposed that dewatering will take place to a maximum depth of 2m below the water table. Dewatering is limited by the licensing requirements from NSW Office of Water. Although 2m is suggested by the applicant ultimately this amount will be constrained by the water licence attached to the property.

The applicant has also proposed that a 'last bucket' extraction take place below the water table to enable access to some more economic gravel deposits. The applicant has proposed a maximum pit depth of 160 AHD, the current pit base is 169 AHD and the ground level is approximately 179 AHD. The detailed groundwater study included in the EIS and supporting information suggests that in the past 15 years the water table has been located between 160 – 170 AHD. The proposed excavations will therefore interact with the groundwater on a regular basis.

The regular interaction through the processes discussed above can lead to impacts on the groundwater through contaminants, salinity, acidity and groundwater drawdown impacts on groundwater dependant ecosystems.

Groundwater drawdown impacts and groundwater dependent ecosystems (GDE):

The report states that GDEs are communities of animals, plants or other organisms, whose extent and life process is dependent on groundwater. The GDEs in the area include the Murrumbidgee River, Deep Marsh and Floodplain waterbodies.

The modelling of the drawdown associated with the quarry operations indicated that the impacts are considerably less than the average seasonal variation and therefore not anticipated to result in a significant impact. Further to this the GDEs listed are outside of the bounds of the quarrying operations and in close proximity to the river. The relationship between the Murrumbidgee and the groundwater level in this location means the GDEs will be able to utilise surface water when available and when water levels decline, dewatering of the quarry pits will not be necessary and therefore the operations will not impact on watertable level or quality. The impacts are therefore acceptable.

Contaminants:

Spills of contaminants with fuels and other fluids related to the operation and maintenance of quarry machinery is a major potential risk to groundwater quality. The report states that all refuelling and maintenance activities would be undertaken within the compacted bunded area within the processing plant area. Council considers that to mitigate against this substantial risk all refuelling and maintenance should occur on a hardstand bunded area and therefore will recommend this in conditions of any consent granted. Storage of contaminants will also be required to be in a safe secure building and above the 1:100 ARI flood planning level or off site. Furthermore conditions of consent will require monitoring of bores and river water in the area and management plans are in place should any contaminants be identified.

Salinity

The report states that there is often potential for groundwater extracted or disturbed to be significantly more saline than surrounding groundwater or local surface water resources. Operations are not considered to result in a net movement between the underlying aquifers or receiving waters given the relatively small scale of the operations and exposed groundwater areas and therefore the impact on salinity is considered negligible.

Acidity

Inspection of bore logs from around the site indicates only a very minimal presence of materials likely to impact on the acidity of the soil. Due to the lack of this material in the upper 20m proposed to be quarried there is negligible risk of mobilisation of acid from exposure of organic material or acid rock.

The application was referred to the NSW Office of Water who supported the application subject to compliance with General Terms of Approval (GTA's) that will be included in any consent granted. The GTA included a number of monitoring and water quality conditions.

State Environmental Planning Policies

State Environmental Planning Policy (Rural Lands) 2008

The aims of this Policy are as follows:

- (a) to facilitate the orderly and economic use and development of rural lands for rural and related purposes,*
- (b) to identify the Rural Planning Principles and the Rural Subdivision Principles so as to assist in the proper management, development and protection of rural lands for the purpose of promoting the social, economic and environmental welfare of the State,*
- (c) to implement measures designed to reduce land use conflicts,*
- (d) to identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations,*
- (e) to amend provisions of other environmental planning instruments relating to concessional lots in rural subdivisions.*

Part 2 Rural Planning Principles

7 Rural Planning Principles

The Rural Planning Principles are as follows:

- (a) the promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas,*
- (b) recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State,*
- (c) recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development,*
- (d) in planning for rural lands, to balance the social, economic and environmental interests of the community,*
- (e) the identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land,*
- (f) the provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities,*
- (g) the consideration of impacts on services and infrastructure and appropriate location when providing for rural housing,*
- (h) ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General.*

The current LEP 2010 and WWDCP contain similar objectives and provisions that support the intent of this SEPP. Compliance with these objectives and provisions has been assessed throughout this report. Meeting the objectives and provisions of the LEP 2010 and WWDCP ensures that the proposal would be considered compliant with the Rural Lands SEPP 2008.

As mentioned the quarry has been in operation for some 24 years. The expansion is a reasonable expectation given resource requirements. The use is acceptable in the zone and compliance with conditions of consent and appropriate management will ensure the expansion remains consistent with the objectives.

State Environmental Planning Policy No.44 – Koala Habitat Protection

The aims and objectives of this policy are as follows:

This Policy aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline:

- (a) by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat, and*
- (b) by encouraging the identification of areas of core koala habitat, and*
- (c) by encouraging the inclusion of areas of core koala habitat in environment protection zones.*

Given the proximity to River Red Gums along the Riverine corridor the area would be considered a potential Koala habitat. The flora and fauna study lodged with the application concludes that the area is unlikely to be a core Koala habitat given the species has not been reliably recorded in Wagga since the 1960's. Further to this no Koala habitat is being removed. The proposed expansion therefore raises no issues under this SEPP.

State Environmental Planning Policy (State and Regional Development) 2011

The application would not be considered State Significant Development. However the development is deemed to be Regional Development as it falls under the definition of Extractive Industry under Schedule 4A of the EP&A Act. Under Section 21 of this SEPP a regional panel may exercise consent authority functions. The application will therefore be determined by the Southern Joint Regional Planning Panel.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

The relevant sections of this SEPP are as follows:

2 Aims of Policy

The aims of this Policy are, in recognition of the importance to New South Wales of mining, petroleum production and extractive industries:

- (a) to provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of the State, and*
- (b) to facilitate the orderly and economic use and development of land containing mineral, petroleum and extractive material resources, and*
- (c) to establish appropriate planning controls to encourage ecologically sustainable development through the environmental assessment, and sustainable management, of development of mineral, petroleum and extractive material resources,*

4 Land to which Policy applies

This Policy applies to the State.

7 Development permissible with consent

(3) Extractive industry

Development for any of the following purposes may be carried out with development consent:

- (a) extractive industry on land on which development for the purposes of agriculture or industry may be carried out (with or without development consent),*
- (b) extractive industry in any part of a waterway, an estuary in the coastal zone or coastal waters of the State that is not in an environmental conservation zone.*

By lodging this application the applicant has complied with this clause.

Part 3 Development applications—matters for consideration

12 Compatibility of proposed mine, petroleum production or extractive industry with other land uses

Before determining an application for consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must:

- (a) consider:*
 - (i) the existing uses and approved uses of land in the vicinity of the development, and*
 - (ii) whether or not the development is likely to have a significant impact on the uses that, in the opinion of the consent authority having regard to land use trends, are likely to be the preferred uses of land in the vicinity of the development, and*
 - (iii) any ways in which the development may be incompatible with any of those existing, approved or likely preferred uses, and*
- (b) evaluate and compare the respective public benefits of the development and the land uses referred to in paragraph (a) (i) and (ii), and*
- (c) evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a) (iii).*

As mentioned previously the existing land uses in the vicinity are a mixture of industrial, residential, outdoor recreation and rural. The EIS identifies a number of impacts on these land uses associated with the expansion of the quarry, such as flooding, noise, dust, pollution and traffic. The detailed assessment throughout the body of this report reaches conclusions that these impacts will be acceptable on the surrounding land uses given compliance with the recommended conditions of consent. The EIS discusses mitigation measures under each impact that include measures such as sealing a section of Gillard Road, watering of stock piles for dust suppression and monitoring of bores and the river for water pollution to name a few. These measures along with the conditions of consent from government agencies such as Office of Water and Environmental Protection Authority along with Council's conditions will ensure the operations do not result in an unacceptable level of impact on the neighbouring land uses.

14 Natural resource management and environmental management

(1) Before granting consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider whether or not the consent should be issued subject to conditions aimed at ensuring that the development is undertaken in an environmentally responsible manner, including conditions to ensure the following:

- (a) that impacts on significant water resources, including surface and groundwater resources, are avoided, or are minimised to the greatest extent practicable,*
- (b) that impacts on threatened species and biodiversity, are avoided, or are minimised to the greatest extent practicable,*

(c) that greenhouse gas emissions are minimised to the greatest extent practicable.

(2) Without limiting subclause (1), in determining a development application for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider an assessment of the greenhouse gas emissions (including downstream emissions) of the development, and must do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions.

The impacts on surface and ground water and threatened species and biodiversity have been discussed in detail above. The conclusion being that with appropriate management and compliance with conditions of consent, the impacts would be acceptable.

The greenhouse gas emissions associated with a sand and gravel quarry are minimised given the resource being quarried, the accessibility of the resource and its location in close proximity to the city reducing impacts associated with the transporting of the material.

15 Resource recovery

(1) Before granting consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider the efficiency or otherwise of the development in terms of resource recovery.

(2) Before granting consent for the development, the consent authority must consider whether or not the consent should be issued subject to conditions aimed at optimising the efficiency of resource recovery and the reuse or recycling of material.

(3) The consent authority may refuse to grant consent to development if it is not satisfied that the development will be carried out in such a way as to optimise the efficiency of recovery of minerals, petroleum or extractive materials and to minimise the creation of waste in association with the extraction, recovery or processing of minerals, petroleum or extractive materials.

The proposal states that the pits will be opened in series and at varying levels to allow access to sand and gravel of different quality and during differing levels of water table. The methods proposed are considered acceptable and allow for efficient resource recovery.

16 Transport

(1) Before granting consent for development for the purposes of mining or extractive industry that involves the transport of materials, the consent authority must consider whether or not the consent should be issued subject to conditions that do any one or more of the following:

(a) require that some or all of the transport of materials in connection with the development is not to be by public road,

(b) limit or preclude truck movements, in connection with the development, that occur on roads in residential areas or on roads near to schools,

(c) require the preparation and implementation, in relation to the development, of a code of conduct relating to the transport of materials on public roads.

(2) If the consent authority considers that the development involves the transport of materials on a public road, the consent authority must, within 7 days after receiving the development application, provide a copy of the application to:

- (a) each roads authority for the road, and*
- (b) the Roads and Traffic Authority (if it is not a roads authority for the road).*

Note. Section 7 of the Roads Act 1993 specifies who the roads authority is for different types of roads. Some roads have more than one roads authority.

(3) The consent authority:

- (a) must not determine the application until it has taken into consideration any submissions that it receives in response from any roads authority or the Roads and Traffic Authority within 21 days after they were provided with a copy of the application, and*
- (b) must provide them with a copy of the determination.*

(4) In circumstances where the consent authority is a roads authority for a public road to which subclause (2) applies, the references in subclauses (2) and (3) to a roads authority for that road do not include the consent authority.

Vehicle movements and transport of materials are important considerations for the quarry expansion.

Road access to the site is via the Sturt Highway (known as Hammond Avenue) turning onto Gillard Road, an all weather road, currently maintained by Tarcoola Turf and Quarries that ends at the reserve to the rear of the site. Tarcoola Road runs east west off the western side of Gillard Road and provides access to industrial premises fronting Hammond Avenue.

The issues associated with traffic relate to noise, dust, the increase in traffic on Gillard Road and its impact on other users of this road and the junction of Gillard Road and the Highway.

The EIS supplementary information undertook traffic surveys and assessments. The report found that there would be approximately 60 truck movements per day compared to 54 currently. It should be noted that the current movements are a result of breaching extraction allowances and whilst they give a good indication of what the proposed impacts will be, the increase should have been considered from what is permitted and not what currently occurs. Nonetheless given that current movements are compliant when analysed, the use of this figure can be accepted. The analysis also took into consideration the Highway traffic and the additional impact of the trucks exiting Gillard Road onto the Highway to determine if there would be any requirement for an upgrade of this junction.

The findings show that the majority of movements are outside of the morning and afternoon peak hours and that the majority of trucks turn left from Gillard Road. The reason for the majority of left exits onto the Highway is due to the operators of the Quarry also operating a concrete batching plant located in Riedel Street, which is left out of Gillard Road. However given Council has no control over who operates the quarry, or where the material is delivered, the traffic movements need to be considered suitable without this relationship.

The report includes traffic modelling in a program known as SIDRA. The findings indicate that the increase in traffic movements would not require an upgrade of the intersection of Gillard Road and the Highway. The average delay for vehicles leaving Gillard Road during the morning peak period is approximately 40 seconds. This would equate to a “level C – Satisfactory but accident study required” level of service. Comments and discussions with the RMS indicate that this junction has no accident history.

The EIS has suggested mitigation measures with regards to trafficking dirt and materials onto the Highway. The proposal is to install a shaker and signage at the location of the weighbridge and consideration of sealing Gillard Road in discussions with Council. Council considers the shaker not to be a favourable option as it creates additional noise and there is no certainty it will be used by every truck, the shaker also has very little impact on reducing dust. Council’s position would be to require the sealing of Gillard Road to the entry of the Quarry and a further 100m into the quarry site. Whilst dirt will be brought onto the sealed Gillard Road it would reduce the amount taken onto the Highway. Given the only vehicles that utilise Gillard Road past the junction with Tarcoola Road are quarry or turf farm users or persons wanting to access the reserve, the dirt on this section of Gillard Road is not considered a major concern. However conditions will be placed on any consent granted requiring Gillard Road to be cleaned of any unacceptable levels of sediment and debris that cause a danger to members of public.

The issue of road maintenance along Gillard Road is a concern even with the sealing of the road. Given the type of vehicle and the fact that the majority of the vehicles using Gillard Road are quarry vehicles Council recognises that the operations contribute significantly to the wear and tear of Gillard Road. Appropriate contributions that directly reflect potential project impacts are commonly applied to local developments and major projects where road haulage is likely to result in increased maintenance costs for local roads. Typically contribution rates are set by the section 94/94A contributions plans, but Council’s plan does not refer to road maintenance. Council considers that a contribution to road maintenance is warranted in this case and recommends a rate of 3 cents/tonne/kilometre for quarried material hauled along Gillard Road.

Conditions of consent will require the road to be sealed. The sealing of the road will also reduce the impact of dust

The application was also referred to the RMS and Council’s Traffic Officer, the following comments were provided:

‘...Even with the increased traffic volume of laden quarry trucks due to this excess extraction rate the intersection of Gillard Road with Hammond Avenue does not have a significant accident history...

As Gillard Road is currently unsealed there is evidence of loose material and dust issues at the intersection of Gillard Road with Hammond Avenue due to the haulage of quarry material. For road safety reasons Gillard Road should be sealed so as to minimise the dust generation and the tracking of loose material onto the Sturt Highway.

...Given the current configuration of the intersection of Hammond Avenue and Gillard Road with 2 travel lanes in each direction along Hammond Avenue it is considered that the current treatment at this intersection is appropriate to accommodate the additional traffic

proposed to be generated by the expanded development subject to implementation of and adherence to an appropriate driver protocol and the sealing of Gillard Road.

Roads and Maritime Services has assessed the Development Application based on the documentation provided and would raise no objection to the development proposal subject to the Consent Authority ensuring that the development is undertaken in accordance with the information submitted as amended by the inclusion of the following conditions of consent...'

The RMS have recommended conditions relating to a traffic management plan, sealing of Gillard Road, the control of dust and loose material on the roads and the maintenance of accurate records. These will be included on any consent granted.

17 Rehabilitation

(1) Before granting consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider whether or not the consent should be issued subject to conditions aimed at ensuring the rehabilitation of land that will be affected by the development.

(2) In particular, the consent authority must consider whether conditions of the consent should:

- (a) require the preparation of a plan that identifies the proposed end use and landform of the land once rehabilitated, or*
- (b) require waste generated by the development or the rehabilitation to be dealt with appropriately, or*
- (c) require any soil contaminated as a result of the development to be remediated in accordance with relevant guidelines (including guidelines under section 145C of the Act and the Contaminated Land Management Act 1997), or*
- (d) require steps to be taken to ensure that the state of the land, while being rehabilitated and at the completion of the rehabilitation, does not jeopardize public safety.*

The Director General Requirements for the preparation of the EIS requested a detailed rehabilitation plan for the quarry operations. The EIS has appropriately addressed this issue.

The rehabilitation strategy discussed in the EIS requires the operator to progressively rehabilitate the quarry pits. As discussed, the operations will allow for two pits to be open at any one time. When a pit is exhausted a new pit will be opened and the rehabilitation of the exhausted pit will begin immediately. No extraction will be permitted in the new pit until the exhausted pit has been appropriately rehabilitated. This will ensure the progressive rehabilitation is achieved.

The bunds will be collapsed into the pit to assist in the formation of stable batters of approximately 1 in 3. Topsoil will dress the batters to assist in the revegetation. The pits will remain partially open and be subject to groundwater, forming a series of ephemeral ponds. The pits will be revegetated using in the main, locally endemic species to increase the likelihood of survival. Species proposed include River Red Gum and the Common Reed. The EIS also discusses maintenance and monitoring of the rehabilitation works. Council will require a number of conditions of consent that relate specifically to the

rehabilitation, particularly the lodgement of a bond to cover (on a progressive basis) the full cost of the rehabilitation requirement, however in principle the plan submitted would be considered acceptable.

State Environmental Planning Policy No. 55

Clause 7 of SEPP 55 requires Council to consider whether land is contaminated prior to granting consent to the carrying out of any development on that land. Should the land be contaminated, Council must be satisfied that the land is suitable in a contaminated state for the proposed use. There is no indication that the site has previously been occupied by any use that could have led to contamination of the site. Furthermore the land is not identified on Councils register of contaminated sites. Accordingly it is not considered necessary to request any investigation reports on the subject site.

State Environmental Planning Policy No. 33 - Hazardous and Offensive Development

The relevant sections of this SEPP have been addressed below:

2 Aims, objectives etc

This Policy aims:

- (a) to amend the definitions of hazardous and offensive industries where used in environmental planning instruments, and*
- (b) to render ineffective a provision of any environmental planning instrument that prohibits development for the purpose of a storage facility on the ground that the facility is hazardous or offensive if it is not a hazardous or offensive storage establishment as defined in this Policy, and*
- (c) to require development consent for hazardous or offensive development proposed to be carried out in the Western Division, and*
- (d) to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account, and*
- (e) to ensure that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact, and*
- (f) to require the advertising of applications to carry out any such development.*

3 Definitions of “potentially hazardous industry” and “potentially offensive industry”

In this Policy:

potentially hazardous industry means a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:

- (a) to human health, life or property, or*
 - (b) to the biophysical environment,*
- and includes a hazardous industry and a hazardous storage establishment.*

potentially offensive industry means a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other

land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.

5 Land to which Policy applies

This Policy applies to the State.

Part 3 Potentially hazardous or potentially offensive development

11 Development to which Part 3 applies

(1) This Part applies to:

- (a) development for the purposes of a potentially hazardous industry, and*
- (b) development for the purposes of a potentially offensive industry, and*
- (c) development notified, for the purposes of this Part, by the Director in the Gazette as being a potentially hazardous or potentially offensive development.*

(2) This Part does not apply to development the subject of a development application made before the date on which this Policy takes effect.

13 Matters for consideration by consent authorities

In determining an application to carry out development to which this Part applies, the consent authority must consider (in addition to any other matters specified in the Act or in an environmental planning instrument applying to the development):

- (a) current circulars or guidelines published by the Department of Planning relating to hazardous or offensive development, and*
- (b) whether any public authority should be consulted concerning any environmental and land use safety requirements with which the development should comply, and*
- (c) in the case of development for the purpose of a potentially hazardous industry—a preliminary hazard analysis prepared by or on behalf of the applicant, and*
- (d) any feasible alternatives to the carrying out of the development and the reasons for choosing the development the subject of the application (including any feasible alternatives for the location of the development and the reasons for choosing the location the subject of the application), and*
- (e) any likely future use of the land surrounding the development.*

The operations result in a number of admissions associated with water releases, noise and dust emissions and as such would be classed as a potentially offensive industry. The reason for choosing the location of the expansion is considered to be reasonable and appropriate. The quarry has been operating in this location for some 24 years and whilst the town has developed around the site the impacts associated with an expansion in this location are likely to be far less than moving to a new site. Furthermore mitigation measures can be introduced throughout the proposed expansion to ensure the impacts of the development on the surrounding land is considered acceptable. All relevant authorities have been consulted and their comments have been addressed in the relevant section below or throughout the body of this report.

Current circulars or guidelines have been considered, particularly 'Applying SEPP 33'. It is considered that compliance with the requirements of Public Authorities and recommended

conditions of consent will sufficiently demonstrate that the proposal is not an Offensive Industry.

(a)(ii) - The provisions of any draft environmental planning instrument

Draft local environmental plans

N/A

Draft state environmental planning instruments

N/A

(a)(iii) - Any development control plan

Wagga Wagga Development Control Plan 2010

The relevant controls of the DCP have been addressed below.

2.1 Site analysis plan

The applicant has lodged a suitable site analysis plan.

2.2 Vehicle access and movements

This has been discussed in detail above. The traffic study found that the increase in truck movements would not require an upgrade to the Gillard Road and Highway junction. The sealing of Gillard Road will improve vehicle access and movements to and from the site. The road will be constructed to Council standards with improved signage and road markings to increase safety.

2.3 Off-street parking

The controls do not have specific requirements for parking spaces for a quarry. Parking for 10 vehicles exists currently at the site office. The EIS indicates that although the amount of material quarried will increase the existing operational practises and procedures will remain consistent. It is therefore not considered necessary to provide any additional parking spaces.

2.4 Landscaping

Given the nature of the proposal no landscaping is proposed with the exception of the rehabilitation. However, it is considered that landscaping can be utilised to mitigate against impacts associated with the proposal such as dust. A landscape plan will be required via condition on any consent granted that shows landscaping along the north western boundary, the south eastern boundary and Gillard Road in particular. The EIS includes a rehabilitation plan that has been discussed above. The proposed levees will be required to be landscaped to ensure that the material is stabilised and no dust issues arise from these structures.

No native vegetation is proposed to be removed as part of this application.

Compliance with recommended conditions of consent will ensure that the landscaping and rehabilitation of the site is acceptable.

2.6 Safety and Security

The site will be locked and secured outside of hours of operation. Safety during works is controlled by Workcover requirements and is the owner/operates responsibility.

2.7 Changing the Landform – Cut and fill

This section of the DCP is generally aimed at residential developments; therefore the controls are not relevant. However a number of the objectives should be considered.

- O1 *Encourage site responsive development and protect the amenity of adjoining land.*
- O2 *Avoid excessive earthworks and minimise changes to the natural landform.*
- O5 *Avoid inappropriate fill being introduced to sites.*
- O6 *Ensure adequate provision for drainage in relation to cut and fill practices.*

As discussed throughout this report the works will result in impacts on the amenity of adjoining properties, with particular regard to noise, dust, traffic and flooding.

However for reasons discussed throughout this report each of these impacts would not be to a degree that would be considered unacceptable given compliance with recommended conditions of consent.

The proposed construction of levee banks will divert drainage patterns. The applicant will be required to submit detailed drainage plans for each levee configuration to show that overland flow will have no impact on adjoining properties. It is expected that this can easily be achieved given the river frontage and relatively flat site.

The proposal would raise no issues under this section of the DCP.

2.8 Erosion and Sediment Control Principles

The impacts of overland flow and flooding have been discussed elsewhere in this report, both have an impact on erosion and the possibility of sediment entering the river. Ensuring the levees are properly constructed and the site layout clearly separates the 'clean' and 'dirty' water and bunds the processing area, the impacts of overland flow and flooding on erosion and sediment control will be mitigated to an acceptable level.

Further to the above, rehabilitation and vegetating the levees also plays an important role. Erosion and sediment control are ongoing issues for such an operation and the management of exhausted pits and earth levees is key to minimising impacts. The discussion above concludes that the implementation of conditions of consent will ensure the rehabilitation is appropriately undertaken.

2.9 Development adjoining open space

Given the Quarry has operated adjoining the open space for a number of years minimal additional impacts are expected. The open space is accessed off the end of Gillard Road and the operations have no reason to access this land. A traffic management plan will be required to ensure that access to the reserve remains during sealing of Gillard Road. The increase in vehicle movements will increase dust and noise but given all vehicle movements will be south along Gillard Road when exiting the site and limited on weekends when the reserve is more likely to be used the impacts are deemed acceptable.

Visually there will be an increase in disturbed land but not to a degree that would be considered unacceptable given the rehabilitation requirements. Furthermore landscaping will screen areas of the quarry from the reserve.

Section 4 Environmental Hazards and Management

4.1 Bushfire

- C1 Applications are to satisfy the relevant provisions of Planning for Bush Fire Protection 2006 (or any later versions) and Australian Standard: 3959 Construction of Buildings in Bush Fire Prone Areas.*
- C2 Where required, a clear separation is to be provided between buildings and bushfire hazards in the form of a fuel-reduced Asset Protection Zone (APZ). In all cases the APZ is to be located wholly within the land zoned Residential. Refer to the requirements of Planning for Bush Fire Protection 2006*

As the proposal is for the extension of the Quarry site that involves no buildings, no specific controls are required. The bush fire risk will not be altered by this proposal. The application was referred to the Rural Fire Service who made no comment.

4.2 Flooding

The site is considered flood prone and therefore this section of the DCP needs to be considered.

Objectives

- O1 Minimise the public and private costs of flood damage.*
- O2 Minimise the risk of life during floods by encouraging construction and development that is "flood proofed" and compatible with the flood risk of the area.*
- O3 Ensure that development and construction are compatible with the flood hazard.*
- O4 Require compatibility with the Flood Plain Development Manual 2005 as relevant*

The relevant controls are as follows:

Development on the rural floodplain (High flood risk area)

- C20 Industrial and high impact commercial uses are unsuitable for development on the rural flood plain (high risk area).*
- C25 Development on the rural flood plain (high risk area) is to comply with the provisions of Table 4.2.5.*

The relevant sections of the table are as follows:

Other development

Floor Levels

- New development is to be consistent with flood hazard and evacuation needs*
- Chemicals and materials are to be stored above the 1:100yr ARI flood level, plus freeboard*

Flood affectation

- *Engineers report required to certify that the development will not increase flood affectation elsewhere.*

The impacts of flooding have been discussed in detail earlier in this report. Whilst C20 states that industrial uses are unsuitable on the rural flood plain. This use exists and is permissible under the LEP and therefore the assessment should be: 'is the proposal increasing any risk or impacts to an unacceptable level?' This has been assessed and considered acceptable.

Conditions of consent will ensure that all chemicals are stored above the 1:100 ARI flood level plus free board or off site.

Section 5 Natural Resource and Landscape Management

5.4 Environmentally sensitive land

As mentioned under part 7 of the LEP the proposal would have an acceptable impact on the biodiversity, waterways and groundwater of the area given compliance with any conditions of consent.

Section 8 Rural Development

8.1 Development in Rural Areas

Controls

C1 Uses are to be compatible with the character of the locality in terms of buildings, structures and the nature of operations.

No new buildings have been proposed and the number of pits operational will not be altered from the current practice. The additional impacts are associated with the increase in the amount of material being quarried. Appropriate management of these impacts will ensure the quarry remains compatible with the character of the locality.

C2 Provide adequate buffer areas and setbacks to minimise potential conflicts with adjoining lawful land uses. Where there is potential for a conflict between land uses, priority will be given to the existing productive use.

The expansion area will bring the operations closer to existing residences to the north and west of the site. Residence 1 will still be some 400m from the proposed pits and residence 2 is approximately 300m from proposed pit 4 and is on the northern side of the river with substantial vegetation between the proposed pits and the dwelling. The impacts from the proposed quarry expansion on these residences will not be to a degree that would be considered unacceptable.

C3 Use landscaping and other screening options to help integrate new uses and developments into the rural landscape.

As mentioned above, landscaping has not been proposed but will be required via condition on any consent granted. The landscaping will provide mitigation with regards to dust and visual screening to reduce the impacts on the adjoining properties.

C4 Uses must be capable of operating within capacities of available existing services.

The services exist on site, the expansion will be capable of operating within the capabilities of existing services.

C5 Provide adequate facilities for additional traffic in terms of vehicle access and movements, parking areas, and loading and unloading of goods.

On site the quarry operations have more than adequate vehicle movement areas to undertake all the required operational functions. The issues with traffic relate to the use and condition of Gillard Road and the junction with the Highway. These have been discussed in detail throughout this report and considered acceptable with compliance with recommended conditions of consent.

C6 In the case of larger projects Council may require the applicant to demonstrate that the roads in the locality are of satisfactory construction and condition to accommodate the size, weight and volume of vehicles that could be generated by the use, and that the local traffic conditions are suitable.

As discussed above the use and condition of Gillard Road and the safety of the junction with the highway are the major traffic concerns. As stated, conditions of consent will require the upgrade of Gillard Road to Council's Standards and contributions to be made for the ongoing maintenance.

C7 Provide satisfactory arrangements for storage and disposal of waste.

The operations will be required to be managed in accordance with conditions of consent and licences from the relevant approval bodies. This will ensure to operations do not result in the pollution of the ground water or waterways through the disposal of waste products.

(a)(iia) - any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and

No planning agreement has been entered into under section 93F.

(a)(iv) - any matters prescribed by the regulations

In accordance with Clause 19 of Schedule 3 of the Regulations the is Designated Development.

19 Extractive industries

(1) Extractive industries (being industries that obtain extractive materials by methods including excavating, dredging, tunnelling or quarrying or that store, stockpile or process extractive materials by methods including washing, crushing, sawing or separating):

(a) that obtain or process for sale, or reuse, more than 30,000 cubic metres of extractive material per year,

The applicant has submitted the required Environmental Impact Assessment (EIS) in accordance with the Director General's Requirements (DGR's) as required and in

accordance with Section 78(8) of the Environmental Planning and Assessment Act 1979 and Schedule 2 of the Regulations.

Matters prescribed by the *Environmental Planning and Assessment Regulation 2000* have been satisfied

(b) - The likely impacts of the development

Context and setting

The quarry has operated in this location for 24 years. The growth of this area of the city has taken place around the quarry. The expansion will not increase the number of operational pits, simply the amount of material extracted. Approving this proposal subject to conditions will bring the current operations in line with licensing requirements and better management practices. The remediation of the site is critical to ensuring the appropriateness of the operations in this location. Conditions of consent will require the remediation to be an ongoing process throughout the life of the quarry. Compliance with the conditions will ensure the quarry remains appropriate.

Access, transport and traffic

These issues have been discussed in detail above. Based on the assessment and demonstration of acceptable impacts at the junction of Gillard Road and the Highway, Council concurs with the applicant's conclusions that the project would not have an adverse effect on the capacity or safety of the local or regional roads network. As discussed throughout this report a number of conditions of consent, such as the sealing of Gillard Road, lodgement of a Traffic Management Plan and a contribution levee will ensure this impact remains acceptable.

Public Domain

The impact on the reserve has been discussed above.

Utilities

The subject site contains a site office with 1 male and 1 female toilet plus a kitchen facility. The existing facility would be considered adequate.

Heritage

The heritage impacts have been discussed above. In conclusion, compliance with recommended conditions of consent will ensure that in the unlikely scenario of uncovering Aboriginal artefacts the correct procedures are followed.

Other land Resources

The quarry targets sand and gravel resources that have been deposited on the Murrumbidgee Flood Plain. The resource is valuable to the wider community and the expansion will allow for this resource to be utilised.

Water

As discussed above, the use and management of water is critical to the operation of the quarry. Water is used in the processing of material and the appropriate licensing is required to undertake this activity. The management of this water to ensure no pollution of

waterways occurs has been discussed above. Appropriate bunding of the processing area will ensure all water used is returned to the sedimentation pit.

The quarrying activities will interact with ground water on a regular basis given the depth to which extraction has been requested. Whilst it has been addressed that there is the potential for a number of impacts, such as groundwater draw down and contamination, the assessment concludes that if managed appropriately these impacts will be negated and the impact on the ground water considered acceptable.

Based on the recommendations of relevant authorities Council is satisfied that sufficient water is available or could be made available to ensure the water needs of the project are met.

Soils

Soil erosion and sedimentation of water bodies are the two major areas of concern given the close proximity to the Murrumbidgee River and the flood prone nature of the site. The applicant has proposed 1:10 ARI levee banks around the working pits and remediation of the exhausted pits.

The levees will be required to be constructed to an appropriate standard and have break in and break out points constructed to minimise the risk of subsidence in the case of a flood and therefore reduce the potential for sedimentation of water bodies. Furthermore they will be required to be stabilised with vegetation to reduce erosion and dust impacts.

The remediation process is critical to the site for a number of reasons, with regards to soils, the battering of quarry pits and the revegetation stabilises the soils reducing erosion and sedimentation of the River.

Air and Microclimate

Within the EIS a detailed air quality assessment was undertaken. The modelling indicates that the proposed development will comply with the air quality requirements at surrounding residential receivers if appropriate mitigation measures are introduced. It should be noted that the assessment was carried out based on the original proposal. The amended plans locate the quarry operations further away from surrounding properties and reduce the traffic along Gillard Road. These changes to the original plan will reduce the impacts before mitigation measures are required.

The initial modelling found that air quality levels would not meet the required standards at residence 1 and 4. The primary source of dust being haul trucks operating on unsealed surfaces. The EIS recommended the following mitigation measures:

1. Level 2 (greater than 2L/m²/hr) water spraying would be undertaken on the unsealed access road from the site office onto the site. This should be undertaken during daytime weather conditions that assist dust dispersion (dry and windy) towards Receivers 1 and 4. During times of consistent adverse weather conditions (dry and winds), operations of these items should be reduced if possible.
2. Material should be watered prior to it being loaded for haulage, where appropriate.
3. The size of storage piles should be minimised where possible.
4. Cleared areas of land should be limited and cleared only when necessary to reduce fugitive dust emissions.

5. On-site traffic should be controlled by designating specific routes for haulage and access and limiting vehicle speeds to below 25km/hr
6. All trucks hauling material should be covered before exiting the site and should maintain a reasonable amount of vertical space between the top of the load and top of the trailer.
7. Material spillage on sealed roads should be cleaned up as soon as practicable.
8. A rumble-strip at the interface of the sealed road and the unsealed access road should be considered.
9. Excavating operations conducted in areas of low moisture content material should be suspended during high wind speed events or water sprays should be used.

A number of these measures have been discussed elsewhere in this report. As mentioned, Gillard Road will be conditioned to be sealed reducing the dust impacts. A number of the other mitigation measures will be conditioned, such as watering of the roads and material within the quarry site and the covering of the trucks. The reduction in the size of the quarry and the number of truck movements in the supplementary information, along with the sealing of the road is likely to bring the impacts down to an acceptable level. However the additional mitigation measures, such as the watering, landscaping and covering of trucks will ensure this level is met. Furthermore, given the operators/owners non compliance issues, strict monitoring conditions will be enforced via conditions of consent to ensure appropriate levels are always maintained.

Waste

Waste products will be minimal; all overburden will be stored on site and used in the rehabilitation of the pits or construction of levee banks.

Energy

The machinery and operations use energy, however quarries are a necessity and the extension of the quarry is far more energy efficient than the construction of a new quarry.

Natural Hazards

As mentioned above the site is considered bush fire prone and flood prone. The bush fire risk is considered negligible given the nature of the use.

The flooding impacts have been discussed in detail above, concluding that the degree of impact would be acceptable.

Safety, security and crime prevention

The site will be secured outside of hours of operation. The owner of the property lives onsite, providing additional security. The general day to day operations would be required to meet work cover requirements for safety. No additional safety measures or security would be required via development consent.

Hours of operation

The applicant has proposed the following hours of operation:

- 7am – 6pm Monday to Friday

- 8am to 6pm Saturday

The original consent had the following hours of operation:

- 7.30am – 6pm Monday to Friday
- 8am to 6pm Saturday

Whilst the proposed hours have increased from 7.30am to 7am on weekdays the 7am start is consistent with the general hours of operation afforded to the construction industry. With the conditions of consent relevant to noise controlling the impact these hours would be considered acceptable.

Social Impacts

Whilst the positive social impacts of expanding the quarry are minimal the proposal has negligible negative impacts given compliance with conditions of consent. The proposal will not impact on the way people carry out their day to day social activities.

Economic Impacts

The major economic benefit associated with the expansion of the Tarcoola Quarry is to provide surety in the supply of construction materials to meet the demand from the Riverina Region. The operation of the quarry will supply competition in the industry to ensure continued affordability.

The quarry operations will also continue to contribute to the local economy through ongoing operational expenditure and employment.

The proposed project provides a necessary resource for continued investment and development in the region, producing products required to support the regional construction industry. The project would allow for the provision of quarry products to regional markets for the next 15-20 years, reducing the need to locate and develop alternative sources over that time.

Construction

No buildings are proposed. Construction of levee banks will be required around each pit as and when they are opened. Conditions of consent will require these levees to be constructed to an appropriate standard.

Noise and vibration

Noise modelling was undertaken as part of the EIS. The original proposal required the construction of a 5m earth wall in the north western corner of the subject site to ensure residence 2 on the northern banks of the river was not impacted by noise to an unacceptable level. This was considered unacceptable mitigation and the applicant revised the proposal in the supplementary information.

Noise modelling was undertaken using the two worst case scenarios:

- Scenario 1 – equipment placed on north western side of the site (near residence 2)

- Scenario 2 – equipment placed to the south west of the site (near residences 1 and 3)

The modelling also used worst case meteorological conditions so are considered to be conservative. The modelling was undertaken in accordance with *Industrial Noise Policy*, *Road Noise Policy* and *Assessing Vibration: A Technical Guide*.

The results showed that all 5 residential receivers complied with the noise level standards with the exception of residence 3 (the owners property) as discussed previously this property does not need to meet the requirements.

The 2.5m earth bund required to the north west of the site provides for 1:10 ARI flood protection and acts as a noise barrier for residence 2. This design is far more acceptable and considered an appropriate mitigation measure given its increased distance from the river bank and reduced height. Furthermore the bund is temporary, albeit for a number of years and will be pushed back into the pit during the rehabilitation of this pit.

Potential impacts from traffic noise and the increase in truck movements has been considered in the EIS and supplementary information. It is considered that given the distance to the closest dwelling from Gillard Road being >400m and the sealing of the road via conditions of consent, the impact will be negligible.

Vibration impacts are a consideration with extractive industries. Given no blasting has been proposed, and will be conditioned on any consent granted, minimal impacts are expected. The EIS states that 'typical vibration levels from activities, such as excavation, are generally negligible at distances greater than 50m'. Given the closest residence is at least 275m from the proposed extraction site the vibration levels from quarry equipment are not anticipated to adversely impact receivers.

Further to the above, conditions of consent will be placed on any consent granted that states the acceptable noise limits at adjoining premises. The EIS and supplementary information has indicated that the expansion and operations will have no issues meeting these requirements. However failure to do so will result in enforcement action. Given the history of non compliance the owner/operator will be required to submit a noise management plan that includes detailed monitoring, compliant management and mitigation measures.

Services

The appropriate services exist on site and will not be altered.

Flora and fauna

The impacts on flora and fauna have been discussed in detail above. In conclusion the expansion of the quarry would not involve the removal of any native vegetation and would be some 80m from the Riparian corridor along the river. The site has been substantially cleared of vegetation over the years through agricultural activities and the existing quarry and turf farming operations. The expansion would have a slight reduction in foraging habitat but this impact would be negligible. As mentioned, landscaping and continuous rehabilitation of the site will increase the native vegetation in the area and provide a varied habitat with a series of ephemeral ponds or billabongs.

Site Design

The proposed expansion areas are to the north of the existing pits and to the western side of Gillard Road. The applicant has proposed to use the closest possible available land to the existing quarry. The options available for expansion are limited given the size of the site and therefore the proposed areas for expansion are acceptable given the impacts assessed above.

The Principles of Ecologically Sustainable Development

The following are principles of ecological sustainability:

1 The precautionary principle

Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

- (a) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
- (b) an assessment of the risk-weighted consequences of various options.*

The principle requires decision-making to give the environment the benefit of the doubt.

2 Intergenerational equity

The present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations (that is, a partnership among all of the generations that may use or expect to benefit from the nation's resources).

3 Conservation of biological diversity and ecological integrity

Conservation of biological diversity and ecological integrity should be a fundamental consideration.

4 Improved valuation, pricing and incentive mechanisms

Environmental factors should be included in the valuation of assets and services:

- (a) polluter pays (that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement), and*
- (b) the users of goods and services should pay prices based on the full cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste, and*
- (c) environmental goals having been established should be pursued in the most cost-effective way by establishing incentive structures, including market mechanisms which enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

The proposed development will not result in serious or irreversible damage. The proposal is consistent with the precautionary principle to the extent that all potential threats to the environment have been identified and assessed and appropriate mitigation measures discussed to minimise the impacts. Conditions of consent will require ongoing monitoring to further reduce the risk of environmental damage.

The resource that has been identified would allow for quarrying for a further 20-25 years, providing a resource to the construction industry that would benefit the future generations. The conditions imposed will ensure that the excavation is undertaken in accordance with current best practice to minimise the impact on the environment.

The conservation of biological diversity and ecological integrity has been discussed throughout this report. The impacts are both minimal and acceptable.

Tarcoola quarry will be required to ascertain licences from the relevant authorities, implement all mitigation measures and rehabilitate the site at their full cost. Undertaking the above measures will ensure that the expansion has an acceptable level of impact on the environment given the resource is a necessity.

(c) – The suitability of the site for the development

Suitability of the site in terms of the likely impacts identified under (b)

The site is currently zoned rural and contains an existing quarry and turf farm, the site is considered suitable for an extension to the Quarry. Compliance with conditions of consent will overcome concerns making the site suitable in terms of the impacts identified under section b.

(d) - any submissions made in accordance with this Act or the Regulations

Referrals

Internal

Mayor and General Manager (development cost >\$1 million)
Flood Plain Management Committee

External

Roads and Maritime Services
NSW Office of Water
NSW Fisheries
Environmental Protection Authority
NSW Office of Environment and Heritage
Division of Resources and Energy - Mine Safety operations Branch
Rural Fire Service - Local (email)
Riverina Water

Notification and Advertising

In accordance with the Council's advertising and notification provisions outlined in Section 1.10 of the WWDCP the application was advertised and notified for a period of 30 days on the following dates 10/07/13 to 12/08/13 and referred to surrounding properties and tenancies. Eleven public submissions and six public authority submissions were received during this period.

Additional information was submitted that required the application to be re-notified on the following dates 19/11/13 to 19/12/13. Six public submissions and six public authority submissions were received. The details of the submissions have been addressed below:

Public Submissions and those from public authorities

The main issues and comments raised in the submissions received have been addressed below. For full submission details please see Council's file.

Public Authorities

Trade and Investment – Crown Lands

Crown lands offered no objection to the proposed development providing:

1. Gillard Road is transferred from Crown Lands to Wagga Wagga City Council
2. Full public access is retained to reserve 71325
3. There are no negative impacts on the use, function and environmental features on any identified adjoining Crown land
4. All Asset Protection Zones to be constructed within the proposed development area are not on Crown land
5. No drainage of water, fluids or waste is to be directed from the associated development onto the adjoining Crown land
6. The Crown and the minister administering the Crown Lands Act 1989 are indemnified and kept indemnified against claims arising out of the proposed development
7. The applicant concedes that this consent does not imply or allow presumption of the concurrence or support of the Minister administering the Crown Lands Act 1989 for the proposal

Council will accept the transfer of Gillard Road from Crown lands to Council. The works will take place wholly within the applicant's site and will have no impact on the vegetation within or access to the reserve. Recommended conditions of consent will control all possible pollution associated with the quarry to ensure that acceptable impacts only are associated with the expansion of the quarry. The issues raised above will not impact on the recommendation of the application.

Transport – Roads and Maritime

The RMS provided the following comments:

Maritime

'...RMS has no objections based on navigational grounds to this Development Application.

It is important to note that no agent shall be exempted from the provisions of the Management of Waters and Waterside Lands Regulations NSW or any other relevant legislation, and all agents must comply with any direction given by RMS officers with regards to pollution prevention...'

No comments or conditions are required.

Roads

The comments received from Roads were addressed earlier in the body of the report. The proposal was supported subject to conditions of consent with the main conditions being the sealing of Gillard Road and providing a traffic management plan.

Department of Primary Industries - Fisheries

Fisheries have provided the following comments:

'...Fisheries NSW do not consider that the works are likely to have significant adverse impact on threatened fish species, populations or the aquatic ecological community which reside in the river in this area provided the works are carried out as stated and all conditions are faithfully implemented.'

Fisheries NSW have reviewed the proposal in light of those provisions and has no objections subject to the proponent meeting General Terms of Approval that follow...'

As discussed above the application is not considered integrated from a fisheries perspective and therefore the GTA's are simply considered as recommended conditions by Council. The conditions relate to the protection of the waterway in the main and will be generally included in any consent granted. Given Fisheries have raised no objection subject to compliance with the conditions no further comment is required.

Department of Primary Industries – Office of Water

The New South Wales Office of Water (NOW) provided comments to Council on 4/9/13 based on the original submission documents. NOW identified a number of issues in relation to the proposed development that needed to be addressed before they would support such a proposal. NOW recommended that Council request additional information.

Supplementary information was submitted to Council on 13 November 2013 and meetings were held between the applicant and NOW. NOW provided their GTA's on 5/2/14. The GTA's address licensing, water quality and management and ongoing monitoring in the main. These GTA's have been included in the recommended conditions of consent.

Office of Environment & Heritage

The Office of Environment and Heritage (OEH) provided the following response to the original application on 12/08/13.

Aboriginal Cultural Heritage

'...OEH has reviewed the information provided in the EIS. OEH has also received supporting information for an Aboriginal Heritage Impact Permit. The cultural heritage assessment and the process of consultation that has been undertaken for this development is consistent with OEH policies, and OEH is able to issue a Section 90 Aboriginal Heritage Impact Permit for the proposal subject to a number of conditions...'

Flooding

...The primary objective of the policy is to reduce the impact of flooding and flood liability on individual owners and occupiers, and to reduce the private and public losses resulting from flooding,...

...Wagga Wagga City Council has prepared a Floodplain Management Plan (2009) that covers the urban areas of Wagga Wagga including the location of the Tarcoola Quarry Site. It is important that this proposed development is consistent with this plan.

...we would like to remind council that the Hydraulic Model that has been used in the assessment of the flooding impacts is currently in the process of being updated by

WMAwater...As such, it is expected that the design flood levels are expected to change as such the flooding assessment within the EIS will also need to be updated to properly reflect current floodplain conditions.

Furthermore, although the Flooding Assessment concluded that “the proposed quarry operations are not considered to pose an increase in flood risk to other properties...” it did report that flood levels were expected to rise by up to six centimetres in surrounding areas, which is concerning... Although the impact of this development by itself maybe minor the cumulative impacts of future development on the floodplain needs to be carefully considered by Council...’

Biodiversity

...Based on the information presented in the EIS and the proposed mitigation measures identified, we have no further comments in regard to the impacts on biodiversity...’

OEH provided an additional response to the supplementary information; however the comments remain largely as submitted for the original application.

The GTA's provided will be included on any consent granted. With regards to the flooding comments, in the main these have been addressed in the body of the report.

The two issues that have not been discussed are the hydraulic model that has been used and the cumulative impacts of future development on the floodplain. The cumulative impacts are a concern and a big issue for Council. A strategic approach needs to be taken on this issue and specific controls incorporated into the LEP and DCP for Wagga. This issue is at the forefront of Council's flood planning. However, this application must be considered against the impacts it creates and whether they are considered acceptable or not and not the potential impacts from future development.

The flooding information used in the EIS is based on the current information Council utilises. Whilst it is correct that the information is being updated, this information is not currently available and therefore the method used by the applicant is acceptable.

Environment Protection Authority

The Environmental Protection Authority (EPA) provided the following comments to the original application on 5/09/13:

‘...The EPA has responsibilities for pollution control and environmental management under the Protection of the Environment and Operations Act 1997. Following a review of the information provided, including the Environmental Impact Statement and all public submissions, we are able to issue our General Terms of Approval (GTA) for the proposed development...’

...In assessing the proposal the EPA has also identified a number of environmental issues that the determining authority may wish to consider in its overall assessment of the application. These are outlined at Attachment C and address the following issues:

- *Noise*
- *Dust*
- *Building and demolition waste*
- *Progressive rehabilitation*

- *Stages development, and*
- *Annual report certifying extraction volumes and areas*

The EPA reviewed the supplementary information and responded by confirming the GTA's submitted with the original submission do not require modification. The GTA's will be included on any consent granted. The GTA's cover the following issues:

- Pollution
- Waste
- Noise
- Traffic
- Operating conditions
- Emergency response
- Monitoring
- Reporting
- Rehabilitation

The other issues raised by the EPA have been assessed in detail in the body of the report and/or included in recommended conditions of consent.

Public Submissions

Issue: Dust caused by quarrying operations. Justification for dust estimates should be provided

Comment: Dust is a major concern given the close proximity of residential properties. An air quality assessment of the proposed operations was undertaken by the applicant. The modelling indicates that the proposal will comply with all air quality criteria at all surrounding residential receivers with the incorporation of mitigation measures such as water carts. The report indicates that the main source of dust is vehicles using the unsealed Gillard Road. Although the model shows that watering of this road will ensure the impacts are acceptable, this mitigation measure is reliant on the owner/operator and given the recent non compliance issues a more permanent mitigation measure would be more appropriate. Conditions of consent will recommend that Gillard Road is sealed up to the entry point to the quarry and within 100m of the quarry site. This measure will permanently address the dust issues associated with Gillard Road. Further to this dust suppression measures such as water carts will be required to be implemented on site to mitigate the dust impacts of the operations, processing and stock piles. The additional landscaping that will be required for a number of reasons along with the rehabilitation of the exhausted quarries will also mitigate dust issues. Whilst these measure will ensure air pollution levels are reduced conditions of consent will also require a monitoring system to be introduced to ensure standards are being met.

Whilst the air quality assessment did make assumptions without appropriate references, the conditions included on any approval, as discussed above, will ensure that the proposal will comply with the relevant standards.

Issue: Safety concerns at junction with Hammond Avenue

Comment: This issue was raised based on the details provided in the original submission. The supplementary information reduced the amount of material to be quarried annually

subsequently reducing the traffic movements. The assessment of the junction using the amended traffic information showed that it was considered adequate.

Issue: The EIS does not adequately address the following:

- History of operations
- Road safety audit
- Detailed description of rehabilitation
- Detailed geological study

Comment: The EIS does not go into great detail with regards to the history of the operations. It does address the original approval and the materials targeted, along with addressing the fact that in recent times the quarry has extracted more material than permitted under the original approval. Whilst a detailed history would be helpful it has little bearing on the assessment of the potential impacts of the proposed expansion. Therefore Council has no issues with the information submitted regarding the history of the operations.

A road safety audit for Gillard Road and modelling of the junction of Gillard Road and the Highway was undertaken by the applicant to the satisfaction of Council. The conclusions are considered acceptable.

The original submission did not address the rehabilitation requirements listed in the Director General Requirements to the satisfaction of Council. The supplementary information supplied further detail and with compliance with recommended conditions of consent the information is considered sufficient.

Whilst the geological information could be argued to be lacking detail with regards to test drilling, the quarry has been in operation for more than 24 years and it is reasonable to use this information along with topographical maps given the close proximity of the expansion pits to the existing operations. There is little doubt that the proposed expansion sites contain similar materials to that that have been quarried for the past 24 years.

Issue: The standard of Gillard Road is poor and will only deteriorate

Comment: Conditions of consent will require Gillard Road to be sealed from Hammond Avenue to the entry to the quarry site. The owner will also be required to pay a maintenance levee for the ongoing maintenance of this road by Council.

Issue: Inaccuracies in EIS with regards to distances and plans. The modelling for noise, dust and flooding should be reassessed based on accurate information.

Comment: The particular inaccuracies raised were distance to neighbouring properties and conflicting pit boundaries on the various plans provided. Whilst accuracy and consistency are crucial, mistakes and errors are expected to a degree in an application of this nature. In this instance Council has received supplementary information that has a detailed pit layout plan that will be stamped as the final plan on any consent granted. The pits will be required to be constructed in accordance with this plan and conditioned to be surveyed to ensure they are excavated as per the approved plans.

Whilst the distance to properties has not been verified, Council is satisfied that the recommended conditions of consent will ensure that all impacts remain in acceptable

levels. It would be unreasonable given the recommended conditions of consent to require amended modelling to be undertaken by the applicant. Whilst the EIS may state distances in number form, the noise, dust and flooding information also includes maps that use aerial photographs to identify impacts. The distances on these aerial photographs cannot be questioned.

Issue: The impacts on the reserve have not been addressed

Comment: No works are proposed in the reserve, an 80m buffer zone has been provided for from the proposed pits to the Riparian zone and the associated dust, traffic and noise impacts raise minimal concern within a public reserve.

Issue: Change of land use is inappropriate in the rural zone, not compatible with surrounding land uses and does not meet the objectives of the rural zone

Comment: Extractive industries are permissible in the rural zone. The use exists and this is simply an expansion of that use. The detailed assessment above has concluded that with compliance with conditions of consent the proposal would not have an unreasonable impact on surrounding land uses and is therefore acceptable.

Issue: The expansion is major, not an extension to existing operations

Comment: The expansion is major and this is why it is considered designated development and requires the preparation of an EIS. However it is also an expansion of the existing operations.

Issue: The extension should be limited to 3 years as the proposed life of the proposal is incompatible with the rights of other rate payers and the future expansion of the city

Comment: The application is for an operational consent. Whilst a recommended condition of consent will give an end date for the application this will not be limited to 3 years as suggested. The applicant has demonstrated that the expansion can be accommodated on the current site without unacceptable impacts on the current land uses, any future proposal in the vicinity will need to take into consideration the final footprint of the quarry operations. The applicant does not need to consider future development that has not been approved.

Issue: External monitoring and management of complaints system should be included on any consent granted

Comment: Noise, water pollution and dust monitoring conditions have been recommended to be included on any consent granted and a condition of consent will require a complaints management system to be agreed with Council and implemented.

Issue: General noise issues. No noise data north of the site with the exception of the nearest resident

Comment: As discussed above, noise issues are an important consideration. Generally traffic and operational noise are the main concerns. The applicant has undertaken noise modelling that indicates the impacts would be compliant with the relevant standards at the nearest receptors. Conditions of consent will ensure the operator maintain these standards

and given the history of non compliance the owner/operator will be required to undertake noise monitoring and report to Council.

Issue: Alterations to natural drainage patterns that will impact on neighbouring properties

Comment: Recommended conditions of consent will require a detailed drainage plan to be submitted to Council prior to the commencement of operations under this consent. The drainage plan will be required to address the direction of flows and ensure that the works do not direct overland flow onto neighbouring properties if this is not the natural drainage line. Given the lay of the land and site features it is expected that the applicant can easily achieve this and therefore Council, considers it appropriate to be conditioned rather than requested before any approval is granted.

Issue: Potential contamination from use of turf farm land

Comment: The use of pesticides on the turf farm to be incorporated into the quarry is controlled by the Pesticides Act 1999. Any breaches in the application of pesticides that may impact on ground water is controlled under this Act and enforced by the Environmental Protection Authority. The EPA has provided no information that they have had any issues with this site with regards to pesticides. The information states that the current employees are Chemcert Accredited and trained in the use of pesticides under the Australian Pesticides and Veterinary Medicines Authority.

Fertiliser is not limited or monitored and therefore its impact on ground water systems must be negligible. Furthermore over fertilizing can have a detrimental impact on the product and therefore the owner is extremely unlikely to have over fertilised the soil and risk the health and productivity of their product. The likelihood of any contamination from fertilisers when opening up pits or using the overburden for levee construction is therefore minimal.

Issue: Excessive hours of operation

Comment: The application proposes to increase the hours of operation from 7.30am on week days to 7am. This issue has been addressed above and considered acceptable.

Issue: 5m high noise wall raises flooding/noise/visual impacts

Comment: This noise wall was part of the original proposal and has been removed in the amendments made in the supplementary report.

Issue: Visual amenity impacted by the expansion

Comment: Whilst a large expansion like this will have a visual impact the maximum height of any works will be 3m, being the construction of the levee banks. Continuous rehabilitation of the exhausted pits will reduce the impacts associated with the quarry. Whilst it is understood that vegetation takes time to establish, the principle behind the rehabilitation plan means that no more pits will be active than are currently. The visual impact is considered acceptable. Further to this landscaping of the boundaries in certain areas will reduce the impacts further.

Issue: Lack of landscaping proposed

Comment: Landscaping of the site will occur during the rehabilitation process. However it can also be utilised to assist in addressing a number of concerns raised in the objections. Landscaping will help to visually screen the quarry reducing its impact on the wider community. Landscaping will also reduce dust impacts and although it won't reduce noise it will help to screen vehicles from view. Therefore it is recommended that a landscape plan be submitted to and approved by Council and then implemented by the owner of the land. The plan will be required to show landscaping in key areas close to sensitive receptors and along Gillard Road.

Issue: Impacts on social amenity have been underestimated

Comment: Council is satisfied that the expansion will not have an unreasonable impact on the social amenity of the area. There will be minimal alterations to the current operations with regards to employment and distribution of product. The quarry provides materials to the local construction industry and this will not be altered.

Issue: There is no overwhelming need for such a large quarry. The economic impacts have been underestimated.

Comment: The need for the quarry is determined by the market. Simply applying for the ability to remove 150,000 tonnes per annum does not mean the owner/operator will do this. If the market does not require that material then it is unlikely the owner/operator will remove that material. The potential is what is applied for and the need should not be questioned. The construction industry requires raw material and competition within the market of supplying raw materials to ensure prices remain competitive. In general the economic impacts will be positive.

Issue: Other sites could be used

Comment: Whilst other sites may be available, the applicant has applied for an expansion of this site and this is what Council must consider.

Issue: Non compliance with current development approval and ongoing enforcement issues

Comment: It is acknowledged that the owner has, and continues to operate outside of the current consent. This non compliance has been picked up by Council and the Environmental Protection Authority. Numerous meetings were held with the relevant parties to address these issues resulting in the lodgement of this application. Whilst non compliance is not acceptable, rectifying the issue by way of lodgement of an application is considered a reasonable outcome by Council. Should the application be refused, the owner will be required to operate in accordance with the current consent and should non compliance occur Council and the EPA will take appropriate actions. Given the history of non compliance, should the application be approved a number of stringent monitoring conditions will be placed on the consent to ensure that the applicant complies with all conditions on any consent granted.

Issue: 80m buffer area to riparian zone is insufficient

Comment: the 80m buffer zone to the riparian area is more than adequate for the protection of this zone. Furthermore conditions of consent will ensure the site is appropriately managed to minimise the risk of pollution to this area.

Issue: The EIS should have included exhaust fumes in the air quality assessments

Comment: Given Gillard Road is a public road this is not considered necessary.

Issue: A whole new application should have been lodged instead of adding additional information

Comment: The process followed with the additional information followed Council and the regulations guidelines. The application was readvertised and referred to all relevant authorities with adequate time for assessment and response provide.

Issue: Council has missed an opportunity to utilise the quarry in the proposed levee upgrade

Comment: This is not a relevant consideration for this application.

Issue: Failure of levee in recent floods raises concern over proposed levees, details should be provided. Possible failures should be modelled.

Comment: The applicant will be required via recommended conditions of consent to construct the levee banks to approved engineers specifications that include appropriate design for flood impacts. This will ensure the pits and levees are designed in the most appropriate manner to accommodate any flooding. Whilst no design is full proof it would be unreasonable to ask for possible failures to be modelled given the stringent conditions associated with the construction and sign off of the levee construction and the fact that failures can happen for a number of different reasons in a number of different scenarios, given the engineers design and sign off, Council would not expect the levees to fail.

Issue: A number of flooding issues were raised. Lack of mitigation measures, impact of levees on flood waters, cumulative impacts of development, levees impacting on back flow after floods, increase in flood damage to properties and river banks, increase in turbulent flow and alterations to preferential pathway of flood waters, compensation should be provided, failure to model worst case scenario, inaccuracies with the modelling, no information with regards to velocity, extents, duration and flow direction.

Comment: A detailed assessment of the flooding impacts and mitigation measures has been undertaken in the body of this report. For a number of reasons discussed the impacts from flooding are considered acceptable.

(e) - the public interest

Federal, state and local government interests and general community interests

The report has identified a number of impacts associated with the expansion of the quarry operations, namely flooding, noise, dust and operational management. The report identifies that with appropriate mitigation measures these issues will be addressed to an acceptable level.

Economically the proposal provides surety in the supply of construction materials to meet the demand of the Riverina Region and provide ongoing competition in sand and gravel supply to ensure continued affordability of construction projects in the region.

It is considered that the benefits economically, along with compliance with mitigation measures will provided a quarry that is considered in the public interest.

Other Legislative Requirements

Section 5A ("Seven Part Test" - Threatened Species)

The following factors must be taken into account in making a determination under this section:

- (a) in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,*
- (b) in the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction,*
- (c) in the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:*
 - (i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
 - (ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,*
- (d) in relation to the habitat of a threatened species, population or ecological community:*
 - (i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and*
 - (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and*
 - (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality,*
- (e) whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly),*
- (f) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan,*
- (g) whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.*

As mentioned under section 7.3 of the LEP above, the applicant undertook a Flora and Fauna assessment. The assessment identified that there was the possibility to impact on 7 bird species and therefore a 7 part test was undertaken for these species. The tests identified that the proposal was unlikely to have a significant impact on any species and therefore a Species Impact Statement was not required.

Section 79B(3)

As mentioned above there is unlikely to be significant impact and a Species Impact Statement is not required. Therefore concurrence is not required from the Director General of National Parks and Wildlife.

Council Policies

N/A

Comments by Council's Officers

Council's other relevant officers have reviewed the application in accordance with Council's processing procedures.

Development Contributions

Given costs are considered operational costs and not construction costs no S94A has been charged for this application.

The proposed works will not result in increased impacts on Council's sewer and stormwater systems and therefore no S64 contributions are required.

Other Approvals

The development is integrated development in accordance with the following:

- Clauses 43b and 48 of the Protection of the Environment and operation Act 1997
- Sections 90 and 91 of the Water Management Act 2000
- Section 90 of the National Parks and Wildlife Act 1974

Conclusion

Council has assessed the application based on the EIS, supplementary information and submissions on the project in accordance with the relevant statutory requirements.

Council has given careful consideration to all potential impacts, particularly with regards to flooding, noise, dust and ongoing operations and management. The previous and current non compliance with the existing consent is a significant issue and the weaknesses in some sections of the EIS are a concern, however it has been determined that rectifying the non compliance by way of application is a suitable solution and that any weaknesses were not to such a degree as to recommend refusal of this application. Council has considered that compliance with recommended conditions of consent will bring the current operations up to appropriate standards and will ensure that the impacts mentioned are contained to an acceptable level.

Council also recognises the potential beneficial economic impacts of the quarry. Council is satisfied that the impacts of the project are able to be minimised, managed, offset, and/or compensated to ensure an acceptable level of environmental performance. Consequently, Council recommends that the proposed expansion be approved, subject to strict and comprehensive conditions of consent.

The proposal complies with the requirements of the Environmental Planning and Assessment Act 1979, the Building Code of Australia and Councils Policies. The objections received have been addressed in this report.

Recommendation

That, pursuant to the provisions of Section 80 of the Environmental Planning and Assessment Act, 1979, it is recommended that Development Application No. DA13/0307 be **APPROVED** subject to the following conditions:

CONDITIONS

Approved Plans and Documentation

1. The development must be carried out in accordance with the approved plans and specifications as follows.

Plan/Doc. No.	Plan/Doc. Title	Prepared by	Issue	Date
23/14626	Tarcoola Turf and Quarries – Extension of Tarcoola Quarry – Environmental Impact Statement – Volumes 1 and 2	GHD	-	June 2013
23/14626	Tarcoola Turf and Quarries – Extension of Tarcoola Quarry – Supplementary Report	GHD	-	November 2013

The Development Application has been determined by the granting of consent subject to and as amended by the conditions of development consent specified below.

NOTE: Any modifications to the proposal shall be the subject of an application under Section 96 of the *Environmental Planning and Assessment Act, 1979*.

REASON: It is in the public interest that work is carried out in accordance with the approved plans. Section 79C(1)(e) of the *Environmental Planning and Assessment Act 1979*, as amended.

Prior to commencement of works

2. Prior to the commencement of works erosion and sediment control measures are to be established and maintained to prevent silt and sediment escaping

the site or producing erosion. This work must be carried out and maintained in accordance with Council's:-

- a) Development Control Plan 2010 (Section 2.8 and Appendix 2) and
- b) Managing Urban Stormwater, Soils and Construction Volume 2E Mines and Quarries.

Prior to commencement of works, a Erosion and Sediment Control Plan illustrating these measures shall be submitted to, and approved by, Council.

NOTE: All erosion and sediment control measures must be in place prior to earthworks commencing.

REASON: To ensure the impact of the work on the environment in terms of soil erosion and sedimentation is minimised. Section 79C (1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

3. Prior to the commencement of works, the Applicant shall:

- (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the entire site; and
- (b) submit a survey plan of these boundaries with applicable GPS coordinates to the Council.
- (c) ensure that the boundaries of the pit being quarried are clearly marked at all times.

REASON: To ensure the approved plans are complied with. Section 79C (1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

Prior to operation

4. Prior to operation the applicant shall submit to Council for approval a revised site plan that indicates;

- i) The stormwater overland flow paths for all 'clean' water in all possible levee configurations. This plan must include the treatment of Gillard Road with culvert locations and sizing's at low points in the road adjacent to natural watercourses.
- ii) The plan must show natural existing drainage paths and proposed drainage paths in accordance with the proposed levy layout.
- iii) The plan must indicate that flow paths for overland flow and flooding will cause no additional impact to neighbouring properties.

REASON: It is in the public interest that drainage does not impact on the adjoin properties. Section 79C(1)(e) of the *Environmental Planning and Assessment Act 1979*, as amended.

5. Prior to works or activities commencing within the road reserve approval under Section 138 of the *Roads Act 1993* is required from Council.

A written application for Consent to Work on a Road Reserve is required to be submitted to and approved by Council. This shall include the preparation of a certified Temporary Traffic Management Plan (TTP) for the works.

It should be noted that work in the existing road reserve can only commence after the plan has been submitted and approved and then only in accordance with the submitted TTP.

REASON: It is in the public interest that proposed works being carried out within the road reserve, in association with the subject development, are assessed for compliance against relevant traffic management standards and the terms and conditions of the *Roads Act 1993*. Section 79C(1)(e) of the *Environmental Planning and Assessment Act 1979*, as amended.

6. The applicant shall submit a detailed landscape plan and legend to be approved prior to commencement of operations.

- (1) Landscape plan shall be in accordance with Council's Landscape Guidelines and Landscape Application Checklist.**
- (2) A Plant Schedule indicating all plant species, pot sizes, spacings and numbers to be planted within the development shall be submitted with the Landscape Plan. Plant species are to be identified by full botanical name. All plants proposed in the landscape plan are to be detailed in the plant schedule.**
- (3) The Landscaping Plan shall include planting along the southern boundary of Pit 1 Cell A and the Basin, the north western boundary of the site and along Gillard Road.**
- (4) The landscaping Plan and documentation shall include details of when the plantings will occur and measures for ongoing establishment and maintenance to ensure a 100% survival rate of trees. Any trees lost due to death, disease, vandalism etc will require replacement.**

REASON: To ensure that landscaping will be provided on the subject land. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

7. The Proponent shall prepare and implement a Transport Management Plan, in consultation with Council and Roads and Maritime Services to outline measures to manage traffic related issues associated with the operation of the quarry and the transport of quarried material. This plan shall detail the potential impacts, the measures to be implemented, and the procedures to monitor and ensure compliance. It shall address, but not necessarily limited to;

- measures to address restrictions on haulage during periods of low visibility eg heavy rain periods or fog etc, along the haulage route,**
- measures to be employed to minimise truck movement during the morning and afternoon peak traffic periods and limit disruption to other motorists, emergency vehicles and school bus timetables, so as to minimise potential conflict with haulage vehicles,**
- measures to ensure that all loaded vehicles entering or leaving the site are covered, and are cleaned of materials that may fall onto public roads,**
- measures to address dust generated by quarry vehicles accessing site,**
- details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the quarry,**
- measures to ensure that dust and loose surface road material generated by traffic activities on and accessing the subject site do not cause a nuisance or hazard to traffic on the public road network.**

- **measures to ensure that the provisions of the Traffic Management Plan are implemented and complied with.**

REASON: To ensure traffic related impacts associated with the development are minimised. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 8. Gillard Road shall be constructed and sealed to provide for 2 travel lanes in accordance with Councils Engineering Guidelines to minimum 30 year life span. The road shall be sealed up to and including the entry to the pits. Prior to commencement of works, plans and a pavement design carried out by suitably experienced Geotechnical Engineer shall be submitted to Council's Development Engineer for approval. Plans are to indicate how stormwater runoff will be drained from the road surface and how any low points in the road will be drained and location of additional safety signage.**

REASON: To ensure traffic related impacts associated with the development are minimised. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended

- 9. Within the site the road shall be sealed and maintained for at least 100m commencing from the front boundary of the premises on Gillard Road.**

REASON: To ensure traffic related impacts associated with the development are minimised. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 10. Prior to the commencement of operations a Flood Evacuation Plan for the development shall be submitted to Council.**

REASON: To provide a permanent, fail-safe, and maintenance-free measure for the orderly evacuation of people from the area in the event of a flood. Section 79C(1)(c) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 11. Prior to the commencement of operations the proponent is to provide Council with a report prepared by a suitably qualified person investigating the alternatives to 'beeping' alarms for the construction equipment. The report must make recommendations regarding the safety and cost of alternatives. Once reviewed by Council the proponent must implement any of the recommendations agreed in writing by Council within 12 months of the commencement of operations under this consent.**

REASON: To ensure noise amenity issues at neighbouring properties are appropriately addressed. Section 79C(1)(c) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 12. Prior to the commencement of works the applicant is to establish a bank guarantee to act as a trust deed to be managed by an agreed solicitor in order to accrue funds for the proposed rehabilitation. These funds are to be accrued annually via an Environmental Levee. The levee will be calculated upon an agreed cubic metre extracted rate and determined by a surveyors report at the end of each financial year that clearly identifies the amount of material extracted. The funds are to be managed in such a manner that funds may only be released via written approval by Wagga Wagga City Council for the purpose of rehabilitation of closed quarry pits.**

REASON: To ensure that rehabilitation will be provided on the subject land. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

13. **Prior to the issue of a Construction Certificate the applicant shall submit a Dust Management Plan for approval by the Director of Planning. The Management Plan must demonstrate that the activities of the proposed development will not create emissions of dust that will impact upon neighbouring properties. The Management plan must address but not be limited to:**
- **Monitoring - locations and schedule**
 - **On site trafficable areas - sealed and unsealed**
 - **Stockpiles - bunds, topsoil, material for sale**
 - **Material handling areas**

REASON: To ensure dust amenity issues at neighbouring properties are appropriately addressed. Section 79C(1)(c) of the *Environmental Planning and Assessment Act 1979*, as amended.

General

14. **The extraction is limited to 150,000 tonnes per annum. The proponent must supply Council with a quantity surveyors report at the end of each financial year that clearly certifies the amount of material extracted and further certifies that approved extraction limit has not been exceeded.**

REASON: It is in the public interest that the development complies with all the conditions of the development consent. Section 79C(1)(e) of the *Environmental Planning and Assessment Act 1979*, as amended.

15. **The development application is to remain consistent with the Environmental Protection Licence (EPL) to the satisfaction of Council at all times. Should there be any inconsistencies between conditions of consent and the EPL, the condition closest to the relevant Industry/Australian Standard at that particular time shall prevail unless agreed in writing by both Council and the EPA.**

REASON: It is in the public interest that the development complies with all the conditions of the development consent. Section 79C(1)(e) of the *Environmental Planning and Assessment Act 1979*, as amended.

16. **Within 12 months the date of approval the consent given by Council's Notice of Determination of Development Application No. 292/88 and dated 23 March 1989 must be surrendered by the submission of a document in accordance with Clause 97(1) of the Environmental Planning and Assessment Regulation 2000.**

NOTE: Prior to surrendering the original consent (DA292/88), it is critical that all "prior to operation" conditions of this consent (DA13/0307) have been satisfactorily complied with to allow continued operation of the quarry. Alternatively, operations will need to cease until such time that the conditional requirements of this consent (DA13/0307) have been satisfied.

REASON: Council is of the opinion that, having determined this Development Application by granting consent, it is not appropriate to permit the continuation of

the consent or right referred to in the condition. Section 80A(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 17. This approval is for the development to be undertaken in accordance with the approved plan (Figure 2.1 dated 4 November 2013) contained within the Supplementary Report (Extension of Tarcoola Quarry – dated November 2013) and the staging identified in this plan, namely:-**

- (1) Continued extraction from pit 1 cell A and B, the opening of pit 2 cell A and B and construction of levee bank for this stage (Stage 1);**
- (2) Opening of pit 3 cell A and B, opening of pit 4 and construction of levee bank around this stage (Stage 2);**

Stage 1 must be completed prior to any other Stage. All other Stages are required to be undertaken in order.

Each pit is to be opened in numerical order and each cell in alphabetical order.

Unless otherwise expressly stated, the conditions must be read as being applicable to all Stages.

No approval is granted for the development to occur in accordance with any superseded plan referencing 5 pits as contained within the Environmental Impact Statement – Volume 1 and 2 (Extension of Tarcoola Quarry – dated June 2013).

REASON: So that the development proceeds in a planned manner in accordance with the approved plans. Section 79C(1)(b) and (c) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 18. Prior to the construction of any and every levee bank, the proponent must lodge and have approved by Council detailed plans and documentation prepared by a suitably qualified person. The plans and documentation must include:**

- Construction method and testing regime of levee construction detailing the thickness of each layer of fill placed for the levee and the frequency of compaction testing**
- Detail of method of stabilisation of the levee banks through vegetation or other means**
- Detailed assessment on the flow path of floodwaters in the case the levee being overtopped for flood events exceeding the 10% AEP. (break in points and construction)**
- Sign off and certification from a structural engineer that the construction will not sustain structural damage from the force of flowing floodwaters or from impact of debris associated with floodwaters for all events up to and including the 1% AEP flood event.**
- The height of the levees does not exceed 10% AEP flood level.**

- **Details of the proposed levee bank to be constructed and compliance with the staging of the levee bank construction. Noting that removal of levee banks may be required prior to the construction of future levee banks.**
- **Confirmation that the levees around excavation pits shall be removed prior to the remediation of the pits and shall be limited to protecting a maximum of two active pits with a maximum area of protection of 5 hectares at any one time.**

REASON: To prevent the proposed development having a detrimental effect on the developments existing on the adjoining lands. Section 79C(1)(b) and (e) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 19. Once work has commenced on each levee bank the works must be completed within 6 months. This applies to each levee bank. The proponent must supply Council with written documentation confirming commencement of works and projected completion date. Sign off from a suitably qualified person that the works have been constructed in accordance with approved plans and all test results is required to be submitted to Council within 3 weeks of the completion of the works.**

REASON: To prevent the proposed development having a detrimental effect on the developments existing on the adjoining lands. Section 79C(1)(b) and (e) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 20. Levee banks are to be constructed and removed in accordance with the staging plan and submitted information.**

REASON: To prevent the proposed development having a detrimental effect on the developments existing on the adjoining lands. Section 79C(1)(b) and (e) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 21. Flood protection bunds and topsoil stockpiles shall be stabilised with vegetation.**

REASON: To prevent the proposed development having a detrimental effect on the developments existing on the adjoining lands. Section 79C(1)(b) and (e) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 22. All earthworks, filling, building, driveways or other works, must be designed and constructed (including stormwater drainage if necessary) so that at no time, will any ponding of stormwater occur on adjoining land as a result of this development.**

REASON: To prevent the proposed development having a detrimental effect on the developments existing on the adjoining lands. Section 79C(1)(b) and (e) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 23. All loading and unloading associated with the development are to take place within the subject site.**

REASON: To prevent the proposed development having a detrimental effect on the developments existing on the adjoining lands. Section 79C(1)(b) and (e) of the *Environmental Planning and Assessment Act 1979*, as amended.

- 24. All exterior lighting associated with the development must be designed and installed so that no obtrusive light will be cast onto any adjoining property.**

NOTE: Compliance with Australian Standard AS4282.1997 —Control of the Obtrusive Effects of Outdoor Lighting will satisfy this condition.

REASON: To prevent the proposed development having a detrimental effect on the developments existing on adjoining land. Section 79C(1)(b) and (e) of the *Environmental Planning and Assessment Act 1979*, as amended.

25. The site must be managed so that:

- a) **No additional fill is placed on the land which impedes the flow of flood waters, other than that approved by Council under this application;**
- b) **Any clearing or drainage activities must not alter the drainage patterns across the site;**
- c) **No landscaping or similar type structures are installed which will inhibit the flow of flood waters other than that approved as part of this application;**
- d) **Any plant or goods stored upon the site must be stored in a manner which will not allow pollution of the flood waters;**
- e) **All actions must be taken upon the site to minimise the adverse affect on the property by flood waters.**

REASON: The allotment is within a recognised flood zone. Development in accordance with the Flood Manual is required to reduce adverse environmental impacts. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

26. The quarry operator shall maintain accurate records of the extraction quantities and traffic movement to and from the subject site. These records shall be kept on site and be available for inspection at the request of either of the Wagga Wagga City Council or Roads and Maritime Services.

REASON: To ensure traffic related impacts associated with the development are minimised. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

27. The proponent shall make annual contributions to Council for the maintenance of local roads impacted by the quarry operations, payable by 31 January each year, in respect of the proceeding calendar year. The contributions shall be at a rate of 3 cents (indexed annually to CPI) per tonne of product material hauled per kilometre of Gillard Road travelled by haulage vehicles associated with the project, unless an alternative contribution, works-in-kind or reimbursement arrangement is negotiated between the Proponent and Council.

REASON: To ensure traffic related impacts associated with the development are minimised. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

28. The landscaping plan approved under condition 6 is to be implemented and maintained at all times throughout the life of the application.

REASON: To ensure that landscaping will be provided on the subject land. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended

29. Full unobstructed public access shall remain to reserve 71325 at all times.

REASON: To ensure impacts associated with the development on the reserve are minimised. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

30. The depth of extraction on each pit is limited to 160 AHD.

REASON: To ensure impacts associated with the development on the groundwater are minimised. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

31. No blasting is permitted.

REASON: To ensure impacts associated with the development on the amenity of the area are minimised. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended.

32. The development consent does not include approval for the site to receive or process waste or other materials.

REASON: To ensure impacts associated with the development on the environment are minimised. Part 5.6 of the *Protection of the Environment Operations Act 1997*.

33. Noise emission from the activities associated with the proposed development shall comply with the requirements of the New South Wales Industrial Noise Policy.

REASON: To ensure impacts associated with the development on the amenity of the area are minimised. Section 79C(1)(b) of the *Environmental Planning and Assessment Act 1979*, as amended..

34. No process water from the activities of the proposed development shall be discharged into the Murrumbidgee River or associated lagoons and drainage lines

REASON: To ensure impacts associated with the development on the environment are minimised. Part 5.3 of the *Protection of the Environment Operations Act 1997*.

35. Wagga Wagga City Councils Engineering Guidelines for Subdivisions and Development shall be referred to for the design of engineering requirements. Any aspect of the design which is not covered in Councils document should reference relevant specifications selected from other sources. Any aspect of the design that is not in accordance or not covered in council's document shall be listed and submitted with the plans for separate approval.

REASON: So that Council may ensure that the design and construction is in accordance with Councils requirements and for the information of the emergency services. Section 79c (l) (e) of the *Environmental Planning and Assessment Act 1979*, as amended.

36. This consent for the expansion and operation of the existing Tarcoola Quarry shall lapse at midnight on 7 March 2030.

REASON: The consent period should be limited to minimise environmental and social impacts. Section 80A(1)(d) of the *Environmental Planning and Assessment Act 1979*, as amended.

General Terms of Approval

- Section 1 – Environmental Protection Authority (EPA)
- Section 2 – Office of Environment and Heritage (OEH)
- Section 3 – Office of Water (NOW)

Section 1 – Environmental Protection Authority (EPA)

Notice No: 1515519

Administrative conditions

A1. Information supplied to the EPA

A1.1 Except as expressly provided by these general terms of approval, works and activities must be carried out in accordance with the proposal contained in:

- the development application DA13/0307 submitted to Wagga Wagga City Council on 18 June 2013; and
- the environmental impact statement, *Tarcoola Turf and Quarries Extension of Tarcoola Quarry Volume 1 June 2013* relating to the development. And
- Supplementary report dated November 2013

A2. Fit and Proper Person

A2.1 The applicant must, in the opinion of the EPA, be a fit and proper person to hold a licence under the Protection of the Environment Operations Act 1997, having regard to the matters in s.83 of that Act.

Limit conditions

L1. Pollution of waters

L1.1 Except as may be expressly provided by a licence under the Protection of the Environment Operations Act 1997 in relation of the development, section 120 of the Protection of the Environment Operations Act 1997 must be complied with in and in connection with the carrying out of the development.

L5. Waste

L5.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997.

L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence under the Protection of the Environment Operations Act 1997.

L6. Noise limits

L6.1 Noise from the premises must not exceed the sound pressure level (noise) limits presented in the Table below. Note the limits represent the sound pressure level (noise) contribution, at the nominated receiver locations in the table.

Noise Limits (dB(A))

Noise Assessment Location	Day
	LAeq(15 minute)
R1	43
R2	42
R3	43
R4	43
R5	43

Note: R1, R2, R3, R4 and R5 refer to noise receptors identified in the EIS identified in A1.1.

L6.2 For the purpose of Condition 6.1:

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays,
- Evening is defined as the period from 6pm to 10pm
- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays

L6.3 Noise from the premises is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary, to determine compliance with the noise level limits in Condition **L6.1** unless otherwise stated.

Where it can be demonstrated that direct measurement of noise from the premises is impractical, the DEC may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.

The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.

L6.4 The noise emission limits identifies in condition L6.1 apply under meteorological conditions of:

- Wind speed up to 3m/s at 10 metres above ground level; or
- Temperature inversion conditions of up to 3°C/100m and wind speed up to 2m/s at 10 metres above the ground.

Noise Management Plan

L6.5 The proponent must prepare and implement a Noise Management Plan to the satisfaction of the EPA that covers all quarry extraction, processing and transport operations. The plan must include but need not be limited to:

- a) Ongoing assessment of feasible and reasonable noise mitigation measures to achieve the noise limits in L6.1 at all times;
- b) Where the limits in L6.1 exceed the Project Specific Noise Levels (PSNLs) (as identified in the Noise and Vibration Assessment by GHD), reducing noise emissions over time to satisfy the PSNLs;
- c) A system that allows for periodic assessment of Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) to minimise noise impacts over the life of the proposal;
- d) Measures to monitor noise performance and respond to complaints;
- e) Measures for community consultation including site contact details;
- f) Noise monitoring, and reporting procedures.

Road Traffic Noise

L6.6 The proponent must prepare and implement a Traffic Noise Management Plan (TNMP), prior to commencement of operation activities, to ensure that feasible and reasonable noise management strategies for vehicle movements associated with the quarry are identified and applied, to include but not necessarily limited to the following;

- a) driver training to ensure that noisy practices such as the use of compression engine brakes are not unnecessarily used near sensitive receivers;
- b) best noise practice in the selection and maintenance of vehicle fleets;
- c) movement scheduling where practicable to reduce impacts during sensitive times of the day (eg school bus times);
- d) communication and management strategies for vehicles not owned and operated by the licensee to ensure the provisions of the TNMP are implemented;
- e) a system of audited management practices that identifies non conformances, initiates and monitors corrective and preventative action (including disciplinary action for breaches of noise minimization procedures) and assesses the implementation and improvement of the TNMP;
- f) specific procedures for drivers for minimising road traffic noise impacts;
- g) clauses in conditions of employment, or in contracts, of drivers that require adherence to the noise minimisation procedures and facilitate effective implementation of the disciplinary actions for breaches of the procedures.

Noise Compliance Monitoring

L6.7 A noise compliance assessment shall be undertaken within three months of commencement of operations at the premises. The assessment shall be prepared by a suitably qualified and experienced acoustical practitioner and shall assess compliance with noise limits presented in L6.1.

Hours of operation

L6.8 All construction work at the premises must only be conducted between may only be carried on between 10:00 am to 3pm Monday to Friday.

L6.9 Activities at the premises, other than construction work, may only be carried on between 7:00 am to 6pm Monday to Friday and 8:00am to 6pm Saturday excluding Sundays and public holidays.

L6.10 This condition does not apply to the delivery of material outside the hours of operation permitted by condition L6.8 or L6.9, if that delivery is required by police or other authorities for safety reasons; and/or the operation or personnel or equipment are endangered. In such circumstances, prior notification is provided to the EPA and affected residents as soon as possible, or within a reasonable period in the case of emergency.

L6.11 The hours of operation specified in conditions L6.4 and L6.5 may be varied with written consent if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected.

Operating conditions

O2. Dust

O2.1 Activities occurring at the premises must be carried out in a manner that will minimise emissions of dust from the premises.

O2.2 Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.

O2.3 All mitigation measures identified in the Environmental Impact Statement for the control of dust must be fully implemented at all times.

O3. Stormwater/sediment control -Construction Phase

O3.1 An Erosion and Sediment Control Plan (ESCP) must be prepared and implemented. The plan must describe the measures that will be employed to minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during construction activities. The ESCP should be prepared in accordance with the requirements for such plans outlined in *Managing Urban Stormwater: Soils and Construction*.

O4. Refuelling

04.1 All refuelling of plant and equipment must be undertaken in a designated hard stand area which has a bund that meets the relevant Australian Standard AS 4452B1997. A bund consists of:

- an impervious bund wall or embankment surrounding the facility or tanks
- an impervious floor within the bund area
- any joints in the floor or the wall, or between the floor and the wall
- any associated facilities designed to remove liquids safely from the bund area without polluting the
- environment.

05. Emergency Response -Pollution Incident Response Management Plan

05.1 The licensee must prepare a pollution incident response management plan. In summary,

- The plan must include the information detailed in the Protection of the Environment Operations Act 1997 (section 153C) and be in the form required by the Protection of the Environment Operations (General) Regulation 2009 (clause 98B);
- The licensee must keep the plan at the premises to which the environment protection licence relates or, in the case of trackable waste transporters and mobile plant, where the relevant activity takes place;
- Licensees must test the plan in accordance with the requirements of the Protection of the Environment Operations (General) Regulation 2009; and
- If a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened, licensees must immediately implement the plan.

Note: The specific requirements for pollution incident response management plans are set out in Part 5.7A of the Protection of the Environment Operations Act 1997 and relevant clauses of the Protection of the Environment Operations (General) Regulation 2009.

Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development or in order to comply with the load calculation protocol must be recorded and retained as set out in conditions M1.2 and M1.3.

M1.2 All records required to be kept by the licence must be:

- in a legible form, or in a form that can readily be reduced to a legible form;
- kept for at least 4 years after the monitoring or event to which they relate took place; and
- produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be

collected: the date(s) on which the sample was taken;

- the time(s) at which the sample was collected;
- the point at which the sample was taken; and
- the name of the person who collected the sample.

M2. Requirement to monitor concentration of pollutants discharged

M2.2 A Noise Management Plan for the site should be produced and noise monitoring undertaken on a biannual basis at the key receptors identified in the EIS as R1, R2, R4 and R5. An annual noise audit of plant and activities should be implemented to ensure best available economically achievable technologies are used.

R1, R2, R4 and R5.

Noise

Pollutant	Units of Measure	Frequency	Sampling Method
Noise	dB(A)	Biannual	As described in the NSW Industrial Noise Policy, Jan 2000 as amended from time to time.

M2.3 For each monitoring/ discharge point or utilisation area specified below (by a point number), the applicant must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The applicant must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns. Dust monitoring must be undertaken at the following receptors R1, R2, R4 and R5

Air

Pollutant	Units of measure	Frequency	Sampling Method
Total Suspended Particles and PM10	g/m ² /Month	Quarterly	Australian Standard AS3580.10.1

M4. Testing methods -concentration limits

M4.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development or in order to comply with a relevant local calculation protocol must be done in accordance with:

- any methodology which is required by or under the POEO Act 1997 to be used for the testing of the concentration of the pollutant; or
- if no such requirement is imposed by or under the POEO Act 1997, any methodology which the general terms of approval or a condition of the licence or the protocol (as the case may be) requires to be used for that testing; or

- if no such requirement is imposed by or under the POEO Act 1997 or by the general terms of approval or a condition of the licence or the protocol (as the case may be), any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

M4.2 Monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area required by condition **M3** must be done in accordance with:

- the Approved Methods Publication; or
- if there is no methodology required by the Approved Methods Publication or by the general terms of approval or in the licence under the Protection of the Environment Operations Act 1997 in relation to the development or the relevant load calculation protocol, a method approved by the EPA in writing before any tests are conducted, unless otherwise expressly provided in the licence.

Reporting conditions

R1.1 The applicant must provide an annual return to the EPA in relation to the development as required by any licence under the Protection of the Environment Operations Act 1997 in relation to the development. In the return the applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable. If load based fees apply to the activity the applicant will be required to submit load-based fee calculation worksheets with the return.

Operating conditions

Activities must be carried out in a competent manner

Licensed activities must be carried out in a competent manner.

This includes:

- the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

Maintenance of plant and equipment

All plant and equipment installed at the premises or used in connection with the licensed activity:

- must be maintained in a proper and efficient condition; and
- must be operated in a proper and efficient manner.

Monitoring and recording conditions

Recording of pollution complaints

The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

The record must include details of the following:

- the date and time of the complaint;
- the method by which the complaint was made;
- any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- the nature of the complaint;
- the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant;
- and
- if no action was taken by the licensee, the reasons why no action was taken.

The record of a complaint must be kept for at least 4 years after the complaint was made.

The record must be produced to any authorised officer of the EPA who asks to see them.

Telephone complaints line

The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

This condition does not apply until 3 months after this condition takes effect.

Reporting conditions

Annual Return documents

What documents must an Annual Return contain?

The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

- a Statement of Compliance; and
- a Monitoring and Complaints Summary.

A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

An Annual Return must be prepared in respect of each reporting, except as provided below

Note: The term “reporting period” is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Where this licence is transferred from the licensee to a new licensee,

- the transferring licensee must prepare an annual return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- the new licensee must prepare an annual return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

Where this licence is surrendered by the licensee or revoked by the EPA or Minister,

- the licensee must prepare an annual return in respect of the period commencing on the first day of the reporting period and ending on in relation to the surrender of a licence -the date when notice in writing of approval of the surrender is given; or
- in relation to the revocation of the licence – the date from which notice revoking the licence operates.

Deadline for Annual Return

The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the ‘due date’).

Notification where actual load cannot be calculated

(Licences with assessable pollutants)

Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee’s control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date.

The notification must specify:

- the assessable pollutants for which the actual load could not be calculated; and
- the relevant circumstances that were beyond the control of the licensee.

Licensee must retain copy of Annual Return

The licensee must retain a copy of the annual return supplied to the EPA for a period of at least 4 years after the annual return was due to be supplied to the EPA.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- (a) the licence holder; or
- (b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

A person who has been given written approval to certify a Statement of Compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review this licence.

Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Written report

Where an authorised officer of the EPA suspects on reasonable grounds that:

- (a) where this licence applies to premises, an event has occurred at the premises; or
- (b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,

and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

The request may require a report which includes any or all of the following information:

- the cause, time and duration of the event;
- the type, volume and concentration of every pollutant discharged as a result of the event;
- the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; and
- the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and

- any other relevant matters.

The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

General conditions

Copy of licence kept at the premises or on the vehicle or mobile plant

A copy of this licence must be kept at the premises or on the vehicle or mobile plant to which the licence applies.

The licence must be produced to any authorised officer of the EPA who asks to see it.

The licence must be available for inspection by any employee or agent of the licensee working at the premises or operating the vehicle or mobile plant.

Dust

The assessment of 24 hour PM10 found the relevant criterion of 50 micro grams per cubic metre at receptors R1 and R4 would be exceeded without the implementation of mitigation measures. The proposed dust mitigation is Level 2 i.e. greater than 2 litres/square metre/hour, water spraying on the unsealed access road to the site office. Prior to commencing operations, details of how this will be achieved must be provided to the EPA. Given the number of truck movements this may require the installation of fixed sprinklers that are triggered by vehicle movement or sealing the access road.

Building and demolition waste

There is a large quantity of building and demolition waste stored at the premises. EPA recommends that a condition of consent is a requirement to process and remove this waste from the premises within 6 months of commencing operations.

Progressive rehabilitation

The existing quarry has experienced significant slumping due principally to flooding which has impacted upon neighbouring properties. Prior to commencing operations a progressive rehabilitation and final landscape plan should be prepared. Rehabilitation works are to be completed prior to the commencement of each new pit as follows:

Rehabilitation to be completed for:	Prior to
Pit 1 Cell A	commencing extraction Pit 2 Cell A
Pit 1 Cell B	commencing extraction Pit 2 Cell B
Pit 2 Cell A	commencing extraction Pit 3 Cell A
Pit 2 Cell B	commencing extraction Pit 3 Cell B
Pit 3 Cell A	commencing extraction Pit 4 Cell A
Pit 3 Cell B	commencing extraction Pit 4 Cell B
Pit 4 Cell A & B	the release of any unused Environmental Levee funds

Section 2 – Office of Environment and Heritage

Administrative Conditions

Information supplied to OEH

Except as expressly provided by these general terms of approval, works and activities must be carried out in accordance with the proposal contained in:

- the development application D/2013/0307 submitted to Wagga Wagga City Council on 20 June 2013; and
- The Environmental Impact Statement (Tarcoola Turf and Quarries. Extension of Tarcoola Quarry Environmental Impact Statement – dated June 2013) relating to the development.

Aboriginal Cultural Heritage Conditions

- No harm can occur to any aboriginal objects within the development area unless an Aboriginal Heritage Impact Permit (AHIP) has been issued by the Office of Environment and Heritage (OEH).
- The proponent must comply with the conditions of the AHIP that is issued by OEH.
- The proponent must ensure that all persons involved in actions or works covered by an AHIP (whether employees, contractors, sub-contractors, agents or invitees) are made aware of and comply with the conditions of the AHIP.
- If any human remains are disturbed in, or under the land, the AHIP holder must:
 - (a) Not further disturb or remove these remains;
 - (b) Immediately cease all work at that particular location;
 - (c) Notify OEH's Environmental Line on 131 555 and the local police as soon as practicable and provide any available details of the remains and their location; and
 - (d) Not recommence any work at the particular location unless authorized in writing by OEH.
- If any other Aboriginal objects are located during the life of the development activity, all work in the area of the finds must cease immediately and OEH contacted for advice. Works must not recommence unless authorized by OEH.

Section 3 – NSW Office of Water (NOW)

General Terms of Approval for work requiring a controlled activity approval under s91 of the Water Management Act 2000

Our Reference:	40 ERM2013/0561	File No: QUE00472
Site Address:	2 Gillard Rd, East Wagga Wagga, NSW, 2650	
DA Number:	DA13/0307	
LGA:	Wagga Wagga City Council	

Number	Condition
--------	-----------

Our Reference: 40 ERM2013/0561

File No: QUE00472

Site Address: 2 Gillard Rd, East Wagga Wagga, NSW, 2650

DA Number: DA13/0307

LGA: Wagga Wagga City Council

Number	Condition
Plans, standards and guidelines	
1	<p>These General Terms of Approval (GTA) only apply to the controlled activities described in the plans and associated documentation relating to and provided by Council:</p> <ul style="list-style-type: none">(i) Site plan, map and/or surveys(ii) Structural design and specifications(iii) Vegetation Management Plan(iv) Works Schedule(v) Erosion and Sediment Control Plan(vi) Soil and Water Management Plan(vii) Rehabilitation Plan <p>Any amendments or modifications to the proposed controlled activities may render these GTA invalid. If the proposed controlled activities are amended or modified the NSW Office of Water must be notified to determine if any variations to these GTA will be required.</p>
2	<p>Prior to the commencement of any controlled activity (works) on waterfront land, the consent holder must obtain a Controlled Activity Approval (CAA) under the Water Management Act from the NSW Office of Water. Waterfront land for the purposes of this DA is land and material in or within 40 metres of the top of the bank or shore of the river identified.</p>
5	<p>The consent holder must (i) carry out any controlled activity in accordance with approved plans and (ii) construct and/or implement any controlled activity by or under the direct supervision of a suitably qualified professional and (iii) when required, provide a certificate of completion to the NSW Office of Water.</p>
Rehabilitation and maintenance	
6	<p>The consent holder must carry out a maintenance period of two (2) years after practical completion of all controlled activities, rehabilitation and vegetation management in accordance with a plan approved by the NSW Office of Water.</p>
END OF CONDITIONS	

**General Terms of Approval
for work requiring a water supply work approval
under s90(2) of the Water Management Act 2000**

Our Reference: 40 ERM2013/0561 **File No:** QUE00472
Site Address: 2 Gillard Rd, East Wagga Wagga, NSW, 2650
DA Number: DA13/0307
LGA: Wagga Wagga City Council

Number	Condition
7	<p>These General Terms of Approval (GTA) only apply to the activities requiring a water supply work approval described in the plans and associated documentation relating to and provided by Council:</p> <ul style="list-style-type: none"> (i) Site plan, map and/or surveys (ii) Structural design and specifications (iii) Vegetation Management Plan (iv) Works Schedule (v) Erosion and Sediment Control Plan (vi) Soil and Water Management Plan (vii) Rehabilitation Plan <p>Any amendments or modifications to the proposed controlled activities may render these GTA invalid. If the proposed controlled activities are amended or modified the NSW Office of Water must be notified to determine if any variations to these GTA will be required.</p>
8	Prior to the commencement of water use on the following parcel of land, Lot 4 DP 740222, the consent holder must make application to the NSW Office of Water to amend the appropriate water supply work approval prior to any intended changes to pump locations and/or pump size.
9	An approval will only be granted to the occupier of the lands where the works are located, unless otherwise allowed under the Water Management Act 2000.
10	When the NSW Office of Water grants an approval, it may require any existing approvals held by the applicant relating to the land subject to the consent to be surrendered or let lapse.
11	All works subject to an approval shall be constructed, maintained and operated so as to ensure public safety and prevent possible damage to any public or private property.
12	All works involving soil or vegetation disturbance shall be undertaken with adequate measures to prevent soil erosion and the entry of sediments into any river, lake, waterbody, wetland or groundwater system.
13	The destruction of trees or native vegetation shall be restricted to the minimum necessary to complete the works.
14	All vegetation clearing must be authorised under the Native Vegetation Act

Our Reference: 40 ERM2013/0561

File No: QUE00472

Site Address: 2 Gillard Rd, East Wagga Wagga, NSW, 2650

DA Number: DA13/0307

LGA: Wagga Wagga City Council

Number	Condition
	2003, if applicable.
15	The approval to be granted may specify any precautions considered necessary to prevent the pollution of surface water or groundwater by petroleum products or other hazardous materials used in the construction and/or operation of the works.
16	A fee calculated in accordance with the Water Management Act 2000 must be paid before an approval can be granted.
17	The consent holder must install suitable devices to all licensed pumps to accurately measure the quantity of water extracted or diverted by the works.
18	All water measuring equipment must be adequately maintained. It must be tested as and when required by the NSW Office of Water to ensure its accuracy.
19	The approval holder must produce, every year, an annual water use report which identifies the annual takes for the previous year, the expected take for the coming year, how any identified shortfalls in water requirement will be obtained (e.g. temporary trade). The water take must also account for water lost through evaporation.
20	If required by the NSW Office of Water, the extraction and use of water must be recorded and reported as specified by the NSW Office of Water.
21	Officers of the NSW Office of Water or other authorised persons must be allowed full and free access to the works for the purpose of inspection and testing.
22	The NSW Office of Water has the right to vary the rate at which the allocation is taken in order to prevent the overuse of the aquifer.
END OF CONDITIONS	

**General Terms of Approval
for work requiring a flood control works approval
under s167 of the Water Act 1912**

Our Reference: 40 ERM2013/0561 **File No:** QUE00472
Site Address: 2 Gillard Rd, East Wagga Wagga, NSW, 2650
DA Number: DA13/0307
LGA: Wagga Wagga City Council

Number	Condition
Plans, standards and guidelines	
23	<p>These General Terms of Approval (GTA) only apply to the flood control works described in the plans and associated documentation relating to and provided by Council:</p> <ul style="list-style-type: none">(i) Site plan, map and/or surveys(ii) Structural design and specifications(iii) Vegetation Management Plan(iv) Works Schedule(v) Erosion and Sediment Control Plan(vi) Soil and Water Management Plan(vii) Rehabilitation Plan <p>Any amendments or modifications to the proposed controlled activities may render these GTA invalid. If the proposed controlled activities are amended or modified the NSW Office of Water must be notified to determine if any variations to these GTA will be required.</p>
24	<p>The applicant must supply a copy of a flood study for the subject area, detailing the potential impacts on the environment, infrastructure and neighbouring properties. This must be submitted with the application.</p>
25	<p>Prior to the commencement of any flood control works on the subject lot, the consent holder must obtain a flood control works approval under the Water Act from the NSW Office of Water.</p>
26	<p>The consent holder must carry out the construction of any flood control works in accordance with approved plans and when required, provide a certificate of completion to the NSW Office of Water.</p>
END OF CONDITIONS	

**General Terms of Approval
for work requiring a water use approval
under s89(1) of the Water Management Act 2000**

Our Reference: 40 ERM2013/0561 **File No:** QUE00472
Site Address: 2 Gillard Rd, East Wagga Wagga, NSW, 2650
DA Number: DA13/0307
LGA: Wagga Wagga City Council

Number	Condition
Plans, standards and guidelines	
27	<p>These General Terms of Approval (GTA) only apply to the water use approval described in the plans and associated documentation relating to and provided by Council:</p> <ul style="list-style-type: none">(i) Site plan, map and/or surveys(ii) Structural design and specifications(iii) Vegetation Management Plan(iv) Works Schedule(v) Erosion and Sediment Control Plan(vi) Soil and Water Management Plan(vii) Rehabilitation Plan <p>Any amendments or modifications to the proposed controlled activities may render these GTA invalid. If the proposed controlled activities are amended or modified the NSW Office of Water must be notified to determine if any variations to these GTA will be required.</p>
28	<p>Prior to the commencement of operations on the following parcel of land, Lot 4 DP 740222, the consent holder must apply for an amendment to the appropriate water use approval.</p>
END OF CONDITIONS	