



Development Services Attachments Wednesday, 19 August 2015 (Part B)

REPORT NUMBER	REPORT TITLE AND ATTACHMENT DESCRIPTION	PAGE NUMBER(S)
9.1.2	Proposed Rural Industry, Transport Depot and Retrospective & Proposed Associated Development: Lot 2929 (RN 299) Brand Highway, Muchea 1. Locality Plan 2. Council Approval 20 March 2013 3. Council Approval for amendments 17 September 2014 4. New Planning Application dated April 2015 5. Acoustic Report dated 8 June 2015 6. Catchment Property Management Plan dated 31 July 2015 7. Site Plan dated 16 July 2015	1 – 241



Cr Norton declared an impartiality interest in item 9.1.9 as she is a friend of the Environmental Consultant.

9.1.9 Proposed change of use – Lot 713/2929 (RN 299) Brand Highway, Muchea*

Applicant	Whitestone Quarries Pty Ltd
File ref	A5006; P171/12
Prepared by	Brendan Jeans, Senior Planning Officer
Supervised by	Azhar Awang, Executive Manager Development Services
Voting requirements	Simple majority
Documents tabled	Nil
Attachments	<ol style="list-style-type: none"> 1. Locality Plan 2. Application Report 3. Applicant's preamble to submissions 4. Consultation Plan and Schedule of Submissions 5. Applicants amended planning application 6. Traffic Impact Statement (TIS)

Background

Council's consideration is required for a proposed change of use for 'Transport Depot', 'Office' and 'Industry-rural' at Lot 713/2929 (RN 299) Brand Highway, Muchea.

Lot L713/2929 Brand Highway is 64.8hectares and adjoins to the north of the Muchea Townsite, bound by Chittering Street, Energy Place and Brand Highway. The property currently contains a dwelling and outbuildings and has been generally used for extensive agricultural purposes i.e. grazing.

The owner of the property, trading as Whitestone Quarries WA Pty Ltd, operates extractive industries within the Shires of Mukinbudin and Mt Marshall, Western Australia. The initial planning application outlined that the owner was to transport the processed material, referred to as Whitestone, from the owner's quarry sites to Lot 713/2929 Brand Highway, Muchea. The Whitestone product is utilised as concrete aggregate, landscape supplies and decorative stone supplies. Amendments mentioned below remove this proposed use.

The application proposes more than one use on Lot 713/2929 Brand Highway, Muchea. The application report and correspondence from the proponent provides differing information however it is understood that the initial proposed developments on the property subject to this application include:

- (a) Industry-Rural
- (b) Warehouse
- (c) Landscape Supplies
- (d) Transport Depot

The application report mentions a number of developments which shall occur should approval be granted for the uses i.e. haulage road, hardstand area. The physical developments on site, which would require planning approval and building permits, such as the sheds, office etc. would require to be assessed as a separate application with all the relevant information provided and is subject to Council's support of this application.

Following the consultation period, the Applicant proposed amendments to the application in an attempt to address the concerns raised in the submissions. The amendments include:

- (a) Remove the use of Chittering Street for any access and egress.
- (b) Clarify the use of the transport depot on the property to be for Whitestone Quarries WA Pty Ltd only in conjunction with the on-site operations.

On 6 February 2013 the Applicant proposed more significant amendments to the planning application (attachment 5). The proposed amendments include removing 'Landscape Supplies', removing heavy haulage vehicles and altering access to the existing driveway to Brand Highway. This amendment was made to enable the application to proceed.

To clarify the planning application, with final amendments, proposes the following:

- To use Lot 2929 for the storage and maintenance of commercial vehicles and equipment associated with transport and excavation operations by the owner;
- To use the existing driveway access of Lot 2929 to Brand Highway for 'As of Right' vehicles only;
- To construct a hardstand area for the parking and storage of commercial vehicles and equipment;
- To construct a workshop and storage shed for the purpose of the maintenance and storage of equipment and vehicles;
- To construct an office for administration purposes of operations on the property

Consultation

The application was advertised in accordance with Clause 9.4 of the *Shire of Chittering Town Planning Scheme No 6*. Advertising commenced 5 September 2012 for a period of twenty-one (21) days.

The Schedule of Submissions has been attached to this report.

Council should note the Applicant responded to the submissions in the Schedule on 24 October 2012. Since this the following has occurred:

- Applicant obtained relevant permit for access over Dampier to Bunbury Natural Gas Pipeline (DBNGP);
- Main Roads advised 'acceptance in principle' for Traffic Impact Statement (TIS) for proposed new access;
- Applicant amended the planning application (as attached) which removes the proposed uses of 'Warehouse' and 'Landscape Supplies' and proposes to use existing driveway for access for 'As of Right' vehicles.

Statutory Environment

Planning and Development Act 2005

Shire of Chittering Town Planning Scheme No 6

The subject property is zoned 'Agricultural Resource'. The objectives of this zone are:

- (a) *To preserve productive land suitable for grazing, cropping and intensive horticulture and other compatible productive rural uses in a sustainable manner;*
- (b) *To protect the landform and landscape values of the district against despoliation and land degradation;*
- (c) *To encourage intensive agriculture and associated tourist facilities, where appropriate;*
- (d) *To allow for the extraction of basic raw materials where it is environmentally and socially acceptable.*

The subject property is located within the 'Water Prone Area – Ellen Brook Palusplain' Special Control Area outlined in Clause 6.3 of the Scheme.

6.3 WATER PRONE AREA – ELLEN BROOK PALUSPLAIN

6.3.1 Land subject to Inundation or flooding are delineated on the Scheme Map. Planning Approval is required for any development within the Special Control Area.

6.3.2 Purpose

- (a) To manage development in areas where there is high risk of inundation so as to protect people and property from undue damage and where there is a potential risk to human health.
- (b) To preclude development and the use of land which may increase the amount of nutrients from entering the surface and/or sub-surface water systems.
- (c) To ensure that wetland environmental values and ecological integrity are preserved and mentioned.

6.3.3 Planning Requirements

The Local Government will impose conditions on any Planning Approval relating to-

- (a) the construction and occupation of any dwelling or outbuilding;
- (b) the type of effluent disposal system used in this area shall be high performance with bacterial and nutrient stripping capabilities to the specifications of Council and the Health Department and shall be located in a position determined by Council.;
- (c) minimum floor levels for any building above the highest known water levels;
- (d) any land use that may contribute to the degradation of the surface or sub-surface water quality.
- (e) no development other than for conservation purposes will be permitted within 30 metres of any natural water body;
- (f) damming, draining or other developments which may alter the natural flow of surface water will not be permitted unless such works are part of an approved Catchment Management Plan.

6.3.4 Relevant Considerations

In considering applications for Planning Approval, the Local Government shall have regard to-

- (a) the likely impact on the health and welfare of future occupants;
- (b) the proposed activities for the land and their potential increase in the risk of causing an increase in nutrients entering the water regimes;
- (c) any provision or recommendation from any Catchment Management Plan.
- (d) the likely impact on any wetland;
- (e) buffer distances from any wetland.

6.3.5 Referral of Applications for Planning Approval

The Local Government may refer any Application for Planning Approval or any amendment to vary a Special Control Area boundary to any relevant authority or community organisation.

The application including the final amendments, proposes the following uses, defined in Schedule 1 and listed in Schedule 2 of the Scheme:

- Industry-Rural *Means-*
1. *An industry handling, treating, processing or packing rural products; or*
 2. *A workshop servicing plant or equipment used for rural purposes.*

An 'Industry-Rural' use is an 'A' use on 'Agricultural Resource' zoned land in the Zoning Table.

Transport Depot *Means premises used for the garaging of two (2) or more motor vehicles, used or intended to be used for carrying of goods or persons for hire or reward, or for the transfer of goods or persons, and includes maintenance and repair of the vehicles, used but not for other vehicles.*

A 'Transport Depot' use is an 'A' use on 'Agricultural Resource' zoned land in the Zoning Table.

Policy Implications

EPA Guidance Statement No 3 – Separation Distances between Industrial and Sensitive Land Uses

EPA Guidance Statement No 3 outlines the generic buffers between Industrial Land Uses and Sensitive Land Uses. The document stipulates a 200m buffer for 'Transport vehicles depot'. It is considered the proposed hardstand area constructed for the transport depot use meets this buffer requirement.

Local Planning Policy No 2 – Muchea Village

Lot 2929 Brand Highway is one of the properties nominated in the System 6 Conservation Reserve for future protection. As Section 3.5 of the Policy states, the property has been 'nominated' for conservation in the future for its importance as mound springs and associated flora including sundew, bog clubmoss and an unusual liverwort.

Financial Implications

It is considered the proposal will not have financial implications on Council.

Strategic Implications

Shire of Chittering Local Planning Strategy 2001-2015

Lot 2929 Brand Highway is located within the 'Ellen Brook Palusplain', which is further identified and addressed in the Strategy:

6.4.2 Aims

- *To protect and enhance the rivers, lesser flow lines and wetlands as a measure to arrest land degradation and improve water quality with appropriate buffer widths determined using biophysical criteria;*
- *To include the recommendation of the Ellen Brook Integrated Catchment Plan as to land uses and nutrient control by encouraging improved land management practices;*
- *To prohibit any non-agricultural development which may contribute to pollution of the surface water or sub-surface water regimes;*
- *To apply the recommendations for the Ellen Brook Catchment Management Plan to achieve the objectives and liaise with relevant agencies for any applications for development or change of land use.*

It is considered the broad issues outlined in Section 7.0 of the Strategy are relevant to the proposal.

Due to the subject property being zoned 'Agricultural Resource'; Section 8.8 of the Strategy outlines the aims of the zone and applies to this application.

Section 10.0 of the Strategy makes reference to the Special Control Areas identified on the Scheme Maps, with the subject property being situated within the Water Prone Area – Ellen Brook Palusplain Special Control Area.

Site Inspection

Site inspection undertaken: Yes

On 9 November 2012 a site meeting was held at Lot 2929 Brand Highway. The following people were present:

- Bill McSharer (Landowner's advisor/Applicant)
- Terry Chisolm (Landowner)
- Leonie Noble (Landowner)
- Phil Bellamy (Environmental Consultant)
- Gary Tuffin
- Azhar Awang
- Brendan Jeans
- Cr Douglas
- Cr Hawes
- Cr Norton
- Cr Clarke

The purpose of the meeting was for the applicant to discuss the proposal to Councillors and discuss any concerns raised by the public and from the Councillors.

On 10 December 2012 another site meeting was held with Main Roads present to discuss the proposed access. At this meeting it was understood that the Applicant was required to submit a TIS to Main Roads for assessment of the proposed access and that Council would not make a determination until formal Main Roads approval for the access was obtained.

Triple Bottom Line Assessment

Economic implications

The proposal may provide for local employment. Submissions from the consultation period indicate property values may devalue as a result of the proposal.

Social implications

A number of public submissions were made during the consultation period, with particular concerns made by landowners fronting Chittering Street adjoining the subject property. The concerns raised included likely decrease in property values, unsightliness, dust, noise pollution, traffic safety and water contamination.

Environmental implications

The submissions received from the relevant agencies and current Council documentation indicates the property contains an important watercourse to the Ellen Brook Catchment and Gingin Brook. Council documentation identifies the property to contain wetlands with System 6 classification however the Chittering Landcare Group have confirmed the property contains significant wetlands and watercourse but is not classified as System 6.

Comment

Town Planning Scheme No 6

The amendment to the planning application on 6 Feb 2013 removed two (2) of the uses initially proposed. The amendment removed the use of the property to transport, store and distribute crushed rock material.

It is considered the objective of the zone 'to protect the landform and landscape values of the district against despoliation and land degradation' is met by the requirement of a Revegetation Management Plan and the requirement to construct hardstand materials of adequate standard for both dust and runoff. It is considered the amendments to the planning application have greatly reduced any impacts on the landscape values.

- Clause 6.3.2 being the purpose of the Water Prone Area of the Ellen Brook Palusplain 'to preclude development and the use of land which may increase the amount of nutrients from entering the surface and/or sub-surface water systems' (b). And 'to ensure that wetland environmental values and ecological integrity are preserved and mentioned' (c).

The proposed use of the land will likely increase nutrient export from what would occur now with agricultural operations. The requirements set out in the Officer's Recommendation, including a Catchment Management Plan, are considered to address the purpose of this clause.

- Clause 6.3.3, relating to conditions Council may impose, (d) 'any land use that may contribute to the degradation of the surface or sub-surface water quality'. (f) 'damming, draining or other developments which may alter the natural flow of surface water will not be permitted unless such works are part of an approved Catchment Management Plan'.

The Officer's Recommendation requires a Catchment Management Plan to address how the proposed uses and development will not impact on the degradation of the surface or sub-surface water quality.

- Clause 6.3.4, relating to relevant considerations by Council, (b) 'the proposed activities for the land and their potential increase in the risk of causing an increase in nutrients entering the water regimes'. (c) 'any provision or recommendation from any Catchment Management Plan'. (d) 'the likely impact on any wetland'.

As mentioned above, it is considered the application does not address the risk of nutrient export, the implementation of a Catchment Management Plan and the likely impact on any wetland.

The Office depicted on the site plan shall be determined in a separate application. An 'Office' use in the Scheme is an 'X' use. It is considered the office is ancillary to the predominant land use, being used in conjunction with the operations on the property, and may be supported subject to further assessment. When the applicant provides more detailed plans of the building, the Office can be assessed.

Local Planning Strategy

The relevant sections of the Strategy to this application mostly relate to the surface and sub-surface water catchment of the area due to flooding. As mentioned earlier the property is located within the Ellen Brook Palusplain Geographic Unit. The aims of the Ellen Brook Palusplain, listed below, require to be addressed in the application:

- *To protect and enhance the rivers, lesser flow lines and wetlands as a measure to arrest land degradation and improve water quality with appropriate buffer widths determined using biophysical criteria;*
- *To include the recommendation of the Ellen Brook Integrated Catchment Plan as to land uses and nutrient control by encouraging improved land management practices;*
- *To prohibit any non-agricultural development which may contribute to pollution of the surface water or sub-surface water regimes;*
- *To apply the recommendations for the Ellen Brook Catchment Management Plan to achieve the objectives and liaise with relevant agencies for any applications for development or change of land use.*

It is considered the proposed land uses may contribute to pollution of the surface water or sub-surface water catchments. Conditions of approval to construct hydrocarbon separation ponds and similar has been consistently applied to approvals for Transport Depots. It is considered the same could be applied to this development.

Submissions

As mentioned above, the submissions received during the consultation period raised a number of concerns from adjoining and nearby residents in Muchea. To summarise, the main concerns include:

- Likely constant noise associated with operations impacting on quiet lifestyle;
- Unsightly view of the industrial operations;
- 7 day week operation;
- Safety of Chittering Street due to the increase in traffic; and
- Impact of proposal on System 6 land.

A late submission was received from Main Roads. The submission stated that Main Roads did not support the proposed access to Brand Highway and the applicant may obtain access from Energy Place or Chittering Street. It is recommended that Council support the proposal once an approved design for access from Main Roads is provided.

The Applicant proposed some minor amendments to the original proposal (attachment 2) as a result of the submissions. The proposed amendments include clarifying the proposed Transport Depot use by limiting operations only associated with the owner's business. A further amendment was to remove the use of Chittering Street. The Applicant also wishes to establish a 'surface water' bore and tank for the use of dust suppression and fire fighting purposes.

As mentioned in the 'Consultation' section of the report, the Applicant proposed significant amendments to the initial application advertised to the public and agencies. It is considered the amendment of the planning application reduces the intensity of development on the site and must be considered in addition to the Schedule of Submissions attachment.

Noise

The impact of noise on local residents is considered to be a major concern. This is evident from:

- The submissions received from adjoining landowners;
- The proposed operation time for the heavy haulage operations being 7am to 7pm, 7 days a week;
- Lot 2929 is relatively 'open' and not shielded from adjoining Townsite landowners;
- The proposal involves noisy operations i.e. dumping of rock materials and machinery

The Applicant has advised that all noise emitted from operations will not leave the property and that the tree planting proposed will aid in minimising noise. Further to this the amendments made to the planning application to remove the transport, storage and handling of rock material will likely reduce noise issues significantly.

Dust

It has been noted that the applicant proposes to use water from a bore as a dust suppressant to minimise dust emissions. The potential for dust has been reduced with the removal of the 'Landscape Supplies' and 'Warehouse' involving the transport and handling of crushed rock material. Comments from Department of Water suggest it is unlikely a licence to take groundwater will be issued as the aquifers have reached their sustainable limits.

It is recommended the Applicant use materials for the access roads and hardstand areas which will minimise dust and that any activity which causes a dust nuisance, be ceased or suppressed.

Environmental Impact

As a result of the amended planning application to remove the transport and storage of rock material the intensity of the use of the land is likely to be reduced. The application presented for Council approval proposes a transport depot and a rural industry use on the land. It is considered the main environmental concern to be possible contamination and interference of the waterways and wetlands. The Officer's Recommendation addresses these issues by requiring a Catchment Management Plan and hardstand areas to be appropriately constructed to catch hydrocarbons.

Dampier to Bunbury Natural Gas Pipeline (DBNGP)

It is evident that the DBNGP dissects the property. As advised by DBNGP Pty Ltd in their submission, the *Dampier to Bunbury Pipeline Act 1997* requires a Section 41 approval for access to/over the DBNGP corridor.

On 8 February 2013 a Permit was issued by the Department of Regional Development and Lands, due to expire 13 March 2013. The Department have advised the expiry date can be extended at request by the applicant.

Buffer requirements

As mentioned earlier in the report and advice from the Department of Environment and Conservation, *EPA Guidance Statement No 3* stipulates a generic separation distance of 200m for a transport depot. This 200m distance applies to the location of the transport depot use from a sensitive land use, which includes residences. The application does not designate a specific site for the transport depot use but does make note on the proposed site plan of hard stand and parking area. It is recommended the 200m buffer be established and maintained.

Access

The initial planning application submitted to the Shire proposed a new access to Brand Highway, located in the centre of the property. Main Roads advised the requirement of a Traffic Impact Statement (TIS) to be made by the applicant for the access to be assessed. The Applicant amended the planning application to use the existing driveway access to Brand Highway and removed the use of heavy haulage vehicles; proposing 'As of Right' vehicles only. This amended proposal has been forwarded to Main Roads. Main Roads responded advising until an assessment and determination is made on the TIS for the initial access proposal, no comment will be made in respect to the amended access proposal.

On 5 March 2013 Main Roads emailed the Shire advising the TIS submitted by the Applicant has been 'accepted in principle' subject to:

1. *The traffic generation in reality not deviating from that proposed by type, configuration, frequency and/or nominated time periods.*
2. *No alteration or change of land use such as sub-division.*
3. *Sighting and approving the widening details on Brand Highway.*
4. *Any works on the highway subject to a formal application.*
5. *All associated works is the cost and responsibility of the development proponent.*

Concluding comments

The planning application initially proposed a transport depot, landscape supplies, warehouse and rural industry. Following advertising and further consultation the application has been amended. It is believed the amendments address a number of the concerns raised in the submission period and provide a less intense proposed development of the land.

OFFICER RECOMMENDATION / COUNCIL RESOLUTION - 110313**Moved Cr Clarke / Seconded Cr Norton****That Council:**

1. **SUPPORT** the proposed Industry-Rural and Transport Depot at Lot L713/2929 (RN 299) Brand Highway, Muchea subject to the following condition:
 - (a) Applicant submit a scale survey site plan depicting proposed access, earthworks, hardstand areas, building structures, buffer areas and any development associated with the application to the satisfaction of the Chief Executive Officer.
2. Upon completion of 1(a) above, delegates authority to the Chief Executive Officer to **GRANT** Planning Approval for the proposed Industry-Rural and Transport Depot at Lot L713/2929 (RN 299) Brand Highway, Muchea subject to the following conditions:
 - (a) The approval is limited to the storage, parking and maintenance of vehicles and equipment used for rural purposes associated with Whitestone Quarries Pty Ltd;
 - (b) Applicant shall comply with Permit S41_825 issued by DBNGP.
 - (c) Applicant shall comply with Main Roads requirements for access to Brand Highway.
 - (d) Traffic generation shall be in accordance with Traffic Impact Statement dated 1 March 2013.
 - (e) No access from Chittering Street and Energy Place.
 - (f) All building structures require a separate application for planning approval.
 - (g) Applicant shall submit a Catchment Management Plan to the satisfaction of the Chief Executive Officer.
 - (h) Applicant shall establish and maintain vegetation screening within six (6) months of the date of this approval.
 - (i) Applicant shall submit a Revegetation Management Plan to the satisfaction of the Chief Executive Officer which includes the revegetation of waterways and maintenance of vegetation screening.
 - (j) Transport Depot, access roads and hardstand areas shall be bitumen sealed and drained to catch hydrocarbons to the satisfaction of the Chief Executive Officer.
 - (k) Transport Depot and hardstand areas shall be setback 30m from lot boundaries and 100m from Brand Highway.
 - (l) Evidence is provided to Council to the satisfaction of the Chief Executive Officer that the Transport Depot and any parking of vehicles and equipment is located a minimum distance of 200m from the southern Townsite lot boundaries.
 - (m) The development shall comply with the *Environmental Protection (Noise) Regulations 1997*.
 - (n) Any servicing of plant and equipment shall be carried out within a confined concrete floor such as a shed, and such area shall have sufficient bunding and spill trays to minimise the impact from any spills as a result of onsite servicing.
 - (o) Any further developments and/or amendments shall be the subject of subsequent planning applications/approvals.
 - (p) If the development (the subject of this approval) is not substantially commenced within a period of two (2) years, or such other period as specified in the approval after the date of the determination, the approval shall lapse and be of no further effect.
 - (q) Where an approval has so lapsed, no development shall be carried out without the further approval of the local government having first been sought and obtained.

Advice Notes:

1. The Applicant has a right of review to the State Administrative Tribunal should the Applicant be aggrieved by Council's decision. Such a review should be lodged to the State Administrative Tribunal within twenty-eight (28) days of Council's decision.
2. Should the Applicant wish to undertake Landscape Supplies and Warehouse, prior Council approval

shall be required.

3. A 11/17/21A permit from Department of Water will be required to interfere or obstruct the bed and banks of a watercourse, including the proposed road crossings.
4. In regards to condition 2(b), the Applicant shall maintain a current Permit approval at all times as required by the Department for Regional Development and Lands.
5. In regards to 2(f) and 2(o), all of the conditions of this approval must be complied with and evidence of this provided to Council prior to the determination of any further development and/or planning application for the site, i.e. shed construction.

THE MOTION WAS PUT AND DECLARED CARRIED 6/0

Locality Plan

Lot 713/2929 (RN 299) Brand Highway

Muchea



Subject Property

Chattering Street

Brand Highway

Application for Planning Approval
&
Preliminary Environmental Management
Plan

*Lot 2929 Brand Highway
Muehea W.A. 6501*



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Section 1: Executive Summary

Whitestone Quarries WA Pty Ltd, (ABN 75 151 434 883), for and on behalf of Mr T.D. Chisholm, Ms L.J. Noble and Avago Pty Ltd, make application before the Shire of Chittering for Planning Approval to undertake the development of Lot 2929 Brand Hwy Muchea.

The application by Whitestone Quarries WA Pty Ltd, seeks Planning Approval pursuant to the Shire of Chittering Town Planning Scheme No 6 (TPS) for the proposed activities upon Lot 2929 Brand Hwy, Muchea. (the site)

The application envisages development of Lot 2929 Brand Hwy by establishing:

1. Hardstand area.
2. Landscape supplies.
3. Storage sheds.
4. Workshop / Weighbridge and Office Administration.
and
5. Internal Road running east/west.
6. General traffic areas west of gas pipeline easement.

The development set out in dot points 1-4 above is to the west of the Gas Pipeline Easement.

The development set out in dot point 5 above represents construction of the internal road from Brand Hwy to the Gas Pipeline Easement located at the western end of Lot 2929.

Lot 2929 Brand Hwy is zoned Agricultural Resource within the Shire of Chittering Town Planning Scheme No 6. (TPS)

Whitestone Quarries WA Pty Ltd suggests the usage described above, meet the activity definitions within the TPS, of:

- Industry – Rural
- Landscape – Supplies
- Transport – Depot
- Warehouse

It is available to the Shire of Chittering to determine the proposed activities of Whitestone Quarries WA Pty Ltd on Lot 2929 Brand Hwy are compliant with the activity definitions contained within the Shire of Chittering Town Planning Scheme No6.

Environmental Plantings will be undertaken to dedicated locations on Lot 2929 Brand Hwy, Muchea.

Whitestone Quarries WA Pty Ltd requests the Shire of Chittering proceed with and grant Planning Approval to the proposed development on Lot 2929 Brand Hwy, Muchea.

Section 2: Preamble

The Directors of Whitestone Quarries WA Pty Ltd. are Mr T.D. Chisholm and Ms L.J. Noble. (attached and marked with the letter "A")

The Sole Director of Avago Pty Ltd is Mr T.D. Chisholm. (attached and marked with the letter "B")

The owners of Lot 2929 Brand Highway, Muchea are Mr T.D. Chisholm, Ms L.J. Noble and Avago Pty Ltd. (attached and marked with the letter "C")

Whitestone Quarries WA Pty Ltd, Mr T.D. Chisholm, Ms L.J. Noble and Avago Pty Ltd are hereafter defined as **"The Parties"**.

Whitestone Quarries WA Pty Ltd own and operate quarry activities by Extractive Industry Licence within the Shires of Mukinbudin and Mt Marshall, Western Australia.

The business of Whitestone Quarries WA Pty Ltd is quarrying, processing, stockpiling and delivery of stone products.

The quarry operations extract and process quartz and feldspar from various locations in the Shires, the processed product is referred to as Whitestone.

All processing of the product is undertaken **before** the product leaves the quarry locations.

The processing reduces the product to 20 and 14mm in size.

The Whitestone product is utilized as:

1. Concrete aggregate
2. Landscape supplies
3. Decorative stone supplies

The product is supplied on a **wholesale basis only**.

Section 3: Development Concept

The Directors of Whitestone Quarries WA Pty Ltd Planning Application envisage developing Lot 2929 Brand Hwy, Muchea. (scope of development concept set out on the satellite and survey plan attached and marked with the letter "D")

The Development Concept is fivefold:

1. Hardstand.
2. Landscape supplies.
3. Storage sheds.
4. Workshop / Weighbridge and Office Administration.
5. Construction of Heavy Haulage Road.

The strategic plan for Whitestone Quarries WA Pty Ltd, identifies potential economic growth for the business by undertaking the acquisition and development of Lot 2929 Brand Hwy, Muchea.

To achieve the strategic plan, the Directors identified the necessity to establish operations adjacent to the Perth metropolitan area (peri-urban) with access by heavy haulage vehicles for delivering and dispatching of plant and equipment, delivery of bulk stone product from Mukinbudin / Mt Marshall for wholesale supply, Storage sheds, Weighbridge, Workshop with supporting Office Administration. (see, satellite and survey plan attached and marked with the letter "D")

Access to Lot 2929 Brand Hwy, Muchea will be by the construction of a purpose built (heavy haulage) internal road running from Brand Hwy to the east through to the western end of the property. This will be the primary access way to the site and the proposed development to the west of the gas pipeline easement. (see, satellite and survey plan attached and marked with the letter "D")

Entry and exit traffic corridors will also need to be established and form part of traffic management to Brand Hwy. (see satellite and survey plan attached and marked with the letter "D")

There will be two light vehicle access ways to the rear and west of the gas pipeline easement, they are:

- Access to the Hardstand and Storage sheds of Energy Rd.
and
- Access to the Workshop and Office Administration of Chittering Rd.

Both access ways are set out on the satellite and survey plan attached and marked with the letter "D".

A future hardstand area will be developed to the northern side of the site, east of the gas pipeline easement. (see satellite and survey plan attached and marked with the letter "D")

The development of Lot 2929 Brand Hwy, Muchea shall occur on the western end of the property. The eastern aspect of the property, facing Brand Hwy, will remain parkland cleared for primary production.

A more detailed description of activities is set out in the next Section 4: Operations.

Section 4: Operations

Whitestone Quarries WA Pty Ltd operations are divided into five activities, they are:

1. Hard Stand.
2. Landscape Supplies.
3. Storage sheds.
4. Workshops / Weighbridge and Office Administration.
5. Construction of a Heavy Haulage Road.

4.1: Hard Stand

It is proposed to establish a dedicated area to the west of the gas pipeline easement for the hard stand of machinery, trucks and other plant and equipment. (see, satellite image and survey plan attached and marked with the letter "D")

The hardstand and traffic area to the west of the gas pipeline easement will be constructed of 300mm crushed limestone. It will be necessary to box out the area of the hardstand and traffic areas to remove all grass and deleterious material before the crushed limestone is placed insitu over the area.

Access to the Hardstand area is by internal road running east / west (heavy haulage construction) from Brand Hwy to west of the gas pipeline easement.

Truck movements will enter by Brand Hwy and proceed west along the central road to a point west of the gas pipeline easement. Once west of the gas pipeline easement, goods and equipment will then be located within the Hardstand area, the Storage Shed, Stone Stockpiles and or Workshop pursuant to operational requirements.

The portion of the road to the west of the gas pipeline easement will be stripped of all deleterious material before construction (forming (box out), filling and compacting) traffic areas.

Road construction, Hardstand and Traffic areas west of the gas pipeline easement will be 300mm crushed limestone suitable for Heavy Haulage Vehicle Traffic.

General Environmental Plantings will be developed to the boundary set back areas west of the gas pipeline easement.

Environmental Plantings will also be undertaken progressively over the boundary and creek areas of the Lot 2929 Brand Hwy, Muchea.

The Environmental Plantings will act as a screen assisting in reducing noise and visual impact upon the residents residing to the south and west of Lot 2929 Brand Hwy, Muchea.

All water runoff will be discharged to the surrounding ground and environmental planting areas.

There will be minimal effect on the surrounding property owners by noise generated from the operations of Whitestone Quarries WA Pty Ltd. (see Section 11 - Environmental Plantings)

There will be minimal impact upon the visual amenity of adjoining residents. (see Section 11 - Environmental Plantings)

The applicant envisages truck movements to and from Lot 2929 Brand Hwy, Muchea will be in the order of 1 per day. (this figure represents an estimate of average)

Hours of operation for Heavy Haulage activities are from 7am to 7pm Monday to Sunday inclusive, 7 days per week.

4.2: Landscape Supplies

It is proposed to establish a dedicated area to the west of the gas pipeline for supply of decorative stone to the wholesale landscape market, metropolitan Perth.

The decorative stone will be delivered to site from Mukinbudin / Mt Marshall by pocket road trains.

The landscape product will be crushed and screened before consignment to Lot 2929 Brand Hwy, Muchea and range between 20mm and 14mm in diameter.

The flow chart of operations at Mukinbudin / Mt Marshall are:



The screening process removes the fine particles of sand from the stone before transport. This process removes the fines which can cause dust. There will be no dust generated in the delivery or handling of the stone product.

There will be no Extractive Industry (quarry operations) on site.

Landscape operators will purchase the decorative stone from Whitestone Quarries WA Pty Ltd site, at Lot 2929 Brand Hwy, Muchea.

Landscape operators wishing to purchase decorative stone from Whitestone Quarries WA Pty Ltd will enter Lot 2929 off Brand Hwy, Muchea and travel west along the internal road to the loading area adjacent to the stockpiles of bulk decorative stone.

Upon passing to the west of the gas easement, the landscape operators commercial vehicles will present at the weighbridge to record weight in, the vehicle will then be loaded with stone, the vehicle will then present at the weighbridge to record weight out, the balance between the incoming and outgoing weights, is the amount of stone purchased by the landscape supplier.

The landscape operator will exit Lot 2929 Brand Hwy, Muchea by retracing their entry along the internal road to Brand Hwy.

For the larger landscape suppliers who undertake retail sales to the public Whitestone Quarries WA Pty Ltd propose supplying:

- Bulk stone.
- Packaged stone.

Bulk stone is as described above.

Packaged stone is bulk stone broken down in weight and packed in 10kg bags sold wholesale to retail outlets.

The activity of packing bulk stone will occur inside the warehouse area adjacent to the bulk stone stockpiles on Lot 2929 Brand Hwy, Muchea.

The packing process simply requires the loading of a hopper with bulk stone, directing that stone to a smaller aperture for filling into plastic bags. The amount of stone filled into each bag is 10kg. Bags are then sealed and stored in the warehouse ready for supply.

No dust will be generated by the packing operations.

General Environmental Plantings will be developed to the boundary set back areas west of the gas pipeline easement.

Environmental Plantings will also be undertaken progressively over the boundary and creek areas of the Lot 2929 Brand Hwy, Muchea.

The Environmental Plantings will act as a screen assisting in reducing noise and visual impact upon the residents residing to the south and west of Lot 2929 Brand Hwy, Muchea.

There will be minimal effect on the surrounding property owners by noise generated from the operations of Whitestone Quarries WA Pty Ltd. (see Section 11 - Environmental Plantings)

There will be minimal impact upon the visual amenity of adjoining residents. (see Section 11 - Environmental Plantings)

Whitestone Quarries WA Pty Ltd does not intend to establish delivery operation for the supply of stone products to the landscape market in metropolitan Perth.

All supply of decorative stone to the landscape market is wholesale. (bulk and or packaged)

The proponent envisages commercial vehicle movements to and from Lot 2929 Brand Hwy, Muchea will be in the order of 4 per day. (this figure represents an estimate of average)

Hours of operation for the supply of Landscape product are from 7am to 7pm Monday to Friday inclusive, 5 days per week.

4.3: Storage Sheds

There are two separate Storage Sheds proposed for the area west of the gas pipeline easement. For the general location of the Storage Sheds (see satellite and survey plan attached and marked with the letter "D").

Two Storage Sheds are proposed for the north west, rear corner, west of the gas pipeline easement.

The Workshop dimensions are:

- Shed 1: 27.25 x 18.2 meters.
- Shed 2: 27.2 x 14.45 meters.

The storage functions are:

- Storage of equipment and components.
- Storage of parts and sundry items ancillary to the operations.

Machinery, Plant and Equipment for storage will enter Lot 2929 via the internal road off Brand Hwy, travel west along the internal road to the west side of the gas pipeline easement and then turn north and make their way to the relevant storage shed.

Light Vehicle Entry to the storage area is also via Energy Rd.

For general location, (see, satellite image and survey plan attached and marked with the letter "D")

The Storage Sheds are constructed of structural steel with zincalume cladding and or similar external product.

Floors will be constructed of an impervious concrete base.

All water runoff from roof areas will be captured in water storage tanks for later use.

All water storage tanks will be fitted with cupping points for access to water by fire fighting equipment.

Finished floor levels (FFL) are yet to be determined but are envisaged to be approximately 1 metre above existing ground level.

General Environmental Plantings will be developed to the boundary set back areas west of the gas pipeline easement. (see satellite and survey plan attached and marked with the letter "D")

Environmental Plantings will also be undertaken progressively over the boundary and creek area of the Lot 2929 Brand Hwy, Muchea.

The Environmental Plantings will act as a screen assisting in reducing noise and visual impact upon the residents residing to the south and west of Lot 2929 Brand Hwy, Muchea.

There will be minimal effect on the surrounding property owners by noise generated from the operations of Whitestone Quarries WA Pty Ltd. (see Section 11 – Environmental Plantings)

There will be minimal impact upon the visual amenity of adjoining residents. (see Section 11 - Environmental Plantings)

The applicant envisages truck movements to and from Lot 2929 Brand Hwy, Muchea will be in the order of 1 per day. (this figure represents an estimate of average)

Hours of operation for heavy haulage activities are from 7am to 7pm Monday to Sunday inclusive, 7 days per week.

4.4: Workshop / Weighbridge and Office Administration

A Workshop is proposed to the south side of Lot 2929 Brand Hwy. The Workshop is west of the gas pipeline easement.

The Weighbridge is directly east of the Workshop but to the west of the gas pipeline easement.

The Office Administration is adjacent the workshop overlooking the Weighbridge.

Mobile ablution facilities will be located adjacent to the workshop. All waste from the ablution facility will be collected and disposed of by a licenced waste collection service.

There will be no ablution or any other waste discharged to ground.

The workshop dimensions are:

- Workshop 1: 48.0 x 24.64 meters.

The Workshop will have two; lean to's, constructed as additional to the workshop. One facing east, one facing west.

The lean to dimensions are:

- Facing East: 48.0 x 20.0 meters.
- Facing West: 48.0 x 20.0 meters.

The workshop functions are:

- Storage.
- Mechanical servicing.
- Repairs and maintenance.
- Refurbishment of equipment.
- Administration office / weighbridge management.
- Packing equipment.
- Storage. (bags of stone)

Machinery, Plant and Equipment for the workshop will enter Lot 2929 via the internal road off Brand Hwy, travel west along the internal road to the west side of the gas pipeline easement and then turn south and make their way to the workshop.

Light Vehicle Entry to the workshop is also via Chittering Rd.

For general location, (see, satellite image and survey plan attached and marked with the letter "D")

The workshops are constructed of structural steel with zincalume cladding and or similar external product.

Floors will be constructed of an impervious concrete base.

Finished floor levels (FFL) are yet to be determined but are envisaged to be approximately 1 metre above existing ground level.

Hydrocarbon (oil's) will be salvaged and stored on site in consequence of operations within the workshop.

There will be no bulk storage facilities of Hydrocarbon (fuel) on site.

Used Hydrocarbons (oil's) will be held within an impervious above ground concrete containment facility until collected by a licenced waste recycler.

There will be no hydrocarbon pollution to the water table.

All water runoff from roof areas will be captured in water storage tanks for later use.

All water storage tanks will be fitted with cupping points for access to water by fire fighting equipment.

General Environmental Plantings will be developed to the boundary set back areas west of the gas pipeline easement. (see satellite and survey plan attached and marked with the letter "D")

Environmental Plantings will also be undertaken progressively over the boundary and creek area of the Lot 2929 Brand Hwy, Muchea.

The Environmental Plantings will act as a screen assisting in reducing noise and visual impact upon the residents residing to the south and west of Lot 2929 Brand Hwy, Muchea.

There will be minimal effect on the surrounding property owners by noise generated from the operations of Whitestone Quarries WA Pty Ltd. (see Section 11 - Environmental Plantings)

There will be minimal impact upon the visual amenity of adjoining residents. (see Section 11 - Environmental Plantings)

The applicant envisages truck movements to and from Lot 2929 Brand Hwy, Muchea will be in the order of 1 per day. (this figure represents an estimate of average)

The applicant envisages light vehicle movements (employees) to and from Lot 2929 Brand Hwy, via Chittering Rd will be in the order of 6 per day. (this figure represents an estimate of average)

Hours of operation are from 7am to 7pm Monday to Friday, inclusive, 7 days per week.

Section 5: Internal Road

Access to Lot 2929 Brand Hwy, Muchea will be by the construction of a purpose built (Heavy Haulage) internal road running east / west off Brand Hwy to the western end of the property. This will be the primary access way to the site and the proposed development to the west of the gas pipeline easement. (see, satellite and survey plan attached and marked with the letter "D")

The highest and thickest point of the internal road abuts Brand Hwy.

Construction of entry and exit lanes from Brand Hwy to the internal road will be in accordance with Main Roads design and engineering requirements.

It will also be necessary to lift the power lines running on the west side of Brand Hwy abutting Lot 2929 Brand Hwy, Muchea.

The Heavy Haulage Road will be surveyed east / west on the centre line of Lot 2929 Brand Hwy, Muchea. It will be 12 to 16 meters wide at the base rising to 10 meters width at the fill level.

Final finished road surface is 8 meters.

A typical description of the section profile for the road is:

- Box out the area of the road to remove all grass and deleterious material.
- Backfill insitu with 300 to 500 mm thick crushed limestone. (dependent on contours and final levels)

- Water bind, compact and grade crushed limestone to fill level.
- Layer crushed limestone with 75mm road base or equivalent, water bind, compact and grade to final levels.
- Apply two coat cold emulsion seal to form road surface.

Note:

The proposed road traverses annual winter creeks. Where the road crosses annual winter creeks it is proposed to install drainage pipes laid insitu beneath the road surface to maintain water flow. All ground surrounding drainage pipes will be armour stone pitched to prevent water erosion to the face of road fill.

The Chittering Land Care Group is in discussions with Whitestone Quarries WA Pty Ltd to design and undertake strategic environmental plantings to the internal road and creek areas of the property.

A general concept of the Chittering Land Care Group is to revegetate and enhance the environmental attributes of Lot 2929 Brand Hwy, Muchea whilst having regard to the balanced interaction between environmental issues and the strategic commercial objectives of Whitestone Quarries WA Pty Ltd. (see Section 11 - Environmental Plantings)

The Environmental Plantings will act as a screen assisting in reducing noise and visual impact upon the residents residing to the south and west of Lot 2929 Brand Hwy.

The internal road traverses the Dampier to Bunbury Natural Gas Pipeline. The road will be constructed and reinforced in accordance with the requirement of the Dampier to Bunbury Natural Gas Pipeline Authority.

All rain water runoff will be discharged to the surrounding ground and Environmental Planting areas.

Section 6: Hardstand and Traffic Areas

All Hardstand and Traffic areas to the west of the gas pipeline easement will be constructed of 300mm crushed limestone. It will be necessary to box out the area of the Hardstand and Traffic areas to remove all grass and deleterious material before the crushed limestone is placed insitu and compacted over the area.

It is the intention of Whitestone Quarries WA Pty Ltd to progressively sheet the entire open area west of the gas pipeline easement with 300mm of crushed limestone for ongoing utilization as Hardstand and Traffic areas.

All rain water runoff will be discharged to the surrounding ground and environmental planting areas.

Section 7: Parking

Parking will be established for all employee cars on the south side of workshop area. (see, satellite image and survey plan attached and marked with the letter "D")

All rain water runoff will be discharged to the existing ground and environmental planting area.

Section 8: Weighbridge

A 16 meter Weighbridge will be established in an area adjacent to the workshop and bulk stone storage.

The exact location of the Weighbridge is yet to be finalized but it will be constructed west of the gas pipeline easement adjacent to the Office Administration.

Section 9: Employment / Economic Benefit

This Planning Application details the proposed development of Lot 2929 Brand Hwy, Muchea.

The development proposal sets out the commercial objectives of Whitestone Quarries WA Pty Ltd when seeking to achieve its strategic direction.

A consequence of achieving the strategic objective of Whitestone Quarries WA Pty Ltd is the generation of direct employment opportunities for five to ten persons within the local and broader community.

Further employment opportunities may become available dependent upon the commercial success of the operation.

An economic benefit occurs to the community by:

- Direct employment.
- Indirect employment by service providers.
- Capital injection by infrastructure development.
- Commercial opportunities.
- Vertical integration opportunities by services providers.

Whitestone Quarries WA Pty Ltd has and continues to deliver economic benefits through sustainable development in regional Western Australia. (dot points above)

Whitestone Quarries WA Pty Ltd seeks to deliver the same economic benefits through development and ongoing operational opportunities at Lot 2929 Brand Hwy, Muchea.

Employment and Economic Development foster:

- Sense of community.
- Community wellbeing.
- Permanence of residents.
- Peri-Urban living.
- Community services.

Section 10: Chattering Land Care Group

The Chattering Land Care Group is in discussions with Whitestone Quarries WA Pty Ltd to design and undertake strategic Environmental Plantings to the creek areas of the property.
(see Preliminary Environmental Report attached and marked with the letter "E")

A general concept of the Chattering Land Care Group is to revegetate and enhance specific areas of environmental significance (creeks) to Lot 2929 Brand Hwy, Muchea whilst having regard to the balanced interaction between environmental issues and the strategic commercial objectives of Whitestone Quarries WA Pty Ltd. (see Section 11 - Environmental Plantings)

Whitestone Quarries WA Pty Ltd support the general concepts outlined within section 10.

Environmental Plantings will be undertaken for:

- Soil stabilization to roads and general areas.
- Soil stabilization to winter creeks.
- Re-establish native flora.
- Environmental screens for noise and visual abatement.

Environmental Plantings will be undertaken to:

- External boundary setbacks west of gas pipeline easement. (30 meters / three rows of trees)
- Internal boundary setback to west of gas pipeline easement. (20 meters / two rows of trees)

- Establish boundary screens reducing noise and visual impact upon the residents residing to the south and west of Lot 2929 Brand Hwy, Muchea.
- Winter creeks / yearly progressive manner.
- Strategic areas for soil stabilization.

Section 11: Environmental Plantings

Whitestone Quarries WA Pty Ltd has instigated a Preliminary Environmental Assessment of Lot 2929 Brand Hwy, Muchea, for inclusion within this Planning Application. (see Preliminary Environmental Management Plan attached and marked with the letter "E")

The environmental issues upon Lot 2929 Brand Hwy, Muchea are managed in accordance with general Department of Environment and Conservation (DEC) regulations. The Location is also managed in accordance with the DEC System 6 Management Policy.

The environmental study will seek and recommend the removal of the DEC System 6 Management Policy. The policy was established in 1984 and is no longer applicable.

Section 12: Technical Approvals

Whitestone Quarries WA Pty Ltd is undertaking consultation with all relevant authorities to determine their requirements for and approval of infrastructure development to Lot 2929 Brand Hwy, Muchea.

Technical design and approvals are being sought from;

(A) Statutory Authorities:

- Shire of Chittering Town Planning Scheme No 6.
- Shire of Chittering Planning and Development.
- Building approvals.
- Main Roads.
- Western Power.
- Department of Environment and Conservation.
- Dampier to Bunbury Natural Gas Pipeline Authority.

(B) Engineering:

- Road Design.
- Building Design.
- Western Power supply.

(C) General:

- Compaction certificate.
- Survey plans.

All design and approval requirements will be obtained by Whitestone Quarries WA Pty Ltd and provided to the Shire of Chittering before development proceeds.

Section 13: Consultation

Whitestone Quarries WA Pty Ltd is engaging a detailed consultation with all the entities described in Section 12 above to determine the requirements and approval process. (all approvals and technical requirements will form part of the development process before the Shire of Chittering).

Whitestone Quarries WA Pty Ltd is engaging in preliminary discussions with some residents to the south and west of the proposed development of Lot 2929 Brand Hwy Muchea.

Whitestone Quarries WA Pty Ltd are prepared to undertake further consultation with adjoining property owners in regards to the development of Lot 2929 Brand Hwy.

Section 14: Complaints

14.1: Complaints Procedure

The Complaints Procedure is an important component of the Environmental Management Plan and addressing general complaints. It is essential that any complaints are further investigated and acted upon. It is also important that all complaints are recorded.

The following activities will be conducted:

- Complaints made to the operator will be documented and dealt with expeditiously.
- Complaints received either directly from the complainant or via the Shire of Chittering will be reviewed by the operator and interested parties to assess:
 - (i) The legitimacy of the complaint;
 - (ii) The aspects of the operation that triggered the complaint;
 - (iii) Management actions required to address the issues raised to bring operations into line with conditions imposed by either the Shire or the Department of Environment and Conservation.
- Actions deemed necessary to bring operations into line with relevant legislation, regulation and Licence conditions will be undertaken immediately and before works are recommenced.
- Summaries of complaints and actions taken to address each specific issue will be recorded in the Complaints Register. (see Section 13.2 and 13.3 below)

Complainants and the Shire of Chittering will be notified in writing of the date, time and nature of the complaint received, results of the investigation, remedial actions undertaken and date and time of recommencement of works.

If any complaints are received, necessary action will take place to help rectify the issue.

14.2: Complaints Register

Complaint #	Date Received	Complainant	Summary of Complaint	Management Actions Required

14.3: Complaints Detail

Date of Complaint: _____ Time of Complaint: _____

Mode of Delivery of Complaint: _____

Complainant: _____

Nature of Complaint:

Aspect of Operation at Issue:

_____**Management Investigation:**

Issues investigated by:

Aspect of operation reviewed:

Licence Condition / Legislation / Regulation that has been breached:

Complaint Resolution:

Upheld / Dismissed

Management Actions Required and Undertaken:

Date Implemented: _____ Time Implemented: _____

Adjustments to operations performed by:

Date adjustment made: _____

Date operations recommenced: _____

Time operations recommenced: _____

Signatures of Parties:_____
Whitestone Quarries WA Pty Ltd_____
Complainant_____
CEO – Shire of Chittering

ANNEXURE A

COMPANY EXTRACT WHITESTONE QUARRIES WA PTY LTD



ASIC Company Extract - Current

Customer Service: 1300 366 402 **Internet:** <https://secure.abr.com.au> **EMail:** abrdata@abr.com.au

Brisbane
Level 10
231 North Quay
Brisbane QLD 4000
GPO Box 13294
George Street
Brisbane QLD 4003
Tel: 61 7 3837 1333
Fax: 61 7 3236 3422

Sydney
Level 19
9 Hunter Street
Sydney NSW 2000
Tel: 61 2 9236 4800
Fax: 61 2 9951 7880

Melbourne
Level 34
140 William Street
Melbourne VIC 3000
Tel: 61 3 8629 1608
Fax: 61 3 8629 1628

Perth
Level 5
102 James Street
North Bridge
Perth WA 6003
Tel: 61 8 9224 4900
Fax: 61 8 9434 9193

Canberra
PO Box 545
Civic Square
Civic ACT 2608
Tel: 61 2 6257 0871
Fax: 61 2 6257 0871

New Zealand
CPO Level 1
12 Queen Street
Auckland Central
PO Box 912012
Auckland Mail Centre
Auckland 1142
Tel: 64 9 367 6200
Fax: 64 9 367 6222

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ASIC Company Extract - Current

WHITESTONE QUARRIES W.A. PTY LTD

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*Extracted from ASIC's database at 15:54:00 on 01/09/2011

Organisation Details

Organisation Name: WHITESTONE QUARRIES W.A. PTY LTD
Australian Company Number: 151434883
State of Incorporation: Western Australia
Registration Date: 10/06/2011
Organisation Number Heading: ACN (Australian Company Number)
Australian Business Number: 75151434883
Review Date: 10/06/2012

Document Number: 5E2725766
Details Type (current/ceased): Current
Details Start Date: 10/06/2011
Organisation Name: WHITESTONE QUARRIES W.A. PTY LTD
Name Start Date: 10/06/2011
Organisation Status: Registered
Organisation Type: Australian Proprietary Company
Organisation Class: Limited By Shares
Organisation Sub-Class: Proprietary Company
Disclosing Entity Flag: N

Company Address

Document Number: 5E2725766
Details Type: Current
Address Type: Registered Office
Address Start Date: 10/06/2011
Address: WHITESTONE QUARRIES W.A. PTY LTD LOT 5 MIDLANDS ROAD CARNAMAH WA 6517

Document Number: 5E2725766
Details Type: Current
Address Type: Principal Place of Business
Address Start Date: 10/06/2011
Address: LOT 5 MIDLANDS ROAD CARNAMAH WA 6517

Company Office Holders

Document	Qual.	Type	Role	Appointed	Ceased	Name	Born	ACN	Address
5E2725766		Current	Director	10/06/2011		CHISHOLM TERRENCE DAVID	14/07/1949 DALWALLINU WA		1 MIDLANDS ROAD CARNAMAH WA 6517
5E2725766		Current	Director	10/06/2011		NOBLE LEONIE JOY	07/12/1952 PERTH WA		1 MIDLANDS ROAD CARNAMAH WA 6517

ASIC Company Extract - Current

Document	Qual.	Type	Role	Appointed	Ceased	Name	Born	ACN	Address
5E2725766		Current	Secretary	10/06/2011		NOBLE LEONIE JOY	07/12/1952 PERTH WA		1 MIDLANDS ROAD CARNAMAH WA 6517

Share Structure - Issued and Paid Capital

Document	Qual.	Type	Code	Title	Issued	Nom. Value	Face Value	Paid	Unpaid	Total	Share Prem	Entitled	Avg Exc.
5E2725766		Current	A	A CLASS	1			\$1.00					
5E2725766		Current	B	B CLASS	1			\$1.00					

Share Holders

Document	Qual.	Type	Class	Held	Owned	Paid	Name	ACN	Address	Joint Indicator	
5E2725766		Current	A	1	Y	Y	CHISHOLM TERRENCE DAVID		1 MIDLANDS ROAD CARNAMAH WA 6517	N	
5E2725766		Current	B	1	N	Y	AVAGO PTY LTD	9410539	1 MIDLANDS ROAD CARNAMAH WA 6517	N	

Charges Registered and Related Documents

Charge Details

Ch No	Status	Date Reg	Type	Created	Expired	Pre-ASIC Ch No	Name	ACN	Organisation Name
2211751	Registered	29/07/2011	Both Fixed & Floating	13/07/2011				005357522	AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

Documents relating to the above Charge

Ch No	Document	Received	Type	Processed	Pages (If Imaged)	Description
2211751	027675441	29/07/2011	309	01/08/2011	33	309 NOTIFICATION OF 309A DETAILS OF A CHARGE

Company Document Listing

Document	Received	Type	Processed	Pages (If Imaged)	Effective	Annual Return	Description
5E2725766	10/06/2011	201	10/06/2011	3	10/06/2011		201C Application For Registration as a Proprietary Company

ANNEXURE B

COMPANY EXTRACT AVAGO PTY LTD



ASIC Company Extract - Current

Customer Service: 1300 366 402 **Internet:** <https://secure.abr.com.au> **EEmail:** abrdata@abr.com.au

Brisbane
Level 10
231 North Quay
Brisbane QLD 4000
GPO Box 13294
George Street
Brisbane QLD 4003
Tel: 61 7 3837 1333
Fax: 61 7 3236 3422

Sydney
Level 19
9 Hunter Street
Sydney NSW 2000
Tel: 61 2 9236 4800
Fax: 61 2 9951 7880

Melbourne
Level 34
140 William Street
Melbourne VIC 3000
Tel: 61 3 8629 1608
Fax: 61 3 8629 1628

Perth
Level 5
102 James Street
North Bridge
Perth WA 6003
Tel: 61 8 9224 4900
Fax: 61 8 9434 9193

Canberra
PO Box 545
Civic Square
Civic ACT 2608
Tel: 61 2 6257 0871
Fax: 61 2 6257 0871

New Zealand
CPO Level 1
12 Queen Street
Auckland Central
PO Box 912012
Auckland Mail Centre
Auckland 1142
Tel: 64 9 367 6200
Fax: 64 9 367 6222

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AVAGO PTY LTD

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*Extracted from ASIC's database at 11:55:13 on 20/01/2012

Organisation Details

Organisation Name: AVAGO PTY LTD
Australian Company Number: 009410539
State of Incorporation: Western Australia
Previous State Number: C0839790X
Registration Date: 11/07/1989
Organisation Number Heading: ACN (Australian Company Number)
Australian Business Number: 48009410539
Review Date: 11/07/2012

Document Number: 00941053B
Details Type (current/ceased): Current
Details Start Date: 19/06/1992
Organisation Name: AVAGO PTY LTD
Name Start Date: 11/07/1989
Organisation Status: Registered
Organisation Type: Australian Proprietary Company
Organisation Class: Limited By Shares
Organisation Sub-Class: Proprietary Company
Disclosing Entity Flag: N

Company Address

Document Number: 0E4181545
Document Number Qualifier: (AR 1999)
Details Type: Current
Address Type: Registered Office
Address Start Date: 06/02/2000
Address: K W PRINCE & ASSOCIATES UNIT 8 9 SUNDERCOMBE STREET OSBORNE PARK WA 6017

Document Number: 004510912
Document Number Qualifier: (AR 1993)
Details Type: Current
Address Type: Principal Place of Business
Address Start Date: 30/06/1993
Address: MIDLANDS ROAD CARNAMAH WA 6517

Company Office Holders

Document	Qual.	Type	Role	Appointed	Ceased	Name	Born	ACN	Address
00941053B		Current	Director	18/07/1989		CHISHOLM TERRENCE DAVID	14/07/1949 DALLINU UNKNOWN		MIDLANDS ROAD CARNAMAH WA 6517

ASIC Company Extract - Current

Document	Qual.	Type	Role	Appointed	Ceased	Name	Born	ACN	Address
00941053B		Current	Secretary	18/07/1989		CHISHOLM TERRENCE DAVID	14/07/1949 DALLINU UNKNOWN		MIDLANDS ROAD CARNAMAH WA 6517

Share Structure - Issued and Paid Capital

Document	Qual.	Type	Code	Title	Issued	Nom. Value	Face Value	Paid	Unpaid	Total	Share Prem	Entitled	Avg Exc.
004510912	(AR 1993)	Current	ORD	ORDINARY SHARES	2			\$2.00					

Share Holders

Document	Qual.	Type	Class	Held	Owned	Paid	Name	ACN	Address	Joint Indicator	
0941053A	(AR 1990)	Current	ORD	1	Y	Y	CHISHOLM GLENYS DAWN		MIDLANDS ROAD CARNAMAH WA 6517	N	
0941053A	(AR 1990)	Current	ORD	1	Y	Y	CHISHOLM TERRENCE DAVID		MIDLANDS ROAD CARNAMAH WA 6517	N	

Charges Registered and Related Documents

Charge Details

Ch No	Status	Date Reg	Type	Created	Expired	Pre-ASIC Ch No	Name	ACN	Organisation Name
479701	Satisfied	02/03/1995	Both Fixed & Floating	01/03/1995				050494454	BANK OF WESTERN AUSTRALIA LTD

Documents relating to the above Charge

Ch No	Document	Received	Type	Processed	Pages (If Imaged)	Description
479701	006037195	02/03/1995	309	02/03/1995	54	309 NOTIFICATION OF 309A DETAILS OF A CHARGE
479701	016296434	05/09/2001	312	05/09/2001	1	312 NOTIFICATION OF 312A DISCHARGE

Charge Details

Ch No	Status	Date Reg	Type	Created	Expired	Pre-ASIC Ch No	Name	ACN	Organisation Name
589778	Registered	08/05/1997	Both Fixed & Floating	01/05/1997				005357522	AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

Documents relating to the above Charge

Ch No	Document	Received	Type	Processed	Pages (If Imaged)	Description
589778	010737412	08/05/1997	309	08/05/1997	55	309 NOTIFICATION OF 309A DETAILS OF A CHARGE
589778	016296433	05/09/2001	311	05/09/2001	2	311 NOTIFICATION OF 311A ASSIGNMENT OF CHARGE
589778	016296432	05/09/2001	312	05/09/2001	1	312 NOTIFICATION OF 312C RELEASE OF PROPERTY

ASIC Company Extract - Current

Ch No	Document	Received	Type	Processed	Pages (If Imaged)	Description
589778	7E3753526	22/06/2011	312	22/06/2011	5	312 NOTIFICATION OF 312C RELEASE OF PROPERTY

Charge Details

Ch No	Status	Date Reg	Type	Created	Expired	Pre-ASIC Ch No	Name	ACN	Organisation Name
795604	Registered	17/04/2001	Fixed	19/03/2001				000015485	GE FINANCE AUSTRALASIA PTY LTD

Documents relating to the above Charge

Ch No	Document	Received	Type	Processed	Pages (If Imaged)	Description
795604	016686762	17/04/2001	309	18/04/2001	13	309 NOTIFICATION OF 309A DETAILS OF A CHARGE

Charge Details

Ch No	Status	Date Reg	Type	Created	Expired	Pre-ASIC Ch No	Name	ACN	Organisation Name
2209394	Registered	26/07/2011	Fixed	13/07/2011				005357522	AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

Documents relating to the above Charge

Ch No	Document	Received	Type	Processed	Pages (If Imaged)	Description
2209394	7E3838775	26/07/2011	309	26/07/2011	5	309 NOTIFICATION OF 309A DETAILS OF A CHARGE

Charge Details

Ch No	Status	Date Reg	Type	Created	Expired	Pre-ASIC Ch No	Name	ACN	Organisation Name
2225876	Registered	31/08/2011	Fixed	18/08/2011				005357522	AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

Documents relating to the above Charge

Ch No	Document	Received	Type	Processed	Pages (If Imaged)	Description
2225876	7E3919606	31/08/2011	309	31/08/2011	6	309 NOTIFICATION OF 309A DETAILS OF A CHARGE

Charge Details

Ch No	Status	Date Reg	Type	Created	Expired	Pre-ASIC Ch No	Name	ACN	Organisation Name
2225915	Registered	31/08/2011	Fixed	18/08/2011				005357522	AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

ASIC Company Extract - Current

Documents relating to the above Charge

Ch No	Document	Received	Type	Processed	Pages (If Imaged)	Description
2225915	7E3919664	31/08/2011	309	31/08/2011	5	309 NOTIFICATION OF 309A DETAILS OF A CHARGE

Charge Details

Ch No	Status	Date Reg	Type	Created	Expired	Pre-ASIC Ch No	Name	ACN	Organisation Name
2225922	Registered	31/08/2011	Fixed	18/08/2011				005357522	AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

Documents relating to the above Charge

Ch No	Document	Received	Type	Processed	Pages (If Imaged)	Description
2225922	7E3919678	31/08/2011	309	31/08/2011	6	309 NOTIFICATION OF 309A DETAILS OF A CHARGE

Company Document Listing

Document	Received	Type	Processed	Pages (If Imaged)	Effective	Annual Return	Description
0E8557168	03/02/2003	316	13/01/2005	3	29/01/2003	(AR 2002)	316L Annual Return Annual Return - Proprietary Company
0E7055510	05/02/2002	316	11/01/2005	3	30/01/2002	(AR 2001)	316L Annual Return Annual Return - Proprietary Company
0E5564998	30/01/2001	316	30/01/2001	3	29/01/2001	(AR 2000)	316L Annual Return Annual Return - Proprietary Company
0E4181545	30/01/2000	316	30/01/2000	3	30/01/2000	(AR 1999)	316 Annual Return 316A Change of Registered Office Address 316L Annual Return - Proprietary Company
0E2910946	31/01/1999	316	31/01/1999	4	31/01/1999	(AR 1998)	316L Annual Return Annual Return - Proprietary Company
0E1866171	30/01/1998	316	01/02/1998	4	30/01/1998	(AR 1997)	316L Annual Return Annual Return - Proprietary Company
0E1056796	04/02/1997	316	08/02/1997	4	22/01/1997	(AR 1996)	316L Annual Return Annual Return - Proprietary Company
0E0758576	27/11/1996	370	28/11/1996	2	27/11/1996		370 Notice of Retirement or Resignation By Director or Secretary
0E0758563	27/11/1996	304	28/11/1996	1	27/11/1996		304A Notification of Change to Officeholders of Australian Company
0E0441572	29/02/1996	316	01/03/1996	4	29/02/1996	(AR 1995)	316L Annual Return Annual Return - Proprietary Company
0E0441558	29/02/1996	203	01/03/1996	1	29/02/1996		203A Notification of Change of Address
00941053E	20/03/1995	316	28/04/1995	4	31/12/1994	(AR 1994)	316L Annual Return Annual Return
004510912	22/04/1994	316	11/05/1994	4	31/12/1993	(AR 1993)	316L Annual Return Annual Return
00941053C	05/11/1993	316	29/11/1993	4	31/12/1992	(AR 1992)	316 Annual Return 316A Change of Registered Office Address 316L Annual Return
00941053B	19/06/1992	316	17/07/1992	4	19/06/1992	(AR 1991)	316 Annual Return 316E Corrections 316L Annual Return
0941053A	01/01/1991	316	16/04/1991	4	01/01/1991	(AR 1990)	316 Annual Return 316E Corrections 316L Annual Return

ANNEXURE C

CERTIFICATE OF TITLE

LOT 299 BRAND HWY, MUCHEA

WESTERN



AUSTRALIA

REGISTER NUMBER 2929/DP254600	
DUPLICATE EDITION N/A	DATE DUPLICATE ISSUED N/A

RECORD OF CERTIFICATE OF TITLE

VOLUME
350FOLIO
154A

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.



REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 2929 ON DEPOSITED PLAN 254600

REGISTERED PROPRIETOR: (FIRST SCHEDULE)

LEONIE JOY NOBLE
TERRENCE DAVID CHISHOLM
AS JOINT TENANTS IN 1/2 SHARE
AVAGO PTY LTD
IN 1/2 SHARE
ALL OF POST OFFICE BOX 70, CARNAMAH
AS TENANTS IN COMMON

(T L944268) REGISTERED 24 MAY 2012

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS: (SECOND SCHEDULE)

1. TITLE EXCLUDES THE LAND SHOWN ON DIAGRAM 100184.
2. C420738 EASEMENT TO THE STATE ENERGY COMMISSION OF WESTERN AUSTRALIA. SEE INSTRUMENT C420738. REGISTERED 9.9.1982.
*H604804 SUNDRY. THE GRANTEE OF TRANSFER C420738 IS NOW THE DBNGP LAND ACCESS MINISTER PURSUANT TO THE DAMPIER TO BUNBURY PIPELINE ACT 1997. REGISTERED 23.11.2000.
3. H604804 SUNDRY. PORTION OF THE LAND HEREIN IS WITHIN THE DBNGP CORRIDOR PURSUANT TO THE DAMPIER TO BUNBURY PIPELINE ACT 1997. SEE LAND ADMINISTRATION PLAN 15560. REGISTERED 23.11.2000.
4. *I210359 TAKING ORDER. THE DESIGNATED PURPOSE OF THE INTEREST TAKEN IS STATE CORRIDOR RIGHTS TO THE DBNGP LAND ACCESS MINISTER UNDER THE PROVISIONS OF THE DAMPIER TO BUNBURY PIPELINE ACT 1997. AS TO THE PORTION OF THE WITHIN LAND SHOWN ON DEPOSITED PLAN 215560 ONLY. REGISTERED 20.8.2002.
5. *L944269 MORTGAGE TO AUSTRALIA & NEW ZEALAND BANKING GROUP LTD REGISTERED 24.5.2012.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF TITLE-----

END OF PAGE 1 - CONTINUED OVER

RECORD OF CERTIFICATE OF TITLE

REGISTER NUMBER: 2929/DP254600

VOLUME/FOLIO: 350-154A

PAGE 2

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 350-154A (2929/DP254600).
PREVIOUS TITLE: 1021-246.
PROPERTY STREET ADDRESS: 299 BRAND HWY, MUCHEA.
LOCAL GOVERNMENT AREA: SHIRE OF CHITTERING.

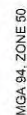
NOTE 1: A000001A LAND PARCEL IDENTIFIER OF SWAN LOCATION 2929 (OR THE PART THEREOF) ON SUPERSEDED PAPER CERTIFICATE OF TITLE CHANGED TO LOT 2929 ON DEPOSITED PLAN 254600 ON 01-MAY-02 TO ENABLE ISSUE OF A DIGITAL CERTIFICATE OF TITLE.
NOTE 2: THE ABOVE NOTE MAY NOT BE SHOWN ON THE SUPERSEDED PAPER CERTIFICATE OF TITLE OR ON THE CURRENT EDITION OF DUPLICATE CERTIFICATE OF TITLE.
NOTE 3: DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING L944269

ANNEXURE D

SATELLITE AND SURVEY PLANS

LOT 299 BRAND HWY, MUCHEA





POINT ID	EASTING	NORTHING
1.	403009	6506735
2.	403040	6506735
3.	403013	6506715
4.	403044	6506715
5.	403057	6506511
6.	403088	6506511
7.	403060	6506650
8.	403080	6506580
9.	403087	6506646

HORIZONTAL DATUM : PCG 94

VERTICAL DATUM : AHD
 (#299) BRAND HIGHWAY

(#299) BRAND HIGHWAY

E OF CHITTERING

ying

WILDER REF No	SCALE @ A3	DWG
	1:4000	21

ALL HARDSTAND AND TRAFFIC AREAS WEST OF GAS PIPELINE EASEMENT ARE 300mm CRUSHED LIMESTONE

PROPOSED
TRANSFORMER
POWER TO SITE

ANNEXURE E

PRELIMINARY ENVIRONMENTAL MANAGEMENT PLAN



Registered Office:
60 Ocean Place, Nilgen WA 6044
Post Office Box:
162 Joondalup DC,
Joondalup, WA 6919
Phone:
0447 733 372

PRELIMINARY ENVIRONMENTAL MANAGEMENT PLAN

LOT 2929 BRAND HIGHWAY MUCHEA WA 6501

The property is located at 2929 Brand Highway, Muchea, Western Australia on the Swan Coastal Sandplain area, to the immediate west of the Brand Highway also bounded by Chittering and Energy Roads to the North and South. The Property to the West is another small holding farm.

The soils of the Swan Coastal Plain are formed by silica sands deposited from river and wind action. The land unit is bounded to the east by the Yilgarn Block which formed from a rift valley some 50 million years ago. The resultant erosion action was deposited onto what became the Swan Coastal Plain. The eroded materials were sorted and developed in-situ to form three distinct dune formations. The most western is called the Quindalup dunes adjacent east to the Spearwood Dunes. The Quindalup and Spearwood dunes are underlined by limestone rocks or have limestone pipes intruding into the sands.

The property however is located on the next dune formation called the Bassendean Dunes which is itself split into three sands called the Jandakot, Gavin and Joel sands. The property is located in an area of the Joel sands which is a sandy loam to sand textured soil that is determined by the organic matter contained in the profile. The water table is close to the surface evidenced by seasonal waterlogging. The B horizon is a humus podzol layer comprising a cemented brown organic B horizon.

The property has operated for several decades as a stock production unit with pasture dominated by Kikuyu, *Pennisetum clandestinum* and Dock, *Rumex vesicarius*? and has a reasonable fertiliser history featuring repeated application of phosphate fertiliser to the extent that the naturally occurring Slender banksia, *Banksia attenuata* is completely missing from the property and all neighbouring properties.

The surface topography is gently undulating dune with poorly delineated natural drainage. The maximum variation in topography is measured in decimetres from the higher drier surface to the north-west to the lower wetter areas to the south. The lower surface in the profile prior to clearing was probably a seasonal wetland although that is impossible to establish with any confidence. The system discharges into the Ellen brook and then eventually into the Swan River drainage system.

The property native vegetation has been majorly altered over the decades of farming activity and the only clearly native species that survives to now is a few scattered and isolated Swamp

paperbark, *Melaleuca raphiophylla* located in the creekline to the north of the entrance tree avenue, in the north-east corner of the property and on the northern boundary. The entrance tree avenue comprises introduced Australian species *Eucalyptus camaldulensis*, *Eucalyptus sideroxylon*, *Eucalyptus botryoides*, *Corymbia cladocalyx*, and local species *Eucalyptus rudis*, *Eucalyptus gomphocephala*, *Eucalyptus calophylla*, *Casuarina obesa*. There is one serious weed species beyond the pasture species which is three sites of Arum Lily, *Zantedeschia aethiopica* which will be physically grubbed out, removing them along with root matter and then burning all the vegetation material followed by on-going monitoring thus preventing them from re-entering the property.

There is one residence located on the property at -31.571516, 115.967603 with associated sheds near the house. The house is serviced with a septic system, bore, rain water tanks and is connected to the electric power supply. Entrance to the house is via the tree avenue from Brand Highway.

The site is part of the Dampier to Bunbury Gas pipeline precinct and this pipeline crosses the property to the western end of the property. The presence of the gas pipeline imposes some restrictions on development including the establishment of buffer zones between the proposed development, the proposed development and the owner residence and neighbours.

Midwest Concepts and Solutions

Midwest Concepts and Solutions is a business that supplies answers and solutions to landowners developing property and ideas in Regional Western Australia based from offices located near Lancelin and in Coomberdale in the Midwest region north of Perth.

The principles of Midwest Concepts and Solutions have many years of small regional business experience in the development of plans to meet regulation and local requirements and retain commerciality. The list of formal qualification includes a range from law to environmental science and business management.

Development Plan for the Property / Environmental

The environmental plan is designed to compliment and fit into the stages of the business unit development yet allow for the particular set of environmental conditions presented by the physical state of the property.

The first stage is to spray the pasture to the west of the Dampier to Bunbury pipeline. This will be carried out using techniques and practices to prevent drift onto neighbouring land either as spray drift or water and soil migration. The chemical is determined to a large extent by the Kikuyu and dock pasture which requires a systemic chemical and Glyphosate (R) has been selected due to the mode of chemical action and because frog tolerant formulations exist. This particular chemical selection will become apparent when development and stabilisation of the poorly defined creek and possible wetland area is developed for later years.

The plan is to establish a buffer zone of trees and shrubs around the boundary of the planned development. This will commence in 2012 and be completed in 2013. The buffer will be several rows thick and be placed inside the property boundary allowing for Chittering Shire Council firebreak provisions. The aim of the buffer is to present a pleasing visual break for neighbours from the future activity in the business development zone of the development and to reduce any intermittent noise generated by business activity on the property.

The species that will be planted into the buffer zone will be selected from local naturally occurring species unless these can't be obtained. Any alternative species will be vetted with staff at the Chittering Landcare Centre for their potential to become weedy and if the potential exists these species will be specifically excluded from any planting or consideration. The species list for selection from will be developed in consultation with the Chittering Landcare Centre and engage the Centre to undertake management of future plantings and site vegetation management on a commercial basis. *(This is not to be seen or inferred that we are seeking anything but a full and open dialogue with the Centre as having expert local expertise).*

Along with the spraying of the buffer zone the planned hardstand area and areas planned for retail sales with associated sales/storage sheds will be sprayed to kill the Kikuyu and Dock pasture prior to the construction of the hardstand and other business activity area which will be confined to the area west of the Dampier to Bunbury Gas pipeline. A single spray event will form the significant activity for stage 2 of the development. The dead matted organic matter contained in the sprayed pasture will be removed and re-spread over other areas of the property, (areas of slightly higher surface profile), as preparation of the construction of the hardstand area and associated commercial activity.

Stage 3 will be the construction of an all weather access road on the property connecting the hardstand area to the Brand Highway. The constructed private road will have to be capable of handling 200 tonne loads safely. The issue that this stage depends on is a study of the traffic on Brand Highway and consultation with the Main Roads agency to ensure that vehicles turning off Brand Highway into the property or leaving the property can do so safely and without undue disruption to other traffic movements.

This may include the design and construction of suitable entry and exit lanes for vehicles travelling south on Brand highway and appropriate turning ability for vehicles entering the property without holding traffic up. It is expected that all heavy vehicles entering or leaving the property will have appropriate escort vehicles accompanying the trucks and prime movers warning other traffic.

The main access road to the work area from Brand Highway will necessitate the construction of two culverts to allow water discharge from the shallow, poorly defined ephemeral creek on the property.

Stakeholder Consultation Process and Information Dissemination

Chittering Landcare and relevant local groups:

A brief meeting was held with the Chittering Landcare Centre Manager and Environmental Officer with the intent of making the Landcare Centre aware of the planned development and to request involvement of the Landcare Centre in ensuring that any and all development was consistent with local aspirations and did not generate any environmental concerns.

This was followed up by a visit to the property by Landcare staff for their initial appraisal. This will be followed up with recommendations on plant species and wetland area development.

Mr Chisholm has nominated to join the Chittering Landcare Centre.

Adjoining Property Owners:

The immediate neighbour to the west operates an organic certified cattle business that will be factored into any development decision by Mr Chisholm. This will be evidenced by any spray operations being carried out in such a way as to prevent any cross contamination and threaten the neighbour's certification.

The Muchea residential development features several neighbours to the south of the property across Chittering Road. The buffer zone of trees and shrubs will provide a visual and physical break to reduce the amenity impact of the development.

Government Agencies:

The significant Government Agency that will be involved on an on-going basis is the Shire of Chittering, especially in the critical early development phase. The planned development will be in accordance with all the provisions of the Shire of Chittering Town Planning Scheme No. 6 and therefore compliant with the WA Planning Commission.

As previously mentioned the property is transacted by the Bunbury to Dampier Gas pipeline and that imposes some development conditions, mainly a restriction on location of any development within the property and proximity to the pipeline. The relationship is one of compliance and no aspect of the planned development will impact on the pipeline operation and maintenance.

Midwest Concepts & Solutions Pty Ltd will be undertaking further environmental assessments of Lot 2929 Brand Highway Muchea.

These assessments will be developed to support an application before the Department of Environment & Conservation for the removal of a Systems 6 Policy over Lot 2929 Brand Highway Muchea.

WHITESTONE QUARRIES WA PTY LTD

PO Box 81, Mukinbudin, WA 6479 or

PO Box 20 Muchea, WA 6501

Ph: 0428 948 340 Terry

Ph: 0417 175 960 Leonie

e-mail: Winchester.quarry@bigpond.com

30th October 2012

Your ref: Splan 19/03/0003, A5006 01233282

Original by Mail

Att: Mr Azhar Awang
Executive Manager Development Services
Shire of Chittering
6177 Great Northern Hwy
Bindoon WA 6502

RE: Lot 2929 (RN 299) Brand Highway, Muchea (Response to Public Comment)

Dear Sir,

In relation to Whitestone Quarries WA Pty Ltd (Whitestone) “**Application for Planning Approval**” before the Shire of Chittering, please find Whitestone’s response to the issues raised by the public consultation process.

The response is divided into three parts, being:

- General issues covered within this preamble.
- and
- Environmental group (Chittering Landcare) and Statutory Authorities.
- and
- Ratepayers and or residents of Muchea.

Preamble:

The area of land at 2929 (RN299) Brand Highway Muchea, (the Location) is within the Shire of Chittering.

The Zoning and thus the Land use is managed pursuant to the provisions of the Shire of Chittering Town Planning Scheme No 6.

By Schedule 2 of the Zoning Table, 2929 Brand Highway, is zoned “Agricultural Resource” (AR).

The Building envelope, (net area of land for development including deduction for setbacks) is:

- Section “A” 438,049 m2, (area of land available for development to the East of the easement).
- Section “B” 89,642 m2, (area of land available for development to the West of the easement).

The Shire of Chittering Town Planning Scheme No 6, (TPS) identifies 4 (four) activities upon the land which the Shire of Chittering may approve, they are:

- | | | |
|----------------------|----------------|------------|
| • Industry – Rural | Permitted (AR) | Class “D”. |
| • Landscape Supplies | Permitted (AR) | Class “A”. |
| • Transport Depot | Permitted (AR) | Class “A”. |
| • Warehouse | Permitted (AR) | Class “D”. |

The TPS defines the meanings attributed to the above activities, they are:

Schedule 1 General Definition TPS:

Industry-Rural: means – at (b), a workshop servicing plant or equipment used for rural purpose.

Landscape Supplies: means - premises used for the storage and sale of items such as wood chips, logs, rocks, sand, stone and other such materials.

Transport Depot: means – premises used for the garaging of two (2) or more motor vehicles, used or intended to be used **for carrying of goods or persons for hire or reward, or for the transfer of goods or persons**, and includes maintenance and repair of the vehicles, used but not for other vehicles.

Warehouse: means – premises used to store or display goods and may include sale by wholesale.

The TPS Class Requirements TPS:

Class “D” used under the Shires TPS is that which means, that the use is not permitted unless the Local Government (the Shire) has exercised its discretion by granting Planning Approval.

Class “A” used under the Shires TPS is that which means, that the use is not permitted unless the Local Government (the Shire) has exercised its discretion by granting Planning Approval after giving special notice in accordance with clause 9.4.

Section 9.4 of the Shires TPS relates to a requirement by the Shire to, “Advertising of Applications” for a period of 14 days inviting public comment from parties who may be affected by the proposed development.

The Application:

The application envisages the development of Lot 2929 Brand Hwy by establishing:

1. Hardstand area.
2. Landscape supplies.
3. Storage sheds.
4. Workshop / Weighbridge and Office Administration.
and
5. Internal Road running east/west.
6. General traffic areas west of gas pipeline easement.

When read in the context of Planning Application, items 1-6 above are permitted activities by the TPS on land zoned “***Agricultural Resource***”.

The development set out in items 1-4 above is to the west of the Gas Pipeline Easement.

The development set out in item 5 above represents construction of the internal road from Brand Hwy to the Gas Pipeline Easement located at the western end of Lot 2929.

It is available to the Shire of Chittering to determine the proposed activities by Whitestone on Lot 2929 Brand Hwy are compliant with the zoning and general definitions contained within the TPS for land zoned ***"Agricultural Resource"***

It is also available for the Shire of Chittering to determine the activities envisaged by the Whitestone Planning Application are fully compliant with the Shire of Chittering strategic intent of sustainable peri-urban development which in consequence fosters employment opportunities within the local community.

Amendments to the Application for Planning Approval:

Whitestone proposed the following amendments to the Application for Planning Approval:

- Under the definition of ***"Transport Depot"*** remove the words: "for carrying of goods or persons for hire or reward, or for the transfer of goods or persons", and add the words "for the business of Whitestone and or associated entities".

Therefore, the definition reads and means:

"premises used for the garaging of two (2) or more motor vehicles, used or intended to be used in the business of Whitestone and or associated entities and includes maintenance and repair of the vehicles, used but not for other vehicles".

- Remove all reference or intent of Whitestone to access or egress Lot 2929 Brand Highway via Chittering Rd. Add, all access or egress to Lot 2929 Brand Highway will be by the internal central road traversing directly from Brand Highway to the western end of Lot 2929 Brand Highway.
- Establish a "surface water" bore and associated storage tank for the:
 - Access to dust suppression agent (water) for construction and development.
 - and
 - Provision of additional water to compliment Fire Fighting Capacity.

Whitestone propose these amendments to address the concerns of the ratepayers and residents of Muchea.

Whitestone does not accept that the ratepayers and residents' concerns are correct and proceed to undertake the Planning Application in accordance with the Shire of Chittering's TPS.

All relevant approvals for the establishment of a bore will be obtained and provided to the Shire of Chittering as part of the development process.

Whitestone supports the incorporation of these amendments as a condition of Planning Approval by the Shire of Chittering.

General Comment:

On Tuesday evening the 18th September 2012, Mr T. D. Chisholm and Mr W.B.McSharer attended an informal meeting of ratepayers and residents, Town of Muchea, to discuss and explain Whitestone's Planning Application and development upon Lot 2929 Brand Highway, Muchea.

It was evident from the discussions that the ratepayers and residents had no understanding or alternatively, ***"chose to ignore"*** the Shire of Chittering's (which the ratepayers elected and empowered) provisions within the TPS and were only interested in pursuing their own self-serving / self-interest as driven by their personal agendas.

The concepts of “**we support development, as long as it is not in our back yard**” and “**no development at all next to us**” and “**we came to Muchea 30 years ago and don’t want any change**” denies the reality of the Shire of Chittering’s Strategic Plan to guide future community opportunities and values balanced with State Government and Shire of Chittering objectives for a peri-urban area.

The only development acceptable to the adjoining ratepayers and residents to Lot 2929 Brand Highway is “**no development at all, whatever it is**”. This is the predominant and prevailing view of the ratepayers and residents of Muchea notwithstanding the Shire of Chittering’s adoption of the TPS as a guide to the future.

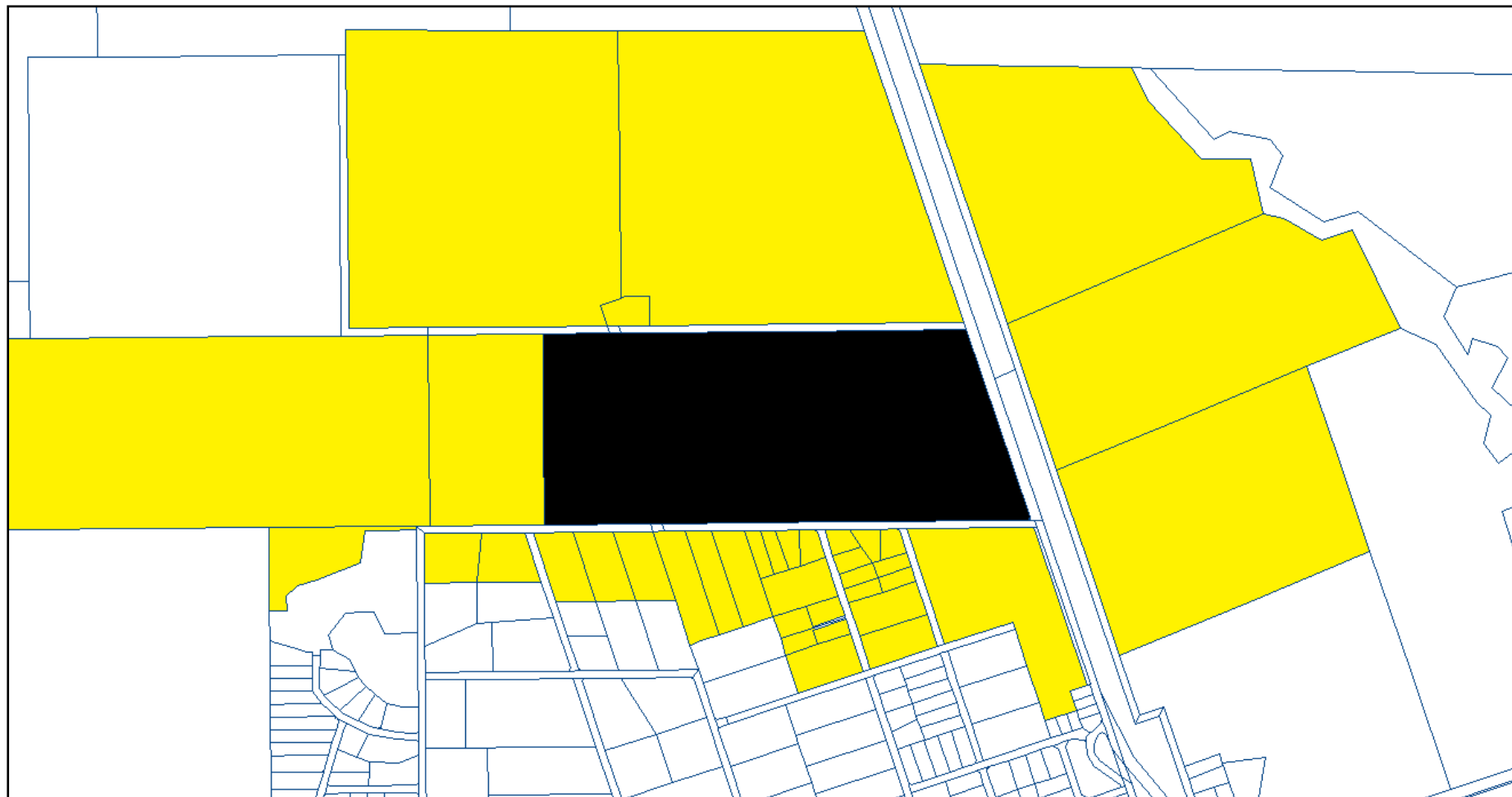
Should you have any further enquiries regarding the above, please contact Bill McSharer on 0447733372 or b.mcsharer@westnet.com.au

Yours Sincerely

P.P. W.B.McSharer

T.D. Chisholm
For and on behalf of
Whitestone Quarries WA Pty Ltd
Director

Attachment 4 – Consultation Plan



Note: Properties highlighted in yellow were notified and given 21 days to respond.

Name	Submission Comments	Applicant Response Comments	Officer Response Comments
Ellen Brockman Integrated Catchment Group (Chittering Landcare Group)	<ul style="list-style-type: none">Proposal has noted the advice given by the Landcare Centre that the soils are unsuitable for septic systems and owner will not be installing a septic system.There are no System 6 (conservation reserves) on this property. If the proponent is referring to the category of multiple use wetland – a listing which covers most of the site, this is covered under the Wetlands of the Swan Coastal Plain.General advice for a multiple category wetland is ‘to use, develop and manage wetlands in the context of water, town and environmental planning’.Landcare would recommend the waterways be fenced at a distance of 20 metres from the centreline of the waterway and revegetated with a mix of species at a density of 10 000 stems per hectare, which could be further covered if the proponent requests a revegetation plan. (Attached advice letter)	<ul style="list-style-type: none">As provided to the Landcare Centre for their comment on the proposed development septic systems will not be installed.The proponent is aware of the requirements of the Wetlands of the Swan Coastal Plains and no planned development will breach those conditions.The regeneration of the wetlands has been discussed with the Landcare Centre and this group will be consulted in the context of the development and wetlands conservation.A Revegetation Management Plan for the site has been and is the intent of the proponent.	<ul style="list-style-type: none">Noted.Noted. It is understood the System 6 classification was identified on the Shire’s Local Planning Strategy and Local Planning Policy No. 2 for future protection but is not registered as a System 6 site.Noted.This is noted and recommended in the Officer’s Recommendation of the Agenda Report.
Department of Water	<p>The Department is unable to support the proposed development and provides the following advice:</p> <ul style="list-style-type: none">Waterways Protection.<ul style="list-style-type: none">The proposed development is located over a minor non-perennial watercourse, Gingin Brook. The Department does not support the discontinuity of waterways. The Department preference is for the watercourse on site to be incorporated into a single lot without boundaries crossing the watercourse. Ideally a foreshore reserve should be proclaimed over the waterway and vested with local government for conservation and protection.Bed and banks permitting<ul style="list-style-type: none">Proposed development is located within the Gingin Brook and Tributaries surface water area, proclaimed under the <i>Rights in Water & Irrigation Act (1914)</i>. A 11/17/21A permit will be required to interfere or obstruct the bed and banks of a watercourse, including the proposed road crossings and lot boundaries. The proponent should contact the Department’s Swan Avon regional office to discuss water management options and requirements under the permit.	<ul style="list-style-type: none">In fact the property has a non-perennial flow of water off the property into the Ellenbrook and the development will not interfere in any way with the flow of water. Creating a separate lot that encompasses the whole catchment of the Ellenbrook is not supported by WAPC regulation or intent and would be an enormous cost to the public and is in reality simply a bureaucratic dream.The bed and banks of the ‘creek’ will not be interfered with and the two pipe/culverts crossings will exceed the peak flow calculations for a 20 year peak flow runoff event and are in fact the size of the culverts under the Brand Highway installed by Government. In the western section of the property the creek’ ceases to exist within any defined water channel and the water flow is a slow general meandering flow through and across the grass vegetation and	<ul style="list-style-type: none">It is understood the Department’s comments are generic for subdivision referrals. The intent of the Department would be to protect the watercourse and limit impact and interference of its flow.The proposed development does in fact interfere with the watercourse. The installation of pipe/culvert crossings through the watercourse is interfering with its flow and a Department of Water permit would be required.

	<ul style="list-style-type: none">○ However should the Shire of Chittering choose to approve the proposed subdivision the Department would like to recommend the following conditions:<ul style="list-style-type: none">▪ Suitable arrangements being made for the protection of the existing natural flow and ecology values of the watercourse and its associated tributaries.▪ Roads and vehicle crossing over waterways are to be designed and constructed to minimise impact on their natural form and function.• Groundwater Licencing<ul style="list-style-type: none">○ Proposed development is located within the Lake Mungala Groundwater Area, proclaimed under the <i>Rights in Water and Irrigation Act (1914)</i>. Currently, both the Superficial and Leederville aquifers have reached their sustainable limits and it is unlikely that a licence to take groundwater will be issued. There may be other options available and the proponent is encouraged to contact the Department’s Swan Avon Region office to discuss water management options.	<p>defining a watercourse would create an unnatural situation.</p> <p>The suppression of dust from the site will be an isolated and minor use of water. It is proposed to install a bore into the surficial aquifer. A full application process via 25D Form 1 and 5C Form 3G will be utilised and any water use monitored unlike the numerous illegal bores on private property in the district that the DOW does little to nothing about monitoring or identifying.</p> <ul style="list-style-type: none">• There is no intent by the proponent to extract water from the Superficial or Parmelia / Leederville aquifers.	<ul style="list-style-type: none">• Noted. It is considered the applicant would require liaising with the Department for the permit and any other requirements to protect the value of the watercourse.• Noted. Liaison and permit requirements as mentioned above would address this.• Noted.
Department of Agriculture and Food WA	<p>The Department has no objections to the proposal however makes the following comments:</p> <ul style="list-style-type: none">• DAFWA notes this property is located adjacent to a property/enterprise registered on the DAFWA’s Sensitive Sites register.• The Sensitive Sites register was established to encourage farming enterprises to consider impacts of their activities on neighbouring enterprises and plan to limit any negative impacts. The register does not offer any legal or statutory protection.• By owners registering they have indicated that their business may be vulnerable to contamination from land management practices that employ herbicides, insecticides and chemical fertilisers.• DAFWA commends the applicant’s plan to establish complaint management procedures, buffer zones and	<ul style="list-style-type: none">• The proponent is somewhat bemused by the comments from the Department of Agriculture and Food in that all the senior DAFWA officers spoken to are uniform in their poor opinion of the pseudo-science behind bio-dynamic farming techniques.• The proponent is aware that the neighbour to the immediate west is a registered organic farm and nothing that will occur on the proponent property will threaten that certification. There will be no use and storage of chemicals that could threaten that certification. As an example, the spray program to kill the Kikuyu grass to allow establishment and survival of the buffer trees and shrubs was carried out with covered spray boom on a windless day using low toxicity chemical and the neighbour was notified by the contractor. The contractor	<ul style="list-style-type: none">• Noted.• This is noted.• This is noted.• Noted.

	<p>implement weed control practices that will not lead to contamination on the neighbouring property.</p> <ul style="list-style-type: none"> DAFWA is unable to determine if the planned buffer zones are sufficient to prevent contamination from herbicide use and subsequent loss of the neighbour's Biodynamic certification. There are no guidelines as to appropriate widths of buffer zones to protect this type of enterprise. DAFWA recommends the Shire seeks a detailed environmental study from the applicant to model the potential for contamination of the neighbouring property and impact on Biodynamic Certification. This study should also determine the benefits of buffer areas and windbreaks to prevent contamination and recommend appropriate buffer zones and windbreak design. Should the Shire support this proposal, a number of conditions should be imposed including establishment and maintenance of preferred buffer zones and windbreaks based on the study and condition control relating to use of chemicals i.e. herbicide, insecticide. A 'communication contract' could be established to ensure early notification of chemical usage with the neighbour. 	<p>brought and removed the chemical used for this operation and will do so again when the buffer zone is improved.</p> <ul style="list-style-type: none"> The proposed vegetation study is an extremely costly exercise and beyond achieving the desired impact of a functional buffer and a viable sustainable wetland, considering the lack of science behind bio-dynamic farming techniques, is not justified, especially given that DAFWA has no objection to the development. The proponent has consulted with the Chittering Landcare Centre and intends to develop and maintain a good working relationship with that local expert group in respect to the re-creation of the wetland area and for species selection. All future chemical use for Kikuyu and other weed control, especially related to regeneration of the wetland areas will be communicated to the neighbour simply as a 'good neighbour' position and not stored onsite. 	<ul style="list-style-type: none"> Noted. Communication with DAFWA indicated the use of EPA Guidance Statement No. 3 could be used to establish a generic buffer and has been addressed in the Officer's Recommendation. Noted. The generic buffer set by EPA has been addressed in the Agenda. It has also been recommended that appropriate drainage and catchment of hydrocarbons be implemented. Noted. It is considered the hardstand areas on the western portion will reduce the use of herbicides and insecticides in close proximity to the neighbouring property. Noted.
Department of Environment and Conservation	<ul style="list-style-type: none"> DEC would like clarification from the Shire and proponent on whether the land use proposed for the site entails a use which could be defined as a transport depot, as this could have ramifications on the level of potential impacts e.g. noise, dust, odour, gaseous emissions etc, affecting the adjacent sensitive receptors (residential dwellings). In the event that a transport vehicle depot will operate from the site, the proponent is required to demonstrate that the development will comply with the generic separation distance prescribed in the Environmental Protection Authority's Guidance Statement No 3 (GS 3) – <i>Separation Distances between Industrial and Sensitive Land Uses</i>. Specifically, the proponent should demonstrate that transport depot activities will occur beyond the generic 	<ul style="list-style-type: none"> The development of Lot 2929 is in accordance with the Shire of Chittering Zoning Table. The intent of the developer is not to engage in or solicit the provision of a Transport Depot to unrelated third parties but use the zoning activity in accordance with the proposed definition within the scope of the amendment. The proposed shed for workshop activities will be located with a separation of greater 	<ul style="list-style-type: none"> Noted. The proponent has applied for a transport depot use in conjunction with the predominant use of the rural industry. The transport of rock material has been removed. The impacts listed in the Department's submission are assessed within the Agenda Report. Noted. The buffer requirement has been outlined in the Agenda Report.

	200m separation distance prescribed in GS 3, or in the event that the activities will occur within the recommended separation distance, the proponent should demonstrate via a site specific buffer study that the lesser distance will not result in unacceptable impacts.	than 200 metres from the nearest habituated dwelling and therefore would comply with the separation distance cited, (200 metres) in the Environmental Protection Authority Statement #3 separation distances between industrial and sensitive land uses. <ul style="list-style-type: none">No development to Lot 2929 Brand Hwy is within the 200 metres buffer.	
Late Agency Submissions			
Main Roads WA	<p>Main Roads objects to the development proposed for Lot 2929 directly accessing Brand Highway at the proposed or existing location for the following reasons:</p> <ul style="list-style-type: none">Main Roads will not support direct access to a highway or main road where alternative access options are available as the safety and uninterrupted passage of through traffic must be given the highest priority.Brand Highway is used frequently by heavy and large vehicles and is a high speed environment where the proposed and existing driveways are located.The proposed commercial operation will generate a large number of heavy vehicle movements that will greatly increase the risk of traffic conflict. The existing driveway currently services private residences and does not generate the type and volume of vehicle movements on and off the highway as what is proposed.Given the above, and as Lot 2929 has the opportunity for access via Chittering Street or Energy Place, MRWA will not support the proposed new access or the use of the existing access for the proposed commercial operation.	<ul style="list-style-type: none">Main Roads have made an arbitrary decision without having regard to all the issues and facts surrounding the proposal. Main Roads have not consulted with the owner of the land to determine if the proposed access has an effect on safety and uninterrupted passage of through traffic on Brand Highway. There are no heavy haulage access roads to the land. The proposal is to build a heavy haulage access road down the middle of the land with a compliant and approved suitable access to Brand Highway.The statement that the proposal will generate a large number of heavy vehicle movements that will greatly increase the risk of traffic conflict is without basis and wrong. The application documentation does not indicate heavy haulage movements to the capacity that Main Roads have commented. The proposed heavy haulage movements are between 6 and 12 movements per day.Chittering Street and Energy Place are local roads vested within the Shire of Chittering and are not compliant heavy haulage roads.	<ul style="list-style-type: none">It is noted Main Roads do not support direct access to the highway for heavy haulage use. Following the advertising period the applicant amended the planning application for ‘As of Right’ vehicles and submitted a Traffic Impact Statement to Main Roads. The Officer’s Recommendation makes requirement for the applicant to obtain Main Roads approval for access to Brand Highway.Noted.This is noted. It is considered the proposal would generate a greater volume of vehicles and incorporate heavy haulage vehicles which previously were not the case.Noted. As mentioned earlier, the Officer’s Recommendation takes this into account requiring the applicant to provide Council with the appropriate approvals for access to the highway.

DBNGP	<ul style="list-style-type: none">Applicant is going through the process for a Section 41 approval.DBNGP Pty Ltd has no objection.		<ul style="list-style-type: none">Noted. It is considered appropriate that the applicant obtain and provide Council with the Section 41 approval prior to Council determining the application, which involves crossing the pipeline. This has been required in the Officer’s Recommendation.Noted.
Public Submission 1	<ul style="list-style-type: none">Our rural peaceful outlook and lifestyle will never be the same. We didn’t move here to look and listen to industry. We could have stayed in Suburbia for that.Could impact on the health of our grandchildren because of dust and it is impossible to have zero dust from this type of industry.Value of our property would be sure to decrease.Safety of our children using school bus stop with extra traffic would be dangerous.Hours of operation from 7am to 7pm, 7 days per week (one section of operation) is extreme. The other sections working 7am to 7pm 5 days per week.For a proposal that “has not been approved” there has certainly been lots of activity on the property.Muchea already has zoned designated Industrial Area; why have more here?	<ul style="list-style-type: none">The proposal does not affect the lifestyle of the area and is a compliant use of Lot 2929 Brand Hwy within the Shire of Chittering Town Planning Scheme. (TPS)The proposal and the amendment set out methodology for dust management. The proposal does not envisage dust issues from development and or operations there is no evidence to support this statement.The amendment removes entirely the use of Chittering Rd, for egress to and from the property the development and ongoing operations.Hours of operation provide flexibility, particularly as Lot 2929 supports operations in Carnamah, Mukinbudin and Mt Marshall.None approved development is being or will be undertaken on the site.The development of Lot 2929 is in accordance with the Shire of Chittering Zoning Table.	<ul style="list-style-type: none">Noted. Amenity of proposal and locality is accounted for in the assessment of the application.Noted. The management of dust has been outlined in the proponent’s application. Further to this the amended application removes rock material being transported, stored and handled on the property, significantly reducing dust emissions.Impact on property values and amenity of locality is addressed in the Agenda Report.The proponent proposed to use Chittering Street for general traffic only and not heavy haulage or delivery use. The proponent has amended the application to remove the use of Chittering Street.Noted. There are no regulations on hours of operations within the planning context. It is considered that a 7 day per week operation for a transport depot not to be excessive and is common in the Shire.Noted. The activity and development on site has ceased as a result of Council becoming aware.The property is zoned ‘Agricultural Resource’. Some industry related uses may be permitted within this zone in the Zoning Table of the Shire’s Town Planning Scheme.

	<ul style="list-style-type: none"> • Transport Depot, if approved, could become a storage area for heavy duty vehicles. It has already been suggested there will be escort vehicles for use with haulage trucks, so how big are we talking? • The size of the shed is 48m. That is a lot of storage for bags of crushed rock? • Noise from Hopper – impossible to say trees planted on boundary will reduce this. • Trees are going to take at least 5 years before any decent size to buffer noise. • Land has already been sprayed west of the pipe line and will become a dust bowl once vegetation dies back completely. • System 6 being removed? Being that the creek flows into the Ellenbrook this surely would not be a good environmental decision. • Maintenance of Chittering Street with extra light vehicles using this street to enter side gate – who will do this? • Once approved, where will the development stop once production starts i.e. huge sheds, hardstands, transport depot etc. 	<ul style="list-style-type: none"> • As above, also proposed amendment Transport Depot. • Reference pages 8-9 of the Planning Application. • Minimal noise from the bagging operations will escape Lot 2929 Brand Hwy. • No noise from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. • The land will not be “open up” for development without the use of a dust suppression agent (water). • The system 6 is in relation to a plant species of Darwinia. Preliminary Environmental assessment has failed to locate any Darwinia on Lot 2929 Brand Hwy. • The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations. • Development is in accordance with the Application for Planning Approval only, any variance will require Planning Approval from the Shire of Chittering. 	<ul style="list-style-type: none"> • The application site plan proposes an area for the transport depot use. A transport depot use, as defined in the Town Planning Scheme, includes the parking of vehicles for the carry of persons or goods and includes maintenance and repair of those vehicles. It would be considered appropriate that the vehicles being parked on site are used in conjunction with the operation on site. The rural industry use includes servicing of rural equipment. • After the advertising period the applicant has removed any association with rock material on the property. • Noted. Noise Management has been commented on in the Agenda Report and it is recommended a site specific acoustic study be undertaken to ensure excessive noise does not leave the subject property. • As above. • Noted. Spraying of land cannot be administered or controlled by the Shire. The Officer’s recommendation requires the hardstand areas to be of a material that minimises dust. • The System 6 has not been removed. This has been clarified by comments from the Chittering Landcare Group and from assessment of the Shire’s Local Planning Strategy and Local Planning Policy No. 2. • The proponent has amended the application to remove the use of Chittering Street. • Any development approved will be required to be in accordance with the approved plans. The site plan provided with the application is indicative of the proposed development.
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	<ul style="list-style-type: none"> Some pre-approval must have been given for a developer to spend over \$2 million. As a community there is a lot of concern and hopefully these comments will be considered. 	<ul style="list-style-type: none"> The proponent has not received “pre-approval” from the Shire of Chittering. The community through its elected members to the Shire of Chittering support the concepts within the TPS, the proposed development is in accordance with the shire of Chittering, TPS. 	<ul style="list-style-type: none"> No pre-approval has been granted by the Shire of Chittering. All submissions are scheduled and provided to Council for consideration.
Public Submission 2	<ul style="list-style-type: none"> I moved to Muchea to get away from the noise and industrial commotions. Whilst I understand progress is inevitable, I question the 12 hours per day 7 days per week. It would seem we would not get any reprieve from dust, noise and general visual pollution associated with this venture. As a long-time resident and ratepayer, if this does go ahead, I ask why the facility can’t be built beside the Brand Hwy? This would alleviate trucks from driving up past most of the Muchea residents affected by this. Also I ask that work hours be limited to a 5 ½ day week so that I can at least enjoy a day with peace and quiet that Muchea renown for. And lastly the proposed tree planting for environmental reasons be enforced. This would remove some of the visual pollution and cut out some dust and noise. As stated earlier, I can understand progress is unstoppable, all I ask for is some sanity to prevail and that our lifestyle is considered when this venture is dealt with by Council. 	<ul style="list-style-type: none"> The proposed development is in accordance with the Shire of Chittering TPS. Hours of operation provide flexibility, particularly as Lot 2929 supports operations in Carnamah, Mukinbudin and Mt Marshall. trees will be established specifically to reduce the visual impact. The proposed development is in accordance with the Shire of Chittering TPS. The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations. Hours of operation provide flexibility, particularly as Lot 2929 supports operations in Carnamah, Mukinbudin and Mt Marshall, the development will not adversely impact upon the peace and quiet of Muchea. There is also substantial existing noise generation from truck movements on Brand Hwy. Tree planting is underway and when completed as per the planning application will reduce the local impact. The proposed development is in accordance with the objectives of Shire of Chittering TPS. 	<ul style="list-style-type: none"> Noted. Noted. Transport Depot’s are commonly operated over 7 days. The landowner/applicant still requires to comply with the <i>Environmental Protection (Noise) Regulations 1997</i>. Noted. The location of the proposal has been assessed and considered in the Agenda Report. It has been noted in the application that Chittering Street is not used for heavy haulage use. The proponent has amended the application to remove the use of Chittering Street and heavy haulage vehicles. Noted. Hours of operation has been considered in the Agenda Report and commented on above. Noted. Officer’s Recommendation requires vegetation screening and maintenance. Noted. All submissions are scheduled and provided to Council for consideration.
Public Submission 3	<ul style="list-style-type: none"> Dust pollution – a large area has already had all vegetation poisoned leaving it a dust bowl. 	<ul style="list-style-type: none"> The land will not be “open up” for development without the use of a dust suppression agent (water). Also see the 	<ul style="list-style-type: none"> Noted. The dust management has been addressed in the application and is to be applied should the proposal be supported on

	<ul style="list-style-type: none"> Noise pollution – trucks and machinery running from 7am to 7pm 7 days per week. Land prices will fall as no one will want to live across the road from an industrial area. Extra traffic on Chittering Street in the morning when children are commuting to the school bus shelter. Once one company has started how many will be allowed to start? 	<p>proposed amendment to the Planning Application for dust management. The land surface has residual vegetation which is supressing any dust mobilisation.</p> <ul style="list-style-type: none"> No noise from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. This is an emotional concept driven by self-motivation. There is no evidence in fact to support this statement and local employment will be created. The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations. Any and all parties seeking to undertake development within the Shire of Chittering must do so in accordance with the Shires objectives and provisions of TPS, being in force from time to time. 	<p>the property.</p> <ul style="list-style-type: none"> It is noted noise pollution is a major concern and this has been addressed in the Officer's Recommendation to require compliance of the <i>Environmental Protection (Noise) Regulations 1997</i>. Noted. Amenity is one factor assessed and considered in the Agenda Report. Noted. The proponent proposed no use of Chittering Street for heavy haulage or additional traffic. The proponent has amended the application to remove the use of Chittering Street. Each application is determined on its merits. If a proposed use can be permitted on a property and meets all the requirements of the Shire's Town Planning Scheme, Council may consider it.
Public Submission 4	<ul style="list-style-type: none"> The place is an eye sore already. There is a lot of noise i.e. trucks, bobcats etc. already. I hope this plan does not go through. There is enough noise in this area. The hay place goes continually. 	<ul style="list-style-type: none"> The development will be undertaken in accordance with and compliant to the Shire of Chittering objectives and TPS. The residents issue with an existing business does not reflect the proponent's commitment to reduce the impacts on neighbouring properties. 	<ul style="list-style-type: none"> Noted. Any unauthorised development has ceased as a result of Council taking action from complaints received. Noted, as above. Noted.
Public Submission 5	<ul style="list-style-type: none"> Visual impact – we purchased our property because of the rural outlook and with the knowledge that the farm across the road came under System 6 Management Policy and that it could not be developed. 	<ul style="list-style-type: none"> The statement is wrong. The system 6 is in relation to a plant species of Darwinia. Preliminary Environmental assessment has failed to locate any Darwinia on Lot 2929 Brand Hwy. 	<ul style="list-style-type: none"> Noted. Comments received from the Chittering Landcare Group indicate the site is not identified as System 6. This is further established from assessment of the Local Planning Strategy and Local Planning Policy No. 2 as being 'nominated' for future protection/conservation. The wetland values of the site shall still require careful consideration in respect of planning requirements.

	<ul style="list-style-type: none"> Property Values – We are worried that as a direct result of the development across the road that our property will drop in value and be very hard to sell. Industrial Area – there is already an industrial area in Muchea, why are they not made to set up there as other business have. We are Townsite and pay our rates as such. We have strict rules put on us as to what we can do on our properties and yet the Shire will allow an industrial business across the road from us. Transport Depot – Once you have granted permission for a truck depot, will they be allowed to put an unlimited amount of trucks on the property? I have heard that the owners intend to store and sell large machinery from the north west. 	<ul style="list-style-type: none"> There is no evidence to support this statement. The proposed development is in accordance with the objectives of Shire of Chittering TPS. The intent of the developer is not to engage in or solicit the provision of a Transport Depot to unrelated third parties but use the zoning activity in accordance with the proposed definition within the scope of the amendment. 	<ul style="list-style-type: none"> Noted. It can be viewed that the industrial nature of the proposal may be unsightly and create noise emissions. Amenity is a factor considered in the Agenda Report. This is noted. The application made proposes uses that are discretionary and subject to Council approval. It is considered the transport depot area applies to the area depicted on the proposed site plan. The storage of machinery/equipment used for rural purposes is permitted under the Rural Industry use. Sale of this machinery/equipment is not permitted as this requires a Warehouse approval. The amendment to the planning application by the Applicant removed the Warehouse proposal.
Public Submission 6	<ul style="list-style-type: none"> Visual impact – we purchased our property because of the rural outlook and with the knowledge that the farm across the road came under System 6 Management Policy and that it could not be developed. Property Values – We are worried that as a direct result of the development across the road that our property will drop in value and be very hard to sell. Industrial Area – there is already an industrial area in Muchea, why are they not made to set up there as other business have. We are Townsite and pay our rates as such. We have strict rules put on us as to what we can do on our properties and yet the Shire will allow an industrial business across the road from us. 	<ul style="list-style-type: none"> The development does not represent an “Eye Saw” and is compliant with TPS provisions the statement is wrong. The system 6 is in relation to a plant species of Darwinia. Preliminary Environmental Assessment has failed to locate any Darwinia on Lot 2929 Brand Hwy. This is an emotional concept driven by self-motivation. There is no evidence in fact to support this statement and local employment will be created. The land zoning and the proposal is entirely compliant and within the Shire of Chittering’s TPS. 	<ul style="list-style-type: none"> Noted. Comments received from the Chittering Landcare Group indicate the site is not identified as System 6. This is further established from assessment of the Local Planning Strategy and Local Planning Policy No. 2 as being ‘nominated’ for future protection/conservation. The wetland values of the site shall still require careful consideration. Noted. It can be viewed that the industrial nature of the proposal will be unsightly and noise will be a nuisance. Amenity is a factor considered in the Agenda Report. This is noted. The application made proposes uses that are discretionary and subject to Council approval.

	<ul style="list-style-type: none"> Transport Depot – Once you have granted permission for a truck depot, will they be allowed to put an unlimited amount of trucks on the property? I have heard that the owners intend to store and sell large machinery from the north west. 	<ul style="list-style-type: none"> The intent of the developer is not to engage in or solicit the provision of a Transport Depot to unrelated third parties but use the zoning activity in accordance with the proposed definition within the scope of the amendment. 	<ul style="list-style-type: none"> It is considered the transport depot area applies to the area depicted on the proposed site plan. The storage of machinery/equipment used for rural purposes is permitted under the Rural Industry use. Sale of this machinery/equipment is not permitted as this requires a Warehouse approval. The amendment to the planning application by the Applicant removed the Warehouse proposal.
Public Submission 7	<p>My concerns are as follows:</p> <ul style="list-style-type: none"> The extra traffic up Chittering Street and the safety of residents who use this road to walk for exercise and also the local children using the road to catch buses to travel to school. The extra noise and dust the industry will create. The change in view as instead of looking at a peaceful rural block of land we are now going to have to look at trucks, stockpiles and sheds. I am aware that progress must happen but can you please ensure that road safety is put in place i.e footpaths and extra lighting along Chittering Street. Also ensuring that the proposed tree planting along Chittering Street be a mandatory stipulation so that we the residents will have a buffer from the noise and dust from the site. 	<ul style="list-style-type: none"> The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations. No noise or dust from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. Hours of operation provide flexibility, particularly as Lot 2929 supports operations in Carnamah, Mukinbudin and Mt Marshall, the development will not adversely impact upon the peace and quiet of Muchea. There is also substantial existing noise generation from truck movements on Brand Hwy. The proposal does not affect the lifestyle of the area and is a compliant use of Lot 2929 Brand Hwy within the Shire of Chittering Town Planning Scheme. (TPS). The proponent has already undertaken plantings to develop natural visual screens. This is a matter between the ratepayer and the Shire of Chittering. The proponent has already undertaken plantings (western side of the gas pipeline) to develop natural visual screens. These plantings will be further expanded along Chittering Rd. 	<ul style="list-style-type: none"> The proponent proposed no heavy haulage or truck movement on Chittering Street. The proponent has advised amending the application to remove the use of Chittering Street. This is noted. Noise must comply with the <i>Environmental Protection (Noise) Regulations 1997</i>. The Officer's Recommendation requires all hardstand areas and access to be constructed to a standard which minimises dust. Noted. The amenity of the proposal is considered by Council. It is considered the proposed vegetated screening shall reduce visual impact to residences. Noted and dismissed as separate comment to proposed development. Noted and supported in Officer's Recommendation.

Public Submission 8	<ul style="list-style-type: none">• I have lived in Muchea for over 30 years and the subject property has always been considered a first class farming property and with the newly opened stock yards nearby, I thought it would be sold as farm land for agistment of stock.• When Des De Gruchy owned this land it was the best farm land in the area. This proposal totally ignores the property’s true potential.• As a nearby resident/landowner enjoying a quiet country/rural lifestyle I am strongly opposed to this proposal which would involve large trucks, noise, machinery, excessive dust and an ugly industrial outlook. Ideally a buffer around the townsite would be wonderful.• If such business is considered necessary why not locate it the other side of the mineral sands on Brand Highway?• Chittering Street is zoned Townsite and is a System 6 wetland area as is most the land around here.• I do believe should such a proposal be approved it will	<ul style="list-style-type: none">• The proposed development is in accordance with the objectives of Shire of Chittering TPS and landuse.• The proposed development is in accordance with the objectives of Shire of Chittering. TPS and landuse. The comments are not relevant.• The proposal does not affect the lifestyle of the area and is a compliant use of Lot 2929 Brand Hwy within the Shire of Chittering Town Planning Scheme. (TPS) No noise or dust from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. Hours of operation provide flexibility, particularly as Lot 2929 supports operations in Carnamah, Mukinbudin and Mt Marshall, the development will not adversely impact upon the peace and quiet of Muchea. There is also substantial existing noise generation from truck movements on Brand Hwy.• The proposed development is in accordance with the objectives of Shire of Chittering TPS and land use.	<ul style="list-style-type: none">• Noted.• Noted. The planning application must be assessed against the Shire’s Town Planning Scheme and other relevant legislation and consider all submissions made. Unfortunately the potential of the land’s use is subjective and not a matter assessed.• This is noted and all matters raised are part of the assessment of the application. The visual and noise amenity are strongly considered. The Officer’s Recommendation requires compliance of noise emissions, appropriate dust suppression and vegetation screening.• The zoning of the land determines what uses are permitted and not the locality. The specific location of the proposal is assessed once Council receive the application.• The subject property is zoned ‘Agricultural Resource’ and some adjoining properties are zoned ‘Townsite’. The System 6 classification on the property has been confirmed by the Chittering Landcare Group to be incorrect. This is further established from assessment of the Local Planning Strategy and Local Planning Policy No. 2 as being ‘nominated’ for future protection/conservation.• Noted.
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	cause big headaches for townsites residents and the Shire as this type of venture often involves a lot of time and energy to ensure it runs accordingly to Shire regulations.		
Public Submission 9	<ul style="list-style-type: none"> Three rows of trees down Chittering Street need to be established now, and any trees that die are to be replaced. This will hide any equipment that is stored in the paddocks around the house area. Trees will take years to grow tall enough to be effective enough to shield surrounding properties from dust and noise. Trucks are to operate 5 ½ days a week only. Limit of trucks to be parked on the property at any one time. No sheds or hardstands to be built on the south side of the house area. No storing of mining equipment on the property for future sale (owner has indicated that this could happen). Ground water quality is to be monitored for contamination. How much ground water is to be used for the operation of this industry? What controls are in place to stop seepage 	<ul style="list-style-type: none"> The proponent has already undertaken plantings (western side of the gas pipeline) to develop natural visual screens. These plantings will be further expanded along Chittering Rd. The density of plantings will be maintained. (four dot points) No noise or dust from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. Hours of operation provide flexibility, particularly as Lot 2929 supports operations in Carnamah, Mukinbudin and Mt Marshall, the development will not adversely impact upon the peace and quiet of Muchea. There is also substantial existing noise generation from truck movements on Brand Hwy. The proposed development is in accordance with the objectives of Shire of Chittering TPS and landuse. Only surface will be accessed by the proponent. All ground water will be licenced in accordance with the Department of Water requirements. Also proposed amendment to planning application. See proposed amendment, dust suppression agent and additional fire fighting capacity. 	<ul style="list-style-type: none"> Noted. It is understood the timing of the growth of the plantings to reduce dust and noise may not be adequate. The Applicant is to liaise with the Chittering Landcare Group to establish vegetation screening with the purpose in mind. This is noted. Noted. The application site plan proposes the area/s to be used for the parking of vehicles and equipment. The transport depot development requires a buffer of 200m which is to be applied and recommended in the Agenda. Building structures must meet setback requirements of at least 30m from lot boundaries. Noted. The application, including amendments, proposes temporary storing and servicing of equipment used in excavation activities. The Department of Water monitor water quality. It has been recommended that a Catchment Management Plan be required to address stormwater management and water quality. The application does not provide details on the amount of water to be used to effectively

	<p>into ground water?</p> <ul style="list-style-type: none"> As there are shift workers in the area, what noise is going to be generated by the tumbler and how will this be monitored? 	<ul style="list-style-type: none"> The proposal does not affect the lifestyle or amenity of the area and is a compliant use of Lot 2929 Brand Hwy within the Shire of Chittering Town Planning Scheme. (TPS) 	<p>suppress dust for the operations. The Officer's Recommendation requires construction of hardstand areas to a standard which creates minimal dust. The above comment responds to the management of water quality.</p> <ul style="list-style-type: none"> All noise emitted will require to be in accordance with the <i>Environmental Protection (Noise) Regulations 1997</i>. Should noise exceed these requirements, the Shire shall investigate.
Public Submission 10	<ul style="list-style-type: none"> Three rows of trees down Chittering Street need to be established now, and any trees that die are to be replaced. This will hide any equipment that is stored in the paddocks around the house area. Trees will take years to grow tall enough to be effective enough to shield surrounding properties from dust and noise. Trucks are to operate 5 ½ days a week only. Limit of trucks to be parked on the property at any one time. No sheds or hardstands to be built on the south side of the house area. No storing of mining equipment on the property for future sale (owner has indicated that this could happen). Ground water quality is to be monitored for contamination. How much ground water is to be used for the operation of this industry? What controls are in place to stop seepage into ground water? 	<ul style="list-style-type: none"> The proponent has already undertaken plantings (western side of the gas pipeline) to develop natural visual screens. These plantings will be further expanded along Chittering Rd. The density of plantings will be maintained. (four dot points) No noise or dust from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. Hours of operation provide flexibility, particularly as Lot 2929 supports operations in Carnamah, Mukinbudin and Mt Marshall, the development will not adversely impact upon the peace and quiet of Muchea. There is also substantial existing noise generation from truck movements on Brand Hwy. The proposed development is in accordance with the objectives of Shire of Chittering, TPS and landuse. Only surface will be accessed by the proponent. All ground water will be licenced in accordance with the Department of Water requirements. Also proposed amendment to planning application. See proposed amendment, dust suppression agent and additional fire fighting capacity. 	<ul style="list-style-type: none"> Noted. It is understood the timing of the growth of the plantings to reduce dust and noise may not be adequate. The Applicant is to liaise with the Chittering Landcare Group to establish vegetation screening with the purpose in mind. This is noted. Noted. The application site plan proposes the area/s to be used for the parking of vehicles and equipment. The transport depot development requires a buffer of 200m which is to be applied and recommended in the Agenda. Building structures must meet setback requirements of at least 30m from lot boundaries. Noted. The application, including amendments, proposes temporary storing and servicing of equipment used in excavation activities. The Department of Water monitor water quality. It has been recommended that a Catchment Management Plan be required to address stormwater management and water quality. The application does not provide details on the amount of water to be used to effectively suppress dust for the operations. The Officer's Recommendation requires

	<ul style="list-style-type: none"> As there are shift workers in the area, what noise is going to be generated by the tumbler and how will this be monitored? 	<ul style="list-style-type: none"> The proposal does not affect the lifestyle or amenity of the area and is a compliant use of Lot 2929 Brand Hwy within the Shire of Chittering Town Planning Scheme. (TPS) 	<p>construction of hardstand areas to a standard which creates minimal dust. The above comment responds to the management of water quality.</p> <ul style="list-style-type: none"> All noise emitted will require to be in accordance with the <i>Environmental Protection (Noise) Regulations 1997</i>. Should noise exceed these requirements, the Shire shall investigate.
Public Submission 11	<p>Strongly object as we did not buy property here to live near a transport depot and warehouse. We have the following concerns:</p> <ul style="list-style-type: none"> Working next to a waterway that is connected to the Gngara Water Reserve. <ul style="list-style-type: none"> Heavy vehicle fuel, oil, hydraulic fluid and any wash down chemicals and other contaminants have the potential to pollute the waterway and our ground water. We rely on the ground water as our drinking source so how do you guarantee this will not be contaminated by chemicals? Obviously this pollutant can then have a negative effect on our native flora and fauna, we have endless birdlife in this beautiful area. Working over a major gas line. <ul style="list-style-type: none"> Will the gas line be reinforced for the extra weight hauled by the trucks? We naturally have safety concerns for the housing if this line is penetrated. What happens if there is a major explosion? Industrial area will devalue our properties. <ul style="list-style-type: none"> Anyone trying to sell in this area will struggle and therefore lose money they previously would have made. 	<ul style="list-style-type: none"> The water way is not connected to the Gngara Water Reserve. All areas used for mechanical activities or wash down have impervious concrete floors to prevent contamination of the ground water. All contaminates will be collected and held on site and disposed of by a licenced waste collection service. All areas used for mechanical activities or wash down have impervious concrete floors to prevent contamination of the ground water. All contaminates will be collected and held on site and disposed of by a licenced waste collection service. All development within the gas pipeline will be undertaken in accordance with the Dampier to Bunbury Natural Gas Pipeline Authority. This is an emotional concept driven by self-motivation. There is no evidence in fact to support this statement and local employment will be created. 	<ul style="list-style-type: none"> Noted. Department of Water advise the watercourse is part of the Gingin Brook. Noted. This has been addressed by the proponent and in the Officer's Recommendation requiring a Catchment Management Plan and swales. Noted as response above. The proponent has obtain a permit for the development within the Dampier to Bunbury Natural Gas Pipeline, expiring 13 March 2013. As above. Noted. The Dampier to Bunbury Natural Gas Pipeline WA Nominees Pty Ltd administers development within the pipeline easement. Noted. Amenity of the locality is part of Council's assessment of the proposal.

	<ul style="list-style-type: none">No footpaths.<ul style="list-style-type: none">We have a lot of children and walkers in the area.Our children catch the school bus from the corner of Chittering Street and Philmore Street so more traffic here and the gate access to Chittering Street will make it hazardous.Noise levels.<ul style="list-style-type: none">We already have the constant highway traffic and Hay Australia noise.Chittering Street and Brand Hwy intersection.<ul style="list-style-type: none">This intersection is already busy and can be dangerous due to the trucks entering Hay Australia and horse floats regularly entering Sandown Park.Letter reply<ul style="list-style-type: none">The letter sent to us was dated 5th September 2012. You only gave us until the 26th to comment. By law we should be given 30 days.	<ul style="list-style-type: none">The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use. The comments are not relevant. This is a matter between the ratepayer and the Shire of Chittering. The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations.No noise from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. the development will not create any noise from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy.The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations.This is not relevant to the response, the Shire of Chittering have determined the process.	<ul style="list-style-type: none">Footpaths do not relate to this proposal.Noted.Noted. The proponent has advised amending the application to remove the use of Chittering Street.Noted.Any noise emitted is to be in accordance with the <i>Environmental Protection (Noise) Regulations 1997</i>.This intersection is not used as part of the proposed operation on site.Noted.Comment below.Clause 9.4.3 of the Shire’s <i>Town Planning Scheme No 6</i> requires a minimum of fourteen days for the application to be advertised. An advertising period of twenty-one days was given and extensions for submissions were also granted after this period. Council have met the legal requirements of advertising.
Public Submission 12	Oppose the proposal for the following reasons: <ul style="list-style-type: none">This development will greatly affect noise and pollution levels in the immediate residential area.	<ul style="list-style-type: none">No noise from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. No noise or dust from the general site operations will escape Lot 2929 Brand Hwy. The proposed	<ul style="list-style-type: none">Noted.

	<ul style="list-style-type: none"> • This being a residential area, children live here and catch the school bus on Chittering Street. This poses a threat to their safety. • There have already been unsightly views when passing the property to and from my property since the new occupancy. • Work has already obviously started on the proposed site before consultation has been finalised. • We have enough unsavoury smells from our neighbour with his fertilisers for his market garden without more fertiliser being brought into the neighbourhood i.e. landscape supplies. • This is a residential area, not an industrial estate. So if you approve this site you will be forced to accept other sites for industrial use. I would like to know how this proposal fits in with the Shire's future plans i.e. 20 year plan. • There will be a great increase in traffic flow, not limited to light vehicles. There will also be heavy vehicles sharing our light duty road. • I feel that this proposal, if approved, will greatly affect the value of the surrounding properties, my property included, in a negative way. • The Shire has enough trouble maintaining its by-laws in its Shire boundaries and this will be another example of 'too hard, let them do what they like if no one complains'. For 	<p>development is to the centre and north side of Lot 2929 Brand Hwy.</p> <ul style="list-style-type: none"> • The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations. • The proposal does not affect the lifestyle or amenity of the area and is a compliant use of Lot 2929 Brand Hwy within the Shire of Chittering Town Planning Scheme. (TPS). Hours of operation provide flexibility, particularly as Lot 2929 supports operations in Carnamah, Mukinbudin and Mt Marshall, the development will not adversely impact upon the peace and quiet of Muchea. There is also substantial existing noise generation from truck movements on Brand Hwy. • The proposed development does not envisage or entail any noxious or semi noxious activities. • The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use. • The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations. • This is an emotional concept driven by self-motivation. There is no evidence in fact to support this statement and local employment will be created. • The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use. All development and 	<ul style="list-style-type: none"> • Noted. The proponent has advised amending the application to remove the use of Chittering Street. • Noted. Any unauthorised development on the property has ceased. • See above comment. • Noted. The amendment to the planning application removes the landscape supplies development. • Each application is determined on its merits. Council is not 'forced' to accept other sites of industrial use. The proposed development is not identified in the Shire's Local Planning Strategy, however development applications aren't commonly identified in Local Planning Strategies. Assessment of the application to the Shire's Local Planning Strategy has been undertaken in the Agenda Report. • Noted. As commented above, Chittering Street is not used. • Noted. • Noted. Council officers aim to ensure compliance of all developments approved in the Shire. At this stage Council can only
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	<p>example, the property on the corner of Great Northern Hwy and Muchea East road (south side). That property is looking disgraceful with all the transport equipment and junk scattered about the place. You can't tell me no one from the Shire hasn't seen it. This is just one example and the proposed property is looking the same.</p> <ul style="list-style-type: none"> We rely on our ground water to survive. What measures are in place to stop any pollution to our drinking water. People in this area already disregard our water supply by using banned fertiliser in their farming practices. 	<p>operations will be in accordance with the local laws (by-laws) of the Shire of Chittering.</p> <ul style="list-style-type: none"> Only surface will be accessed by the proponent. All ground water will be licenced and extracted in accordance with the Department of Water requirements. Also proposed amendment to planning application. 	<p>assess the proposal on its merits.</p> <ul style="list-style-type: none"> Concerns of ground water contamination have been addressed in the Officer's Recommendation with the requirement of a Catchment Management Plan. The use of fertilisers for general rural practice cannot be administered by the Shire.
Public Submission 13	<p>Oppose the proposal for the following reasons:</p> <ul style="list-style-type: none"> This development will greatly affect noise and pollution levels in the immediate residential area. This being a residential area children live here and catch the school bus on Chittering Street. This poses a threat to their safety. There have already been unsightly views when passing the property to and from my property since the new occupancy. Work has already obviously started on the proposed site 	<ul style="list-style-type: none"> No noise from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. No noise or dust from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. The proposal does not affect the lifestyle or amenity of the area and is a compliant use of Lot 2929 Brand Hwy within the Shire of Chittering Town Planning Scheme. (TPS). Hours of operation provide flexibility, particularly as Lot 2929 supports operations in Carnamah, Mukinbudin and Mt Marshall, the development will not adversely impact upon the peace and quiet of Muchea. There is also substantial existing noise generation from truck movements on Brand Hwy. The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations. The proposal does not affect the lifestyle or amenity of the area and is a compliant use of Lot 2929 Brand Hwy within the Shire of Chittering Town Planning Scheme. (TPS) The proposed development is in accordance 	<ul style="list-style-type: none"> Noted. Noted. The proponent has advised amending the application to remove the use of Chittering Street. Noted. Any unauthorised development on the property has ceased. See above comment.

	<p>before consultation has been finalised.</p> <ul style="list-style-type: none">• We have enough unsavoury smells from our neighbour with his fertilisers for his market garden with out more fertiliser being brought into the neighbourhood i.e. landscape supplies.• This is a residential area, not an industrial estate. So if you approve this site you will be forced to accept other sites for industrial use. I would like to know how this proposal fits in with the Shire’s future plans i.e. 20 year plan.• There will be a great increase in traffic flow, not limited to light vehicles. There will also be heavy vehicles sharing our light duty road. The Shire will have to widen and resurface roads to the entrances to the property with specific type bitumen to handle the heavy traffic, which will incur more cost to the rate payer, which I am not prepared to pay.• I feel that this proposal, if approved, will greatly affect the value of the surrounding properties, my property included, in a negative way.• The Shire has enough trouble maintaining its by-laws in its Shire boundaries and this will be another example of ‘too hard, let them do what they like if no one complains’. For example, the property on the corner of Great Northern Hwy and Muchea East road (south side). That property is looking disgraceful with all the transport equipment and junk scattered about the place. You can’t tell me no one from the Shire hasn’t seen it. This is just one example and the proposed property is looking the same.• We rely on our ground water to survive. What measures are in place to stop any pollution to our drinking water.	<p>with the objectives of Shire of Chittering. TPS and land use. All development and operations will be in accordance with the local laws (by-laws) of the Shire of Chittering.</p> <ul style="list-style-type: none">• The proposed development does not envisage or entail any noxious or semi noxious activities.• The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use.• The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations. All cost of development will be paid by the proponent (this includes thee access road of Brand Hwy.• This is an emotional concept driven by self-motivation. There is no evidence in fact to support this statement and local employment will be created.• The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use. All development and operations will be in accordance with the local laws (by-laws) of the Shire of Chittering.• Only surface will be accessed by the proponent. All ground water will be	<ul style="list-style-type: none">• Noted. The amendment to the planning application removes the landscape supplies development.• Each application is determined on its merits. Council is not ‘forced’ to accept other sites of industrial use. The proposed development is not identified in the Shire’s Local Planning Strategy, however development applications aren’t commonly identified in Local Planning Strategies. Assessment of the application to the Shire’s Local Planning Strategy has been undertaken in the Agenda Report.• Noted. As commented above, Chittering Street is not used.• Noted.• Noted. Council officers aim to ensure compliance of all developments approved in the Shire. At this stage Council can only assess the proposal on its merits.• Concerns of ground water contamination have been addressed in the Officer’s
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	<p>People in this area already disregard our water supply by using banned fertiliser in their farming practices.</p> <ul style="list-style-type: none"> I have been involved with the transport industry for 29 years in many different ways and I can tell you this is not a good idea for this area. 	<p>licenced and extracted in accordance with the Department of Water requirements. Also proposed amendment to planning application.</p> <ul style="list-style-type: none"> The intent of the developer is not to engage in or solicit the provision of a Transport Depot to unrelated third parties but use the zoning activity in accordance with the proposed definition within the scope of the amendment. 	<p>Recommendation with the requirement of a Catchment Management Plan. The use of fertilisers for general rural practice cannot be administered by the Shire.</p> <ul style="list-style-type: none"> Noted.
Public Submission 14	<ul style="list-style-type: none"> Our property is located at 162 Chittering Street and has been a certified Bio-Dynamic farm for 17 years and is a registered business with the Shire. We have been classified a sensitive agricultural area with the Department of Agriculture and are the longest held A-Grade Demeter certified Bio-Dynamic farmer in WA. If this proposal is approved we will lose our certification under our certifying body and our livelihood. Our bio-dynamic farm and market gardens is well known amongst chefs, restaurants, food lovers and consumers in Perth with our produce supplying many renowned restaurants, health food stores and sold at farmers markets including the Lower Chittering Markets. Our produce has also been the subject of numerous articles on bio-dynamic farming and good food and featured in <i>The Food Lovers Guide to Perth</i>. The farm has also been the focus of a number of bio-dynamic field days and visits from university and Tafe students. Certification of a bio-dynamic farm is the result of much work as the certifying body, Demeter Australia, sets very high standards to ensure produce is free from artificial pesticides and chemicals and produced under strict requirements of bio-dynamic farming techniques. The Australian Demeter Bio-dynamic Standard is one of the strictest certification standards of any organic farming system in the world. Achieving certification under this standard was no minor achievement. My late husband and I gave much consideration to the location of our farm as we were mindful that activities undertaken by our neighbours could adversely affect our bio-dynamic certification. We purchased our property in Chittering Street, Muchea, after we had researched the use 	<ul style="list-style-type: none"> (following 5 dot points). See response; Department of Agriculture and Food WA in relation to issues raised by the so called Bio-Dynamic farming operation No development or ongoing operations of the business on Lot 2929 Brand Hwy will affect the farming operations. There is and will be no interpretation to the natural flow of water (adequate drainage infrastructure is proposed) by development of the land. See DEC proposed response. The concept of flooding to adjoining properties is emotional scare mongering and without any factual basis. There is and will be no interpretation to the natural flow of water (adequate drainage infrastructure is proposed) by development of the land. See DEC proposed response. The concept of flooding to adjoining properties is emotional scare mongering and without any factual basis. No noise or dust from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. The proposed development does not 	<ul style="list-style-type: none"> Noted. Noted. Noted. Noted.

	<p>of artificial chemicals, pesticides and fertilisers on the property by the previous owner, checked the quality of water on the farm, and ensured that the farm itself, and adjoining properties, were all zoned rural.</p> <ul style="list-style-type: none">• The sensitivity of our bio-dynamic farm has already been acknowledged by the Shire who have registered the road verge in front of our property so that it will not be sprayed with pesticides that could impact our bio-dynamic certification This sensitivity has also been acknowledged by the Department of Agriculture who have it listed as a Sensitive Site.• Other concerns to us is the natural drainage in the dryer months of water flowing from our property through natural drainage systems into the adjoining property, we have been advised through correspondence with the EPA that any disturbance to this is undesirable and that the land has wetland zoning. It is an important source of water for the Ellenbrook catchment and any such disturbance may result in flooding to adjoining properties.• We are also concerned with the proposal being built in close proximity to our boundary, fearing that easterly winds will inundate our property with dust and any other contaminants that will affect our certification but will also affect the crops themselves including fruit, vegetables, grazing lands for beef/sheep and goats, pigs and poultry.• We respect our neighbours want to develop the land but would prefer that it was located in the far north-eastern sector rather than the land adjoining our property, still this would be a concern if any contamination was to affect our property as it would still lead us to losing our certification.• It is also our understanding that the owner wishes to use Chittering Street for light vehicle access to the property, my concern is the amount of traffic that this may bring to our street. We have young children that ride bikes and walk each day, as well as other locals riding horses, walking dogs etc.	<p>envisage or entail any noxious or semi noxious activities or contaminates. All ground water will be licenced in accordance with the Department of Water requirements and used as a dust suppression agent and to complement fire fighting capacity.</p> <ul style="list-style-type: none">• The location of the proposed development is in accordance with the Shire of Chittering TPS and Land use.• The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations.	<ul style="list-style-type: none">• Noted.• Noted. The Department of Water administer any interference with the watercourse and any further requirements regarding surface and ground water impacts.• Noted.• This is noted.• Noted. The proponent has amended the application to remove the use of Chittering Street whereby all access is via Brand Highway.
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	<ul style="list-style-type: none">• The proposed change of use is not compatible with the established land use in the area. The land is currently zoned rural as it was at the time of purchase of the applicant. A change in land use would be detrimental to the Sensitive Site registered with the Department of Agriculture immediately adjacent to the proposed development.• The applicant claims to have spoken to some residents to the west of the subject property however as the neighbour to the immediate west of the property, who is acknowledged by the applicant as someone they know who is the owner of a registered Sensitive Site with the Department of Agriculture, I am yet to be consulted by the applicant regarding their proposed development or adequate measures to protect my bio-dynamic certification.• The change of land use would jeopardise my established farm business. The applicant indicates in their application that the first stage of development would be the use of chemical herbicide Glyphosate to kill the pasture in the proposed development area to the west of the gas pipeline. The applicant claims they will undertake measures to ensure this does not impact upon my certification, however no details have been provided as to how this will be achieved nor have they undertaken consultation with myself to ensure any such measures are adequate. Furthermore this spraying has already taken place showing a disregard for myself, my bio-dynamic certification and the approval process. The applicant has also failed to provide detail on how dust from the land, which has been sprayed with Glyphosate, will be managed to avoid contaminating my land during construction.• The application does not provide any details as to how the drainage within the proposed development area will be managed so as to not have a detrimental impact upon adjoining areas. The maps and plans provided in Annexure D of the application show infrastructure built on top of the existing drainage in the area. This area is prone to flooding in wet winters and alteration of the existing drainage, through redirection, covering/enclosing or infilling, would have detrimental effects on adjoining properties, especially my own which is located up-stream of the proposal.	<ul style="list-style-type: none">• The land was and is zoned “Agricultural Resource”. There is no application to change the Land use. The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use. All development and operations will be in accordance with the local laws (by-laws) of the Shire of Chittering.• See response; Department of Agriculture and Food WA in relation to issues raised by the Bio-Dynamic farming operation (following 5 dot points). No development or ongoing operations of Lot 2929 will affect the farming operations.• See response; Department of Agriculture and Food WA in relation to issues raised by the so called Bio-Dynamic farming operation (following 5 dot points). No development or ongoing operations of lot 2929 will affect the farming operations. The proponent has sprayed an area abutting the so called Bio-Dynamic farming operation without interference with or impact on the farming operation. The proponent is, was and shall remain mindful not to undertake activities which may adversely impact upon the farming operations.• There is and will be no interpretation to the natural flow of water (adequate drainage infrastructure is proposed) by development of the land. See DEC proposed response. The concept of flooding to adjoining properties is emotional scare mongering and without any factual basis.	<ul style="list-style-type: none">• The compatibility of the proposed uses are assessed in the Agenda Report against the Shire’s Town Planning Scheme and other legislation. The impact of the proposal on your property is noted.• Noted. It is not a requirement of the proponent to consult with neighbouring properties; it is at their own desire. Council have advertised the proposal in accordance with Clause 9.4.3 of the Town Planning Scheme.• Noted.• Noted. Development on site, if supported, would require to be raised and any additional water runoff caused by development would require to be maintained on site.
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	<ul style="list-style-type: none">• While the proponent has suggested they will undertake environmental plantings around the boundaries of the property, the detail of the species to be used in these plantings are not provided and it is unclear as to when the environmental, aesthetic, noise and dust suppressing benefits of these plantings will be realised. Inadequate and/or slow growing plantings will not provide any benefits for quite some time.• The applicant has shown a disregard for the process by commencing with development of the land prior to receiving all of the appropriate approvals by undertaking spraying of the land with herbicides and the construction of internal roads.• The introduction of commercial traffic to Chittering Street will be detrimental to residents of the area who walk, ride bicycles and ride horses along the street.• I strongly encourage the Shire of Chittering to reject the proposed land use application and the proposed development and to instruct the applicant to undertake genuine and detailed consultation with all affected parties, such as myself, and to provide sufficient details as to how all of the above concerns may be addressed.• I also encourage the Shire of Chittering to give consideration to, in the event that they do concede to allowing the application to establish an industrial business, ensuring that any rezoning of the land use be restricted to the eastern portion of the lot which is immediately adjacent to Brand Hwy and ensure that the western portion of the lot is always zoned rural so as to protect my registered Sensitive Site agricultural system.• Should the Shire limit the zoning to the eastern portion, this would:	<ul style="list-style-type: none">• The proponent has undertaken and completed environmental planting to the entire boundary area west of the gas pipeline easement. The species selection is detailed in the Preliminary Environmental Management Plan (PEMP) has been developed in association with Chittering Land Care.• The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use. All development and operations will be in accordance with the local laws (by-laws) of the Shire of Chittering. Only preparatory works have been undertaken on the site, timing of road construction was designed to avoid dust generation during the dryer months of the year.• The entire land was and is zoned “Agricultural Resource”. There is no application to change the Land use. The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use. All development and operations will be in accordance with the local laws (by-laws) of the Shire of Chittering. The development and ongoing operational activities to the western end of the property will have no adverse impact on the farming operations• See response; Department of Agriculture and Food WA in relation to issues raised by the Bio-Dynamic farming operation No development or ongoing operations of the business on 2929 Brand Hwy will affect the farming operations.	<ul style="list-style-type: none">• Noted. The proponent advised Chittering Landcare Group assisted with the Environmental Management Plan and proposed plantings.• Noted. Unauthorised works on the property has now ceased as a result of Council’s request.• Noted. The proponent has proposed to amend the application to not use Chittering Street.• Noted.• Noted.• As below.
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	<ul style="list-style-type: none"> ○ Minimise impact of rezoning to my established and registered agricultural Sensitive Site; and ○ Minimise impact of commercial traffic upon Chittering Street to the extreme eastern portion of the street and to Brand Hwy. Ideally all commercial traffic should be restricted to Brand Hwy and Energy Road. 	<ul style="list-style-type: none"> • The amendment removes entirely the use of Chittering Rd, from the development and ongoing operations. • The proponent is establishing heavy haulage access of Brand Hwy. (Energy Rd is unsuitable and the Shire of Chittering will not bear the cost of upgrading Energy Rd) 	<ul style="list-style-type: none"> • Noted. • Noted. As mentioned earlier, an amendment to the application removed Chittering Street for proposed access and use.
Public Submission 15	<ul style="list-style-type: none"> • How could this ever be considered in our townsite? There is an industrial area zoned east of this, off the Great Northern Highway. Let it be permitted there as it is definitely not appropriate and wanted in our townsite. • Would you allow this in the ‘Tidy Town Bindoon’? • The noise of the hoppers, trucks and machinery coming and going 7 days a week. • The dust it is going to create. • The ugliness at the front of our townsite. • The excess traffic coming and going. 	<ul style="list-style-type: none"> • The development is not within the Muchea Town site. The land was and is zoned “Agricultural Resource”. There is no application to change the Land use. The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use. All development and operations will be in accordance with the local laws (by-laws) of the Shire of Chittering. • Not relevant to the issue. • (dot points3-6) No noise from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. No noise or dust from the general site operations will escape Lot 2929 Brand Hwy. The proposed development is to the centre and north side of Lot 2929 Brand Hwy. The proposal does not affect the lifestyle or amenity of the area and is a compliant use of Lot 2929 Brand Hwy within the Shire of Chittering Town Planning Scheme. (TPS). Hours of operation provide flexibility, particularly as Lot 2929 supports operations in Carnamah, Mukinbudin and Mt Marshall, the development will not adversely impact upon the peace and quiet of Muchea. There is also substantial existing noise generation from truck movements on Brand Hwy. • Not relevant to the intent and purpose of Landscape supplies. 	<ul style="list-style-type: none"> • The subject property is located adjacent to the Muchea Townsite and is zoned ‘Agricultural Resource’. • This comment is not relevant to the proposal being presented. • Noise shall be required to comply with the <i>Environmental Protection (Noise) Regulations 1997</i> and is required as part of the Officer’s Recommendation. • Noted. The proponent has outlined dust management measures in the application and is addressed in the Officer’s Recommendation. • Noted. Amenity is a consideration of Council in determining applications. • Noted. The proponent has amended the application to only use the Brand Highway for access, which is considered to ease the impact of noise and traffic hazard of Chittering Street.

	<ul style="list-style-type: none">• We already have a landscape supplies one street away from this.• This particular property already looks like an eyesore from the road with the works already commenced, even though this supposedly has not been approved yet.• Approve it in the industrial area, it is not wanted in our townsite.	<ul style="list-style-type: none">• The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use. All development and operations will be in accordance with the local laws (by-laws) of the Shire of Chittering. Only preparatory works have been undertaken on the site, timing of road construction was designed to avoid dust generation during the dryer months of the year.• The development is not within the Muchea Town site. The land was and is zoned “Agricultural Resource”. There is no application to change the Land use. The proposed development is in accordance with the objectives of Shire of Chittering. TPS and land use. All development and operations will be in accordance with the local laws (by-laws) of the Shire of Chittering.	<ul style="list-style-type: none">• Noted. The amended application removes the proposed landscape supplies.• Noted. Unauthorised development has ceased at the property.• Noted.
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WHITESTONE QUARRIES WA PTY LTD

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6th February 2013

Mr Azhar Awang
Executive Manager Development Services
Shire of Chittering
6177 Great Northern Highway
Bindoon WA 6502

Original by e-mail

RE: Lot 2929 Brand Hwy, Muchea (the site) – Planning Application

Dear Sir,

I refer to the Planning Application of Whitestone Quarries WA Pty Ltd, (the company) dated 13th August 2012.

The company proposes to amend the Planning Application before the Shire of Chittering by removing from the current application reference to:

- The provision of landscape supplies as detailed at item 2 page 3 of the application.
- Description of landscape activities as set out in item 4.2, pages 6 -7 of the application.
- The development of an internal road running east/west. (as per satellite image)
- Description of internal road as set out in section 5, pages 10 – 11 of the application.

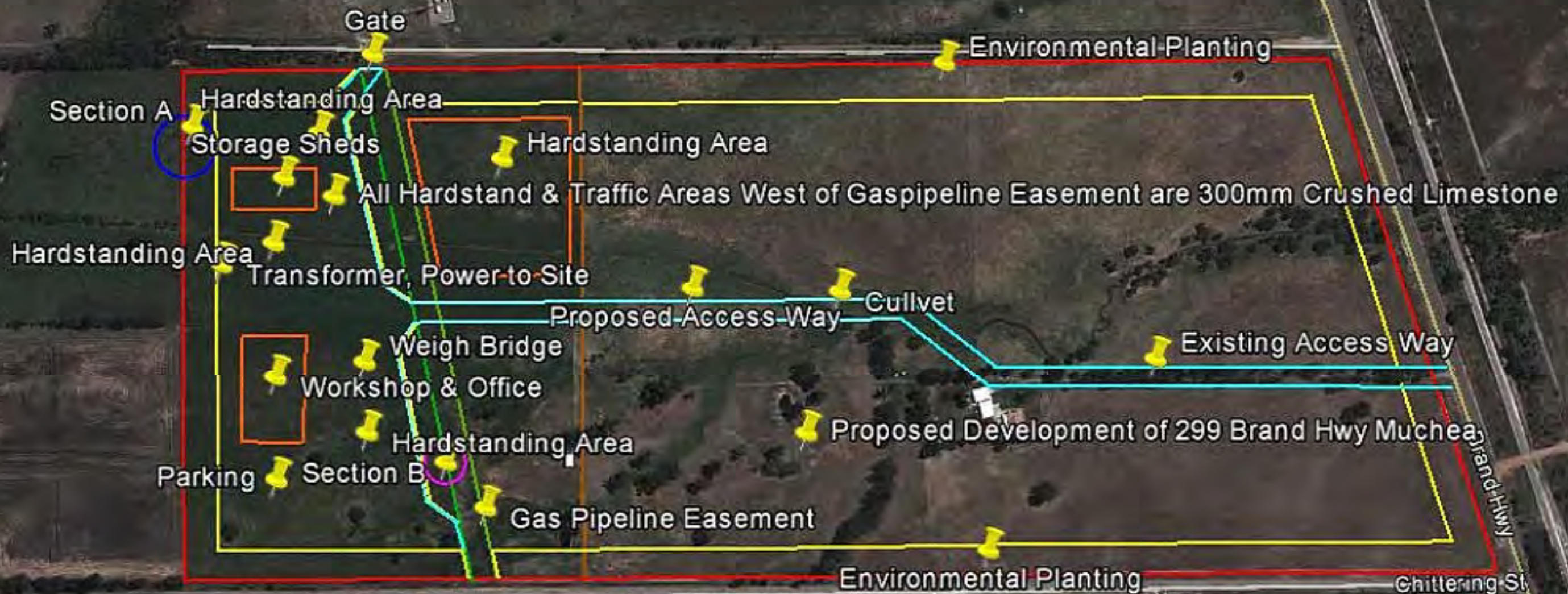
For the purpose of clarity, the company will not be accessing the site with heavy vehicles transporting quarried material to facilitate wholesale landscape supplies.

It is proposed to use the existing light vehicle access way off Brand Hwy to facilitate access to the site, and construct an extension to the internal road providing access to the development at the western end of Lot 2929. (see attached satellite image)

Should the Shire of Chittering have any queries, please contact Bill McSharer on b.mcsharer@westnet.com.au or by mobile on 0447733372.

Yours Sincerely

Mr T.D. Chisholm
For and on behalf all parties.





CONSULTING CIVIL & TRAFFIC ENGINEERS, RISK MANAGERS.



Project:	Lot 299 Brand Highway – Stage 1 Transport Impact Statement
Client:	Whitestone Quarries WA Pty Ltd
Job Number:	1302001
Author:	Heidi Lansdell
Signature:	
Date:	1 st March 2013



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 Consulting Civil and Traffic Engineers, Risk Managers

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1. INTRODUCTION

Shawmac has been commissioned to prepare a Transport Impact Statement for the proposed workshop and storage facility to be located at Lot 299 (No. 2929), Brand Highway, Muchea, in the Shire of Chittering. This report has been prepared in accordance with the WAPC *Transport Impact Assessment Guidelines – Volume 4: Individual Developments* and in a format which will be suitable for submission to both Main Roads Western Australia and the Shire of Chittering.

The subject lands is located approximately 44km north-east of the Perth CBD on a parcel of land on the western side of Brand Highway between Chittering Street and Energy Place. The general location of the proposed facility is shown in Figure 1.1.

Figure 1.1 – Site Location Map





While the number of daily trips to and from the site is expected to be minimal, a significant proportion of these trips will consist of as-of-right heavy vehicles such as light trucks and semi-trailers which will use Brand Highway to enter and exit the site. The primary issues which will be addressed as part of this assessment will therefore relate to ensuring that the proposed access arrangements to the site will accommodate safe ingress and egress via the proposed crossover to the west side of Brand Highway. Brand Highway is classified as a *Primary Distributor* and is owned, operated and maintained under the jurisdiction of Main Roads Western Australia (MRWA) Wheatbelt North Region.

2. EXISTING AND PROPOSED SITUATION

2.1. Existing Situation

The subject site is zoned as *Agricultural Resource* and is currently being used for primary production which generates approximately ten (10) light vehicle movements per day. The site is bounded by the Brand Highway to the east, Chittering Street to the south and Energy Place to the north. An aerial view of the site and the boundary road network is shown in Figure 2.1.

Figure 2.1 - Aerial Photo of Proposed Development Site



The existing cross-section of Brand Highway in the vicinity of the site consists of a sealed width of 7.0m with 3.5m lanes, a 1.0m sealed shoulder and a 1.0m unsealed gravel shoulder. Chittering Street consists of a sealed width of 7.0m with no shoulders and Energy Place is currently a gravel track approximately 3.0m wide. Existing access arrangements to the site consist of 5.5m wide crossover on approach to the intersection with Brand Highway with the crossover width flaring to approximately 11.5m at the highway to accommodate simultaneous outbound left- and right-turning movements 220m north of Chittering Street. Figure 2.2 shows an aerial photo of the existing site crossover which is the location of the proposed access to the development.

**Figure 2.2 – Existing Site Access**

Existing daily and peak period traffic volumes for Brand Highway have been sourced from Main Roads Western Australia (MRWA). The latest data shows that the average weekday daily volume on Brand Highway in the vicinity of the subject site is in the order of 3,863 vehicles per day (vpd). The data suggests that the roadway peak periods for Brand Highway occur between 6:30 a.m. and 7:30 a.m. in the morning with a volume of 266 vph and between 3:30 p.m. and 4:30 p.m. in the afternoon with a volume of 316 vph. The data also indicates a significant percentage of heavy vehicle traffic (24.5%) which will be accounted for as part of the traffic assessment. No traffic data was available for Chittering Street and Energy Place and it has been assumed that the weekday daily traffic volumes on these roads are less than 200 vpd and 50 vpd respectively.

Figure 2.3 and 2.4 shows the existing intersections of Brand Highway with Energy Place and Chittering Street.

Figure 2.3 – Existing Brand Highway/Energy Place Road Intersection



Figure 2.4 – Existing Brand Highway/Chittering Street Road Intersection

2.2. Proposed Development

The developer, Whitestone Quarries WA Pty Ltd has proposed the construction of a workshop and storage facility to be located on the western side of Brand Highway, north of the Chittering Street intersection with Brand Highway. Proposed access arrangements to service the development consist of an upgraded crossover to Brand Highway at the same location as the existing crossover.

Based upon discussions with the applicant, Shawmac has been advised that the workshop and storage facility is planned to operate 12 hours per day on weekdays (between 7:00 a.m. and 7:00 p.m.). The facility will be staffed by between one (1) and three (3) employees.



3. TRAFFIC ASSESSMENT

3.1. Site Trip Generation

Based upon discussions with the applicant, it is anticipated that the proposed workshop and storage facility is expected to generate approximately 20 movements per day on a typical weekday during the typical operating hours of 7:00 a.m. and 7:00 p.m. This estimate has been based upon the following breakdown:

- 8 as-of-right heavy vehicle movements (both inbound and outbound movements); and
- 12 light vehicle movements (both inbound and outbound movements).

Table 3.1 summarised the overall trip generation associated with the proposed development, including an estimate of the number of movements expected to occur during the weekday a.m. and p.m. peak hours.

Table 3.1 – Trip Generation

	Daily			AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out	Total	In	Out
Trucks	8	4	4	2	1	1	2	1	1
Employees	12	6	6	6	6	0	6	0	6
Total	20	10	10	8	7	1	8	1	7

3.2. Trip Distribution

It has been assumed that all site-generated traffic associated with the proposed facility will access and egress the site via the upgraded existing crossover to the west side of Brand Highway with the majority of traffic entering and exiting the site to and from the south according to the following distribution:

- Light vehicles – 90% south and 10% north on Brand Highway; and
- Truck movements – 100% south on Brand Highway.



3.3. Traffic Operations Assessment

Austrroads' *Guide to Traffic Management* provides advice on the capacity of unsignalised intersections. For minor roads where there are relatively low volumes of turning traffic, capacity considerations are usually not significant and capacity analysis is unnecessary. Intersection volumes below which capacity analysis is unnecessary are indicated in Table 3.2.

Table 3.2 – Threshold Analysis Parameters (Austrroads, 2009)

Type of road	Light cross and turning volumes maximum design hour volumes (vehicles per hour (two way))		
Two-lane major road	400	500	650
Cross road	250	200	100

As indicated by the table, the peak hour volumes on Brand Highway would be required to reach over 650 vehicles before additional analysis of the intersection is warranted.

Based upon the latest traffic data, the peak morning and afternoon hour volumes are 266 vph and 316 vph, respectively. The proposed activities on the site are expected to generate approximately 8 additional vehicular trips during the roadway peak hour. The threshold of 650 vph will not be reached and therefore detailed analysis of the intersection is not necessary.

Based upon a review of the anticipated daily and peak hour traffic generation associated with the proposed development of the site, it can be concluded that the site-generated traffic can be accommodated within the existing practical capacity of the boundary road system with minimal vehicular queuing or delays.



3.4. Review of Existing Road Geometry, Sightlines and Crash History

The proposed upgraded crossover location has also been assessed with respect to relevant sightline requirements for exiting vehicles (from a minor approach, such as a crossover or access road), as documented in Austroads *Guide to Road Design: Part 4A – Unsignalised and Signalised Intersections*.

Brand Highway currently has a posted speed limit of 110 kph in the vicinity of the intersection. MRWA guidelines indicate that typical design speeds are generally 10 kph or more above the posted speed limit and it has therefore been assumed that the design speed for Brand Highway in the vicinity of the site would be 120 kph. Minimum sightline requirements for 110 kph (as sourced from Austroads guidelines) have been documented in Table 3.3. However, it should be noted that based upon Australian Road Rules, heavy vehicles are limited to a maximum travel speed of 100 kph.

Table 3.3. - Minimum Sight Distances

	Type	Sight Distance (m)
Approach Sight Distance	Minimum	229
	Desirable	245
Safe Intersection Sight Distance	Minimum	329
	Desirable	345

Approach sight distance (ASD) is the minimum level of sight distance, which should be available at all intersections. ASD is numerically equal to normal car stopping sight distance (SSD), which is defined as the distance travelled by a vehicle between the times when the driver receives a stimulus signifying a need to stop and the time the vehicle comes to rest.

Safe intersection sight distance (SISD) is the minimum standard, which should be provided on the major road at any intersection. It provides sufficient distance for a driver of a vehicle on the major road to observe a vehicle on a minor road approach moving into a collision situation (e.g. in the worst case, stalling across the traffic lanes), and to decelerate to a stop before reaching the collision point. It is generally sufficient to enable cars to cross a major road safely from a side road.

The existing access road intersects with Brand Highway at an angle of approximately 72 degrees. Intersection angles are generally recommended to range between 70 and 110 degrees, with a preferred intersecting angle of 90 degrees to the major road.

Based upon a review of the existing road geometry and sightlines, the available sight distance is excellent in both directions and exceeds the minimum required distances for the intersection. Figure 3.1 and 3.2 show photos of the available sight distance at the proposed site access taken during a site



investigation.

Figure 3.1 – Sight Distance to the North Along Brand Highway From Site Crossover



Figure 3.2 – Sight Distance to the South Along Brand Highway From Site Crossover

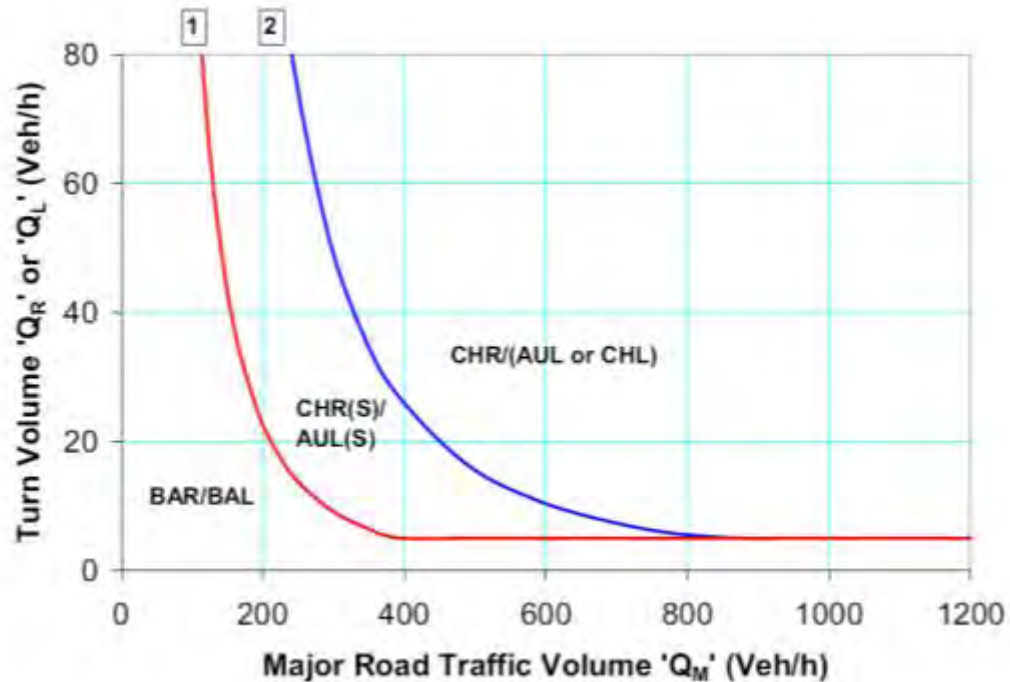




Consulting Civil and Traffic Engineers, Risk Managers

In order to assess the need for turn treatments at the proposed site access, reference was made to the Austroads' *Guide to Road Design – Part 4A: Unsignalised and Signalised Intersections*. The guidelines describe the hourly traffic volumes on the major and minor roads that warrant each type of turn treatment including basic (Type BA), auxiliary lane (Type AU) and channelised (Type CH) turn treatments. Figure 4.9(a) of this document is shown below as Figure 3.3.

Figure 3.3 – Warrants for Turn Treatments on the Major Road at Unsignalised Intersections (Design Speed $\geq 100\text{km/h}$)

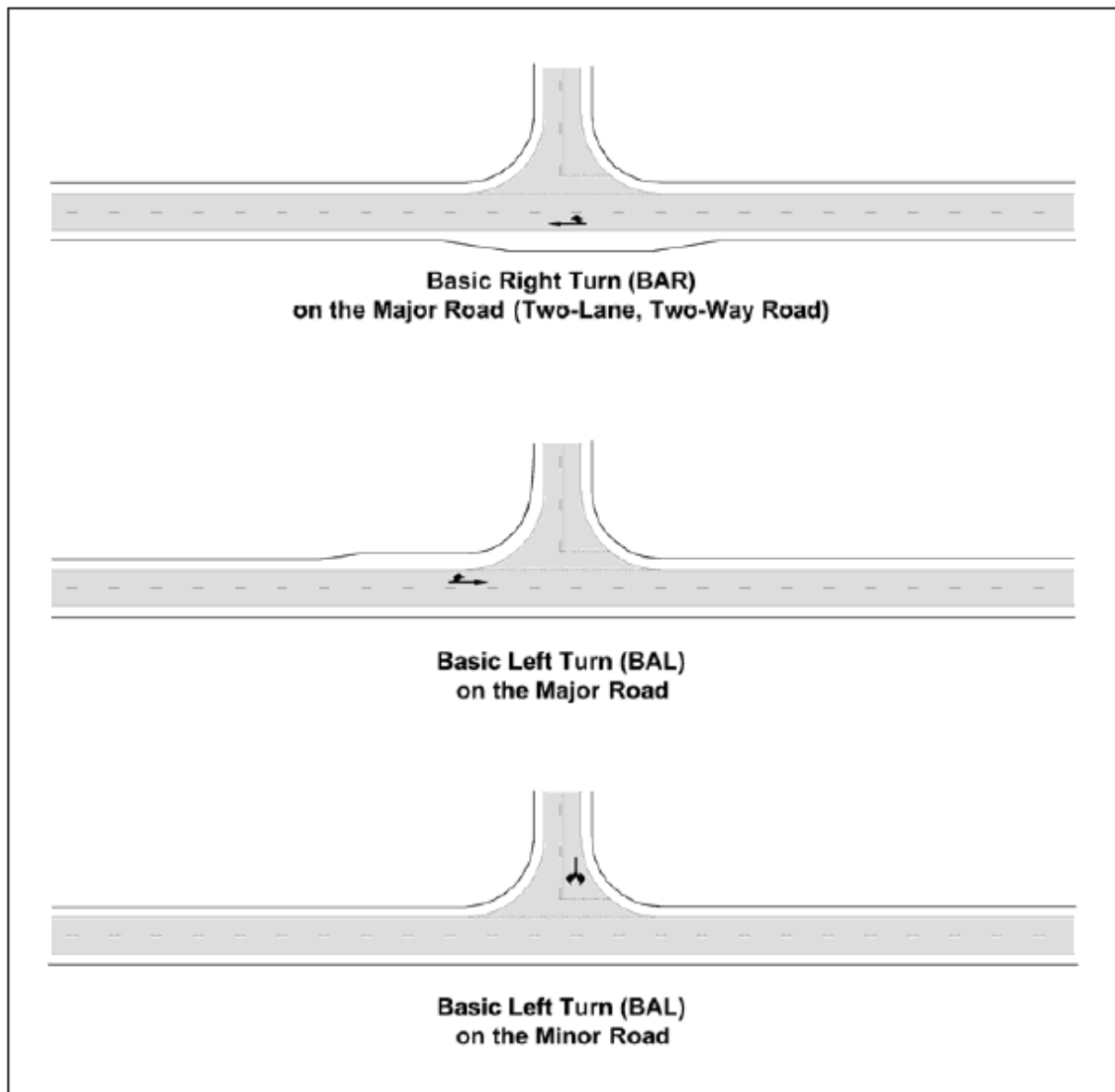


The projected major road traffic volume is 324 vph on Brand Highway and the turn volume is less than 8 vph on the access road with the majority (90%+ to and from the south) of site-generated traffic turning left into the site and right out of the site. As a result, a BAR or localised widening on the southbound approach to the crossover to allow for through traffic to overtake stopped vehicles on the right is neither justified nor is it required. A basic left-turn treatment (BAL) on Brand Highway in the form of a widened shoulder to allow vehicles turning left into the development to move off the highway to allow through vehicles would enhance safe ingress by site-generated traffic.

Figure 3.4 illustrates typical basic turn treatments for unsignalised intersections including the BAL treatment.



Figure 3.4 – Typical Rural Basic Turn Treatments



The existing crossover at its intersection with Brand Highway will also be upgraded to a suitable rural standard with appropriate line marking and traffic control implemented at this location to allow for safe and efficient ingress and egress by site-generated traffic. Localised clearing of vegetation to the north and south of the site crossover will enhance safe exiting sightlines. Details regarding the upgrade of this road will be addressed during the detailed design stages of the project. Details relating to the proposed upgrades to the crossover and changes to the existing road space on Brand Highway will be addressed during the detailed design stages of the process.

A review of the documented 5-year crash history at this location indicates that there have been no recorded crashes at either the Brand Highway/Chittering Street or Brand Highway/Energy Place intersection.



4. SUMMARY AND CONCLUSIONS

Shawmac has undertaken an assessment of the anticipated traffic operations associated with the proposal to construct a workshop and storage facility on Lot 299 (No. 2929), Brand Highway, Muchea in the Shire of Chittering.

Based upon assessment of the anticipated site-generated traffic associated with the development proposal and the existing primary boundary road network, the increase in traffic can be accommodated within the existing practical capacity of these roads and the increased activities on the subject site will result in a negligible impact on existing traffic operations.

A site visit to assess the available sightlines for vehicles entering and exiting the site concluded that sight distance in both directions is sufficient and meets the minimum required sight distance as prescribed by Austroads guidelines.

Due to the type of as-of-right heavy vehicles expected to access the site, the implementation of a localised widening of the existing shoulder along the west side of Brand Highway (a BAL treatment) on approach to the site crossover from the south will result in safe and efficient ingress and egress at this location for vehicles accessing the site from the south. The existing crossover will be upgraded to a suitable rural standard at its intersection with the Brand Highway and will include the implementation of appropriate line marking and traffic control at this location.

Details relating to the implementation of the BAL treatment and to the upgrade of the crossover will be addressed during the detailed design stages of the project.

In conclusion, based upon the results of the Transport Impact Statement and associated recommendations, the proposed development of the workshop and storage facility at 299 Brand Highway, Muchea, can be supported from a traffic operations and safety perspective.

9.1.2 Proposed modification to existing Planning Approval – Lot 713/2929 (RN 299) Brand Highway, Muchea*

Applicant	Whitestone Quarries Pty Ltd
File ref	A5006; P171/12
Prepared by	Brendan Jeans, Senior Planning Officer
Supervised by	Azhar Awang, Executive Manager Development Services
Voting requirements	Simple Majority
Documents tabled	Nil
Attachments	1. Council Minutes 20 March 2013 OCM 2. Amendment application

Background

Council's consideration is requested for a proposed modification to a condition of the Planning Approval at Lot 713/2929 (RN 299) Brand Highway, Muchea.

Council at its 20 March 2013 Ordinary Council Meeting (OCM) resolved to grant Planning Approval subject to conditions for a Rural Industry and Transport Depot at 299 Brand Highway, Muchea (attachment 1). The Applicant is requesting to modify Condition 2e of the Planning Approval:

"2e. No access from Chittering Street and Energy Place."

Following the Planning Approval granted by Council, the Applicant has been in ongoing discussions with Main Roads WA (MRWA) to obtain approval for access to Brand Highway. MRWA have indicated they would not support the upgrade of the existing access direct from the property to Brand Highway. The modification request is based on advice from MRWA and the Shire that the use of Energy Place may be acceptable subject to upgrade and design and Council's approval. For the Applicant to comply with the Planning Approval granted, a modification to Condition 2e to allow access from Energy Place has been requested.

Consultation

Main Roads WA has been consulted seeking their comments on the proposed modification for access to the site. MRWA provided the Shire with a copy of the letter sent to the landowner outlining their support for the revised Traffic Impact Statement for the access of Energy Place, and their requirements to obtain approval.

The Shire's Executive Manager Technical Services has supported the proposed design of access onto Energy Place, and has advised the requirement of Energy Place to be constructed in accordance with the Shire's *Subdivisional Development Guidelines 2012* (as amended).

Statutory Environment

State: *Planning and Development Act 2005*

Local: *Shire of Chittering Town Planning Scheme No 6*

The subject property is zoned 'Agricultural Resource'. The objectives of this zone are:

- (a) *To preserve productive land suitable for grazing, cropping and intensive horticulture and other compatible productive rural uses in a sustainable manner;*
- (b) *To protect the landform and landscape values of the district against despoliation and land degradation;*
- (c) *To encourage intensive agriculture and associated tourist facilities, where appropriate;*
- (d) *To allow for the extraction of basic raw materials where it is environmentally and socially acceptable.*

The subject property is located within the 'Water Prone Area – Ellen Brook Palusplain' Special Control Area outlined in Clause 6.3 of the Scheme.

6.3 WATER PRONE AREA – ELLEN BROOK PALUSPLAIN

6.3.1 *Land subject to Inundation or flooding are delineated on the Scheme Map. Planning Approval is required for any development within the Special Control Area.*

6.1.1 Purpose

- (a) *To manage development in areas where there is high risk of inundation so as to protect people and property from undue damage and where there is a potential risk to human health.*
- (b) *To preclude development and the use of land which may increase the amount of nutrients from entering the surface and/or sub-surface water systems.*
- (c) *To ensure that wetland environmental values and ecological integrity are preserved and mentioned.*

6.3.3 Planning Requirements

The Local Government will impose conditions on any Planning Approval relating to-

- (a) *the construction and occupation of any dwelling or outbuilding;*
- (b) *the type of effluent disposal system used in this area shall be high performance with bacterial and nutrient stripping capabilities to the specifications of Council and the Health Department and shall be located in a position determined by Council;*
- (c) *minimum floor levels for any building above the highest known water levels;*
- (d) *any land use that may contribute to the degradation of the surface or sub-surface water quality.*
- (e) *no development other than for conservation purposes will be permitted within 30 metres of any natural water body;*
- (f) *amming, draining or other developments which may alter the natural flow of surface water will not be permitted unless such works are part of an approved Catchment Management Plan.*

6.3.4 Relevant Considerations

In considering applications for Planning Approval, the Local Government shall have regard to-

- (a) *the likely impact on the health and welfare of future occupants;*
- (b) *the proposed activities for the land and their potential increase in the risk of causing an increase in nutrients entering the water regimes;*
- (c) *any provision or recommendation from any Catchment Management Plan.*
- (d) *the likely impact on any wetland;*
- (e) *buffer distances from any wetland.*

6.3.5 Referral of Applications for Planning Approval

The Local Government may refer any Application for Planning Approval or any amendment to vary a Special Control Area boundary to any relevant authority or community organisation.

Local: *Shire of Chittering Subdivisional development Guidelines 2012 (as amended)*

The design and construction of Energy Place for the proposed use shall be in accordance with the Shire's Specifications dealt with by the Shire's Technical Services department.

Policy Implications

Nil

Financial Implications

It is considered the proposal will have minor financial implications on Council due to ongoing road maintenance. The Applicant would bear all associated costs with the upgrade and use of Energy Place.

Strategic Implications

Local: *Shire of Chittering Local Planning Strategy 2001-2015*

Lot 2929 Brand Highway is located within the 'Ellen Brook Palusplain', which is further identified and addressed in the Strategy:

6.4.2 Aims

- *To protect and enhance the rivers, lesser flow lines and wetlands as a measure to arrest land degradation and improve water quality with appropriate buffer widths determined using biophysical criteria;*
- *To include the recommendation of the Ellen Brook Integrated Catchment Plan as to land uses and nutrient control by encouraging improved land management practices;*
- *To prohibit any non-agricultural development which may contribute to pollution of the surface water or sub-surface water regimes;*
- *To apply the recommendations for the Ellen Brook Catchment Management Plan to achieve the objectives and liaise with relevant agencies for any applications for development or change of land use.*

It is considered the broad issues outlined in Section 7.0 of the Strategy are relevant to the proposal.

Due to the subject property being zoned 'Agricultural Resource'; Section 8.8 of the Strategy outlines the aims of the zone and applies to this application.

Section 10.0 of the Strategy makes reference to the 'Special Control Areas' identified on the Scheme Maps, with the subject property being situated within the 'Water Prone Area – Ellen Brook Palusplain Special Control Area'.

Site Inspection

Site inspection undertaken: Yes

Triple Bottom Line Assessment*Economic implications*

There are no known economic implications associated with the proposed modifications to the Planning Approval. The Applicant will be responsible for the costs associated with the required upgrade of Energy Place.

Social implications

There are no known social implications associated with the proposed modifications to the Planning Approval.

Environmental implications

There are no known environmental implications associated with the proposed modifications to the Planning Approval.

Comment

The proposed modification to the condition of the Planning Approval to allow access from Energy Place will still require the Applicant to obtain approval from MRWA for the upgrade and use of the intersection of Energy Place with Brand Highway (Condition 2c). The existing Planning Approval requires the internal access road to be bitumen sealed and for traffic to be consistent with the Traffic Impact Statement (TIS) dated 2013. As the access arrangements have changed, a revised TIS was required and so it is considered appropriate to also modify Condition 2d of the Planning Approval to state the revised date.

The proposed modification is considered to provide a good outcome as it will result in the improvement of Energy Place, result in the associated traffic movements of the site at a greater distance from Muchea Town-site residences and be consistent with the position of MRWA to utilise existing access options. Furthermore it is considered that Council's reconsideration of the decision is justified due to the advice received from MRWA.

9.1.2 OFFICER RECOMMENDATION / COUNCIL RESOLUTION - 050914

Moved Cr Gibson/Seconded Cr Douglas

That Council:

- 1. Support the modification to Condition 2e of Planning Approval P171/12 to read as follows:
*"2e. Access shall be from Energy Place. Energy Place shall be constructed in accordance with the approved design drawings and the Shire of Chittering Subdivisional Development Guidelines 2012 (as amended) to the satisfaction of the Chief Executive Officer."***
- 2. Support the modification to Condition 2d of Planning Approval P171/12 to revise the date of the Traffic Management Impact Statement to 21 July 2014.**
- 3. Delegate authority to the Chief Executive Officer to grant Planning Approval P171/12 with the modification set out in 1 and 2 above.**
- 4. Notify the Applicant that the modification of Condition 2e does not alter the timeframe of compliance of conditions of Planning Approval P171/12.**

THE MOTION WAS PUT AND DECLARED CARRIED 6/0

DEVELOPMENT APPLICATION

LOT 2929 (NO 299) BRAND HIGHWAY,
MUCHEA

SHIRE OF CHITTERING

EXTENSION OF WHITESTONE QUARRIES
RURAL INDUSTRY PRODUCT PROCESSING
PLANT

Prepared for: Whitestone Quarries
Prepared by: Allerding and Associates

APRIL 2015

Allerding
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1.0 EXECUTIVE SUMMARY

We act on behalf of Whitestone Quarries Pty Ltd (**Whitestone**), the landowners of Lot 2929 (No 299) Brand Highway, Muchea (**the Site**). This report has been prepared in support of the extended development of the existing ‘Industry - Rural’ and ‘Transport Depot’ landuse, approved by the Shire at its Ordinary Council Meeting of 20 March 2013.

The development works subject of this application are consistent with the Shire’s prior approvals in that they merely seek to allow Whitestone to give effect to the Site’s approved land uses and to conduct their business affairs in a manner already foreshadowed by the Shire at the abovementioned meeting of Council.

In accordance with its prior approvals, the Site is already used to facilitate the storage, distribution and processing of stone product which is used for a range of purposes including road base, concrete raw materials and decorative stone for landscaping purposes. That stone is sourced from quarries located near Carnamah, and in the Mount Marshall and Mukinbudin Shires. The stone is then transported to the Site in bulk quantities and distributed as needed to meet customer requirements. To ensure quality requirements are satisfied, Whitestone has undertaken the following new works on Site that are subject of this application for approval:

- 1. The development of a stonewashing process line to the north western portion of the Site which will allow the stone products to be washed prior to delivery to Whitestone’s clients; and
- 2. The development of a weigh bridge and incidental hut.

Whitestone seeks the Shire’s support for the above works under clause 8.4.1 of its Town Planning Scheme No. 6 (**TPS6**).

Approval is also sought for the development of the following incidental structures:

- 1. Two equipment storage sheds to be constructed over an approved ‘laydown’ area, towards the northern boundary of the Site, and east of the existing stonewashing process line. It is also proposed to reduce the total site coverage of this ‘laydown’ area as previously approved by Council, to provide sufficient site coverage for the development of the equipment sheds. The surface of laydown area is to be constructed using crushed and compacted limestone dressed with granite fines that will prevent dust but provide a superior drainage outcome than conventional bitumen seal;
- 2. A stock feed store extension to the east of the approved service centre, located south of the existing stonewashing process line;
- 3. The construction of a covered roof area adjacent to the existing residence to provide cover over two existing transportables, which are used in conjunction with that dwelling for family residential purposes only;
- 4. The extension of the east-west bitumen internal road towards the location of the approved ‘service centre’ shed and to allow for cul-de-sac turn around area within the existing and approved ‘lay down’ area south of the stonewashing process line; and
- 5. Modification and clarification of treatment of lay down areas in response to incorporating improved management measures.

In the circumstances of this case, where the Shire has already allowed for the establishment of Whitestone’s Industry - Rural and Transport Depot business operations, the development works subject of this application are consistent with that approval and are aligned with the business operations already contemplated and approved by the Shire. It does not alter the volume of product originally anticipated to be processed on site, or the volume of trucks accessing the premises. It simply adds an additional element of processing of that product to meet quality control standards for end users. Accordingly, it is our view that the development is both capable and appropriate for approval and we respectfully request the Shire grant approval on that basis.

A copy of the Shire of Chittering’s Form 7 – Form of Application for Planning Approval is included as **Annexure 1** of this report.

2.0 INTRODUCTION

2.1 Background

At its Ordinary Council meeting of 20 March 2013, the Shire resolved to approve a proposed ‘Industry-Rural’ and ‘Transport Depot’ use on the Site. On 26 June 2013, the Shire also approved a ‘service centre’ shed towards the western boundary of the Site, which is used for the storage of vehicles and to assist in Whitestone’s business operations, including the storage, distribution and processing of Whitestone’s products.

In the assessment of those applications the Shire was aware of Whitestone’s intended business operations on Site. As it has recognised, Whitestone operates extractive industries within the Shire of Mukinbudin and Mt Marshal, Western Australia. Currently, between the Muchea and quarry operations, the enterprise employs 16 full-time staff. It has a well founded client base and a sound reputation for the reliable supply of competitive, quality products.

The subject Site facilitates the storage and distribution of stone which is used for road a range of purposes including road base, for use in concrete production and decorative stone for landscaping purposes. The stone is sourced from quarries located near Carnamah, and in the Mount Marshall and Mukinbudin Shires. The stone is transported to the Muchea site in bulk quantities and then distributed as needed to meet consumer requirements. The only addition to the operation previously approved by Council is the treatment of the product which is to be washed prior to delivery for quality control purposes. In no way does the minor addition of that treatment alter the interpretation or nature of the primary use and purpose of the business.

The products are granitic and quartz stone crushed at the quarry site to pre-determined sizes up to 25mm average section. The quarrying and crushing activities are necessarily of quantities and complexities such that quick changes to product specifications are precluded. This requires ample stockholdings of product variants to be held on site to meet client demands. The client base includes public utilities, major construction contractors, local government bodies, road-making contractors, concrete producers and railway ballast needs. Retail and domestic requirements are not directly serviced although some product is purchased by landscape suppliers in bulk quantities for decorative stone purposes.

Again the proposed developments sought within this application do not alter the fundamental purpose of the approved use as explained above, it merely introduces incidental development infrastructure that facilitates the cleaning of these products using high volume low pressure water, or high pressure water which will displace and flush away minimal debris from the granite and quartz stone.

2.2 Location

The location details have not altered since the Shire’s previous consideration of development works in April 2013 and June 2013. Notwithstanding, the following information is provided for the Shire’s convenience to assist in the assessment of this application.

2.2.1 Site Details

The site is located at Lot 2929 (No. 299) Brand Highway, Muchea, identified on Deposited Plan 254600 and Certificate of Title Volume 350, Folio 154A (refer to the Certificate of Title included as Annexure 3). The site occupies a total area of approximately 64.8 hectares.

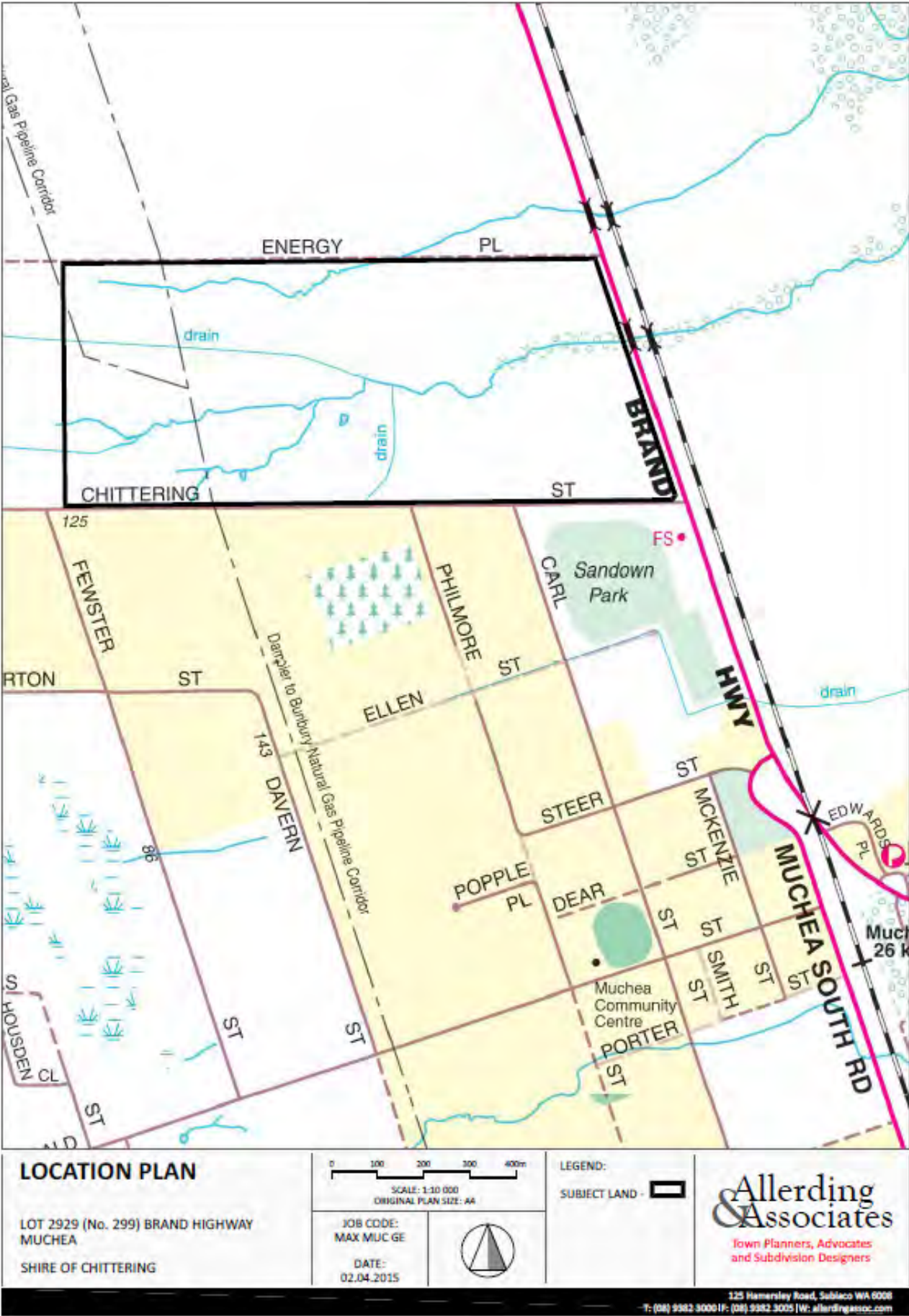


Figure 1 – Location Plan



Figure 2 – Aerial Photo

2.2.2 Site Context

In regards to the wider context, the Site is located approximately 44km north-west of the Perth CBD and located west of Brand Highway and bound by Chittering Street and Energy Place to the south and north respectively. The general location of the Site is illustrated by **Figure 1**. An aerial view of the site and the boundary road network is shown in **Figure 2**

2.2.3 Existing Land Use

The Site is approved for use as an ‘Industry – Rural’ and ‘Transport Depot’ under the Shire of Chittering’s Town Planning Scheme No. 6. Whitestone operates its business in accordance with those land uses to receive and process materials extracted off site, within the Shires of Mukinbudin and Mt Marshall, Western Australia.

2.2.4 Other Land Use Constraints

The Site is dissected by the Dampier to Bunbury Natural Gas Pipeline and associated easement as illustrated by **Figure 19** below. Issues as to access over the pipeline were already considered by the Shire as being a matter for the Department of Regional Developments of Lands under the *Dampier to Bunbury Pipeline Act 1997* (WA) and for Whitestone to ensure it maintains its access permits granted under s 41 of that Act. Nothing alters these arrangements under this application.

3.0 OVERVIEW OF PROPOSAL

This application is for the approval of works which seek to expand upon the existing Industry - Rural and Transport Depot use of the Site, as approved by the Shire on 20 March 2013. In essence, the nature of the works will not alter the nature of Whitestone’s existing business operations.

Whitestone seeks the Shire’s retrospective approval of the following works, which are capable and appropriate for approval under clause 8.4.1 of TPS6:

- 1. The construction of a stonewashing process plans located towards the north western boundary of the Site; and
- 2. Weigh bridge and incidental hut structure located east of the gas pipeline easement and along the approved east-west internal road.

Approval is also sought for the development of the following incidental structures:

- 1. Two equipment storage sheds to be constructed over an approved ‘laydown’ area, towards the northern boundary of the Site, and east of the existing stonewashing process line. It is also proposed to amend the Shire’s prior approval dated 20 March 2013 by reducing the total site coverage of this ‘laydown’ area as illustrated by **Annexure 2**, to provide sufficient site coverage for the development of the equipment sheds. The surface of laydown area is to be constructed using crushed and compacted limestone dressed with granite fines to allow for better drainage than conventional bitumen seal;
- 1. A stock feed store extension to the east of the approved service centre, located south of the existing stonewashing process line to facilitate the rural use of the lot;
- 2. The construction of a covered roof area adjacent to the existing residence to provide cover over two existing transportables, which are used in conjunction with that dwelling for family residential purposes only;

- 3. The extension of the east-west internal road towards the location of the approved ‘service centre’ shed and to allow for cul-de-sac moveability within the existing and approved ‘lay down’ area south of the stonewashing process line. These extension works are to be bitumen sealed; and
- 4. Modification and clarification of treatment of lay down areas in response to incorporating improved management measures for drainage and spill management.

3.1 Development Particulars

Specific operating and design details of the developments subject of this application are considered in turn below, and are illustrated by **Appendix 2**:

3.1.1 The Product Washing Plant

Whilst the product delivered to the Site is quite clean, it sometimes includes small amounts of fibrous root material that must be removed. Whitestone have erected a stonewashing treatment plant on a concrete base to enable this cleaning process to be undertaken.

The constructed washing plant is located towards the north western boundary of the Site, as illustrated by **Appendix 2**. The various operating stages of the product washing process are best described with reference to the attached plans under **Appendix 2**. Any reference to an “Area” below is a reference to the legend of the ‘General Site Layout Plan’ and ‘Stonewashing Process Line Plan’ under **Appendix 2**.

- 1. Product is transferred from the “work in progress” or “WIP”, (Area “V”), to the Feed Hopper (Area “F”) using a wheeled loader (refer to **Figure 3** below). This Feed Hopper services both the Trommel Feed Conveyor (Area “E”) and the Screen Unit (Area “H”);
- 2. The Feed Hopper (Area “F”) supplies the Trommel Feed Conveyor (Area “E”) (refer to **Figure 4** below);
- 3. The Trommel Feed Conveyor (Area “E”) supplies the Trommel (Area “D”);
- 4. The Trommel (Area “D”) is an inclined rotating screen incorporating an internal screw flange that progresses the product through the unit. During this process a high volume of low pressure water is introduced over the product which displaces and flushes away the minimal debris. The water that is used for this process is re-cycled from the Main Pond (Area “N”) by means of pumps at the Pump Station (Area “M”);
- 5. The washed product, water and flushed debris exit the Trommel and discharges onto the De-water Screen (Area “B”);
- 6. The discharged water and debris are collected by the Water Return Flume (Area “C”) and collected in the Water Return Pond (Area “K”);
- 7. The displacement of water from the Main Pond and its return to the Water Return Pond generates a positive water floor through the Filter Wall (Area “L”) which is comprised of fine sized aggregate;
- 8. De-water Screen (Area “B”) is angled down toward the Trommel Run-out Conveyor (Area “A”) and is vibrated such as to feed the product onto the Trommel Run-out Conveyor (refer to **Figure 11** below);

- The Trommel Run-out Conveyor (Area “A”) can be swung such that the product can be discharged into the Stockpile Containments (Area “T”) to form Stockpiles (Area “S”);
- At this point the wet product is held for one or two days in either the Stockpile Containments (Area “T”), or moved to the WIP Area by a wheeled loader to allow the water to soften any attached film or clay;
- The product is then moved by wheeled loader to the Feed Hopper (Area “F”), which supplies the Screening Feed Conveyor (Area “G”), which in turn supplies the Screen Unit (Area “H”) (refer to **Figures 7, 9 and 10**);
- The Screen Unit is angled down toward the Screening Run-out Conveyor (Area “J”) (refer **Figure 8**) and is vibrated such as to feed the product onto the Screening Run-out Conveyor. The Screen Unit is housed and within the housing, high pressure water jets are employed to blast away remnant film;
- The Screening Run-out Conveyor (Area “J”) can be swung such that the product can be discharged into the Stockpile Containments (Area “T”) to form Stockpiles (Area “S”);
- Product can then be either held in the Stockpile Containments (Area “T”) or in the WIP area until dispatched from Site;
- The discharged water and minimal debris is discharge into the Settling Pond (Area “I”) which retains any settled debris and then overflows and is collected in the Main Pond (Area “N”) (refer to **Figure 6**);
- Water usage is minimal due to the re-cycling initiatives employed as part of the washing process. The only water used is that water retained in wetting the surfaces of the product. Due to the very high water table in this area and particularly on this Site, the Main Pond (Area “N”) and the Water Return Pond (Area “K”) replenish naturally (refer to **Figures 5 and 12**). This is estimated to be up to 3,500kL per annum. It is also estimated that 500kL of water per annum is required to meet the Site’s dust suppression needs (refer to paragraph 9 on page 4 of **Annexure 4**). As discussed in further detail below, the Department of Water has advised of its approval of Whitestone’s Form 4A application under the *Rights in Water and Irrigation Act 1914* (WA) to enter into an agreement to lease water from a neighbouring licensee for a period of two years. Whitestone is now in the process of considering its options to negotiate a Water Allocation with the Department of Water to ensure a long term supply source is achieved on Site.

It is significant to note that the washing facility is contained on the already approved laydown area and does not require any extension to that area as part of this application. Further, it is also relevant to note that there are no chemicals required in the cleaning process that could give rise to contamination, instead, it simply uses high volume/high pressure water to remove clay and fibrous materials from rocks sourced from the quarry. It does not result in any practical removal of any water resource. Water is continuously recycled and re-used on the site via the two ponds with the only by-product being the material removed from the washed stones that will be removed from the ponds and disposed off offsite on an as required basis.



Figure 3 – Feed Hopper (Area “F”).



Figure 4 – The Feed Hoper (“F”) supplies the Trommel Feed Conveyor (Area “E”).



Figure 5 – Main Pond (“N”) with static water level approximately 1m below ground level.



Figure 7 – Screen Unit (“H”).



Figure 6 – Main Pond (“N”) in foreground and Settling Pond (“I”) in background.



Figure 8 – Screen Unit (“H”) and Screening Run-Out Conveyor (“J”).



Figure 9 – Feed Hopper (“F”) and Screening Feed Conveyor (“G”).



Figure 11 – Trommel Run-Out Conveyor (“A”), De-Watering Screen (“B”), Trommel (“D”) and Water Return Pond (“K”).



Figure 10 – Screen Unit (“H”) and Screening Run-Out Conveyor (“J”).



Figure 12 – Water Return Pond (“K”), Trommel Run-Out Conveyor (“A”), De-Watering Screen (“B”) and Trommel (“D”).

3.1.2 The Weigh Bridge

Retrospective approval is also sought under clause 8.4.1 of TPS6 for the development of a weigh bridge located towards the western end of the existing and approved internal road system, and east of the gas pipe easement, as shown on **Appendix 2**. Product is received from the quarry sites in Pocket Road Trains carrying approximately 50 tonnes (semi-trailer plus a long trailer). The same truck that has delivered the granite to the Site is then loaded with washed granite and makes the delivery of ordered material to customers. At this time the trucks pass over the weighbridge to ensure the load does not exceed 55 tonnes. We can assume the outgoing load is only 50 tonnes. The truck then returns to the quarry site after delivery.

The weigh bridge is essential to maintain accurate inventories and to confirm weights of the client’s own product processed under contract. The weighbridge records the gross weight of product and vehicle. All receipts are recorded. Monthly tonnage which is processed averages approximately 500 to 1,500 tonnes, and will average out at approximately 1000 tonnes per month over a one year period. The average truck movements per month are 20 trucks into the site and 20 trucks out of the site, based on an average monthly processing of 1000 tonnes of product, and the carriage of 50 tonnes per truck.

In addition, and since November 2014, there have been six deliveries from clients delivering their own product under contract for processing at the Site. Therefore there have been an additional 6 trucks arriving on Site for movement over the weighbridge, and 6 empty trucks leaving the site. As clients pick up their own product after processing, this accounts for 6 empty trucks arriving and 6 trucks carrying stone departing over the weighbridge. This totals 24 movements over the 6 month period for an average of 4 truck movements per month.

The net result is an estimate of 44 truck movements per month.

The specific operating details of the weigh bridge can also be explained by reference to **Appendix 2**. Upon receiving dispatch instructions, the product will be transferred from its holding location west of the site and by wheeled loader directly into the transport vehicle. The transport vehicle will then move to the weighbridge (shown as Area ‘P’ on **Annexure 2**) where weights of the product and the vehicle are recorded by the weighbridge attendant located in the proposed ‘Control Box’ (Area ‘Q’). The weigh bridge attendant will then confirm that the product for despatch is as per the client’s order and will release the vehicle for delivery.

Photos of the existing weigh bridge and control hut are provided at **Figures 13** and **14** below.



Figure 13 – Weigh bridge and control hut.



Figure 14 – Weigh bridge and control hut.

3.1.3 Equipment Sheds

Whitestone proposes to construct two equipment sheds which will be set back approximately 70 metres from the northern boundary of the Site and to be located over a portion of the northern ‘laydown area’ already approved by Council on 20 March 2013. The layout dimension of these sheds are illustrated by **Appendix 2**. As shown, each shed will be 500m2 in area and they will be accessible via sliding doors facing the northern boundary, towards Energy Place. The Sheds will be used to facilitate Whitestone’s existing business operations, by storing minor equipment generally associated with site maintenance and general operations.

Elevation drawings have not been prepared at this stage. Accordingly, Whitestone would be happy to receive a condition for elevation drawings to be prepared to the satisfaction of the Shire prior to construction.

3.1.4 Stock Feed Store Extension to Approved ‘Service Centre’ Shed

The stock feed store relates to the pre-existing rural use on the balance of the property for stock feed and does not have any relationship to the Industry - Rural or Transport Depot use. As illustrated by **Appendix 2** and **Figure 19**, the stock feed store is to extend east from the existing service centre shed (refer to **Figure 15** below).

Elevation drawings have not been prepared at this stage. Accordingly, Whitestone would be happy to receive a condition for elevation drawings to prepared to the satisfaction of the Shire prior to construction.



Figure 15 – stock feed store extension to be constructed east (left) of the existing and approved service centre.

3.1.5 Proposed Roof Cover over Transportable Dwellings & Entertainment Area

The applicants simply seek to introduce a covered roof area over two existing transportable dwellings on the site and to construct an entertainment area to be used on an occasional basis in conjunction with the existing residential dwelling. These dwellings are solely used for family residential purposes to accommodate the applicants’ large immediate family on an occasional basis when they visit the Site for accommodation and recreation purposes.

In the same manner that applies to the stock feed store and equipment sheds, elevation drawings have not been prepared for the roof cover or entertainment area at this stage. Accordingly, Whitestone would again be happy to receive a condition for elevation drawings to be prepared to the satisfaction of the Shire prior to their construction.

3.1.6 Internal Road Extension and Cul-De-Sac

As illustrated by **Annexure 2**, **Figure 18** and **Figure 19** below, Whitestone proposed to clarify the extent of the bituminised east-west internal road towards the approved ‘service centre’ shed. This will provide a cul-de-sac for convenient moveability for delivery and service vehicles accessing the approved ‘laydown’ (refer to **Figures 16** and **17**).

In essence, this aspect of development does not require the Shire’s further consideration under the provisions of TPS6 as it merely seeks to construct a bitumen seal over that area designated for the internal road extension and cul-de-sac in accordance with condition 2(j) of Whitestone’s development approval dated 20 March 2013.



Figure 16 – Existing internal road to extend west to accommodate cul-de-sac development.



Figure 17 – Location of proposed cul-de-sac development to be bitumen sealed.

3.1.7 Amendment to Approved Northern ‘Laydown’ Area

As part of its existing approval issued by Council on 20 March 2013, the Site is already capable of accommodating the development of a ‘laydown’ area towards the northern boundary, adjacent to Energy Place, and east of the existing processing plant. The purpose of this area is to receive and discretely store product delivered to the Site, and to ensure it is not mixed with different specification product or pre-processed product. This area is otherwise labelled as ‘future hard stand area’ on the copy of approved plans provided under **Figure 18** below.

Whitestone now proposes to reduce the total area of this approved ‘laydown’ area as illustrated by **Annexure 2** and **Figure 19** below and to surface it with a 150-200mm deep crushed and compacted limestone base dressed with 74mm of granite fines. The benefits of this surface treatment in lieu of a bitumen seal are considered under paragraph 3.1.8 below.

3.1.8 Treatment of Laydown Areas

In accordance with Council’s approval dated 20 March 2013, all ‘hardstand’ areas (described as ‘laydown’ areas on **Figure 18** below) were required to be bitumen sealed and drained to catch hydrocarbons to the satisfaction of the Chief Executive Officer.

Notwithstanding, following further considerations Whitestone have instead opted to construct the western ‘laydown’ (or ‘hardstand’) areas adjacent to the process plant and approved ‘service centre’ (refer to **Figures 18** and **19** below) with a thick 150-200mm crushed limestone base which has been covered by a thinner 75mm crushed granite stone layer. These laydown areas have been watered and compacted during construction, leaching any dust from the stone to form a solid base suitable for vehicle movements. It is Whitestone’s intention to also construct the northern ‘laydown’ area with the same surface treatment.

The purpose of condition 2(j) of Council’s approval was to satisfy the Shire that issues of dust exposure and nuisance would be suppressed. However, as subsequently addressed in the 2013 Catchment and Property Management Plan prepared by Midwest Concepts & Solutions Pty Ltd (**Midwest Concepts**), the use of Whitestone’s limestone and granite rock seal is a preferred treatment in lieu of a bitumen treatment. This is because of its benefits to suppress dust exposure.

The use of a permeable limestone and granite seal over the hardstand (or ‘laydown’) areas is also preferred to a conventional bitumen seal because of its benefits to prevent issues associated with hydrocarbon management, which potentially arise from the use by vehicles. The limestone and granite seal is permeable in nature and will act as a drainage system in and of itself, without requiring the construction or implementation of additional drainage measures, otherwise needed for a bitumen seal. As considered in Midwest Concepts’ report at page 11:

“The limestone will absorb any accidental spills and confine the leakage to the limestone layer itself. The granules of the crushed limestone have a large surface area related to the extent of the crush size that acts as a point of attachment for the spilt materials; additionally the pore spaces provide more surface area for the spilt material to stick. The sticking is a factor of electrostatic forces on the surface of the granules and when the pores are filled the material is held in place by surface tension”.

“If spills occur ... the limestone and crushed rock will be removed and treated at an approved facility set-up and accredited to process such materials. The limestone hardstand allows for easy removal and processing”.

That report also identified the comparative environmental and hydrocarbon management issues associated with the use of a traditional bitumen seal:

“... bitumen leaches beno(a)pyrene and anthracene, (known carcinogens), into the environment. These chemicals are also known endocrine disruptors ... Reconstituted Asphalt Material (RAP) is ... reprocessed by the addition of additives such as softening chemicals like paraffin to change its properties as a binder. RAP has greater potential to leak BaP and other polycyclic aromatic hydrocarbons including pyrene and anthracene into the environment”

Notwithstanding the fact that the concrete and granite seal will suppress dust exposure, it has already been considered at the Council’s Ordinary Council of 20 March 2013 that the applicant can minimise dust exposure by the use water from the Site’s bore. In addition, Whitestone is now able to use the water taken under its approved license agreement to mitigate against any foreseeable concerns.

Other measures will also ensure issues of dust are mitigated, including Whitestone’s ability to limit the height of product stockpiles stored on the ‘laydown’ areas which may contribute to dust concerns and the planting of environmental screening (refer below) which will contain wind and dust movements.

Accordingly a granite and limestone seal over the ‘laydown’ areas is appropriate in recognition that this surface treatment will adequately address the objectives of condition 2(j) by mitigating issues of dust exposure and ensure the management of hydrocarbons in a preferred manner to that if bitumen was provided.

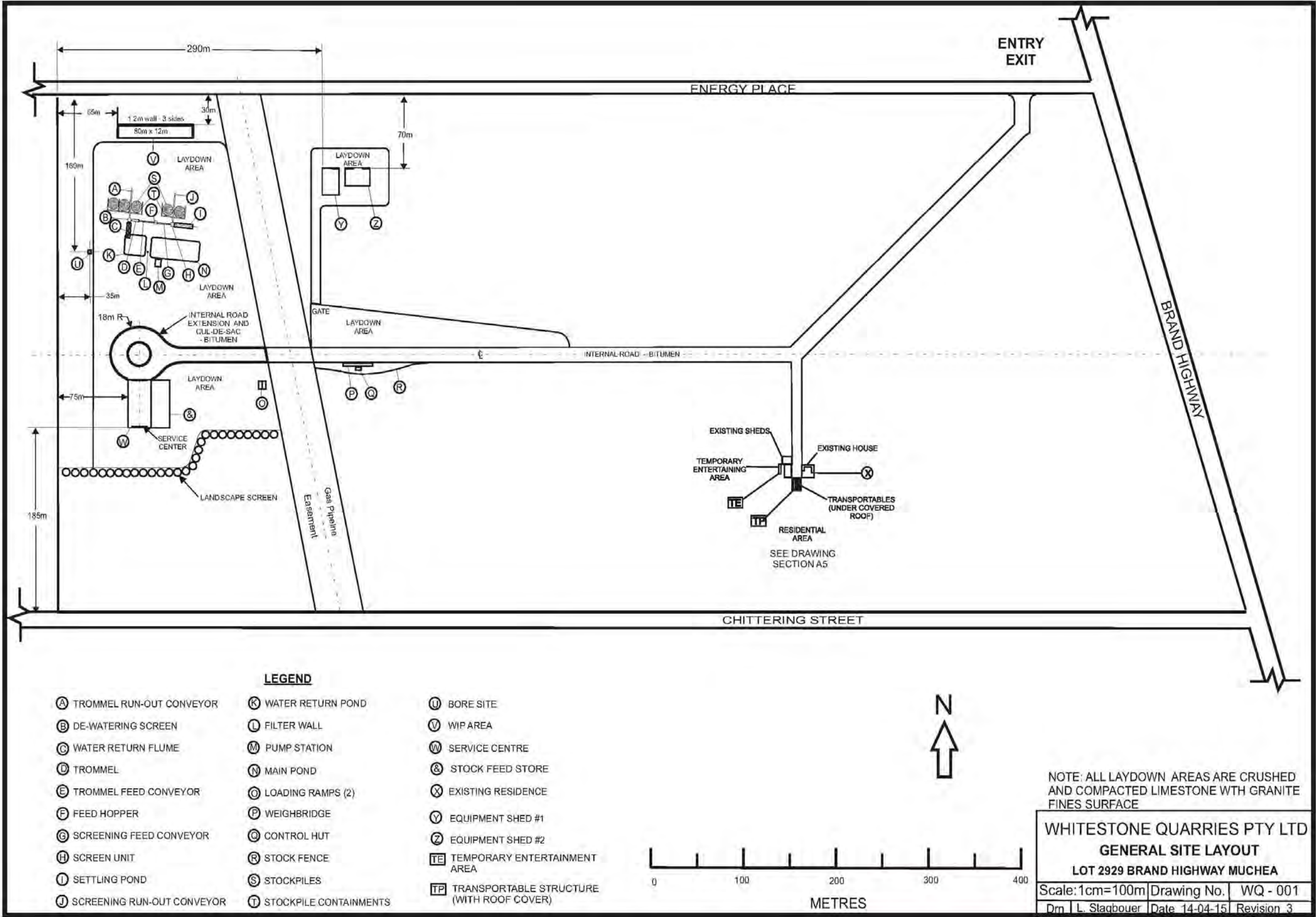


Figure 19 – Proposed Site Plan

4.0 PLANNING FRAMEWORK

The Shire’s planning framework has not been amended in any significant way since the prior assessment and approval of the Site’s ‘Industry – Rural’ and ‘Transport Depot’ use. Accepting this, and acknowledging that this application is for the mere extension and continued use of those approved uses, a detailed reassessment under the Shire’s planning framework is not necessary for the purpose of the use, and would only be relevant in the context of the proposed development works.

Notwithstanding, the following information is presented for completeness to assist the Shire for ease of review.

4.1 Shire of Chittering Town Planning Scheme No. 6 (TPS6)

The subject property is zoned ‘Agricultural Resource’. The objectives of this zone are:

- 1. To preserve productive land suitable for grazing, cropping and intensive horticulture and other compatible productive rural uses in a sustainable manner;
- 2. To protect the landform and landscape values of the district against despoliation and land degradation;
- 3. To encourage intensive agriculture and associated tourist facilities, where appropriate;
- 4. To allow for the extraction of basic raw materials where it is environmentally and socially acceptable.

The subject property is located within the ‘Water Prone Area – Ellen Brook Palusplain’ Special Control Area outlined in Clause 6.3 of the Scheme. Within the confines of that zone both Industry Rural and Transport Depot are permissible uses under the Scheme.

An extract of the Scheme map is provided at **Figure 20** below.

4.2 Water Prone Area – Ellen Brook Palusplain

Land subject to Inundation or flooding are delineated on the Scheme Map. Planning Approval is required for any development within the Special Control Area.

Purpose

- a. To manage development in areas where there is high risk of inundation so as to protect people and property from undue damage and where there is a potential risk to human health.
- b. To preclude development and the use of land which may increase the amount of nutrients from entering the surface and/or sub-surface water systems.
- c. To ensure that wetland environmental values and ecological integrity are preserved and mentioned.

Planning Requirements

The Local Government will impose conditions on any Planning Approval relating to:

- 1) the construction and occupation of any dwelling or outbuilding;

- 2) the type of effluent disposal system used in this area shall be high performance with bacterial and nutrient stripping capabilities to the specifications of Council and the Health Department and shall be located in a position determined by Council.;
- 3) minimum floor levels for any building above the highest known water levels.
- 4) any land use that may contribute to the degradation of the surface or sub-surface water quality.
- 5) no development other than for conservation purposes will be permitted within 30 metres of any natural water body.
- 6) damming, draining or other developments which may alter the natural flow of surface water will not be permitted unless such works are part of an approved Catchment Management Plan.

Relevant Considerations

In considering applications for Planning Approval, the Local Government shall have regard to:

- 1) the likely impact on the health and welfare of future occupants;
- 2) the proposed activities for the land and their potential increase in the risk of causing an increase in nutrients entering the water regimes;
- 3) any provision or recommendation from any Catchment Management Plan;
- 4) the likely impact on any wetland;
- 5) buffer distances from any wetland.

Referral of Applications for Planning Approval

The Local Government may refer any Application for Planning Approval or any amendment to vary a Special Control Area boundary to any relevant authority or community organisation.

The application proposes extension to the approved ‘Industry – Rural’ land use, defined in Schedule 1 and listed in Schedule 2 (zoning table) of the Scheme:

‘Industry-Rural’ means:

- a) An industry handling, treating, processing or packing rural products; or
- b) A workshop servicing plant or equipment used for rural purposes.

An ‘Industry-Rural’ use is an ‘A’ use on ‘Agricultural Resource’ zoned land in the Zoning Table.

This application does not propose any additional or different land uses, it merely seeks approval for extension to the existing approved rural industry land use.

Policy Implications

EPA Guidance Statement No 3 Separation Distances between Industrial and Sensitive Land Uses.

EPA Guidance Statement No 3 outlines the generic buffers between Industrial Land Uses and Sensitive Land Uses.

EPA Guidance Statement No 3 outlines the generic buffers between Industrial Land Uses and Sensitive Land Uses. The document stipulates a 200m buffer for ‘Transport vehicles depot’. As previously detailed in the report to Council dated March 2013, “It is considered the proposed laydown area constructed for the transport depot use meets this buffer requirement.” Further, it is not proposed to change or amend the use that would warrant any alteration to that buffer.

4.3 Local Planning Policy No 2 - Muchea Village

Lot 2929 Brand Highway is one of the properties nominated in the System 6 Conservation Reserve for future protection. As Section 3.5 of the Policy states, the property has been ‘nominated’ for conservation in the future for its importance as mound springs and associated flora including sundew, bog clubmoss and an unusual liverwort.

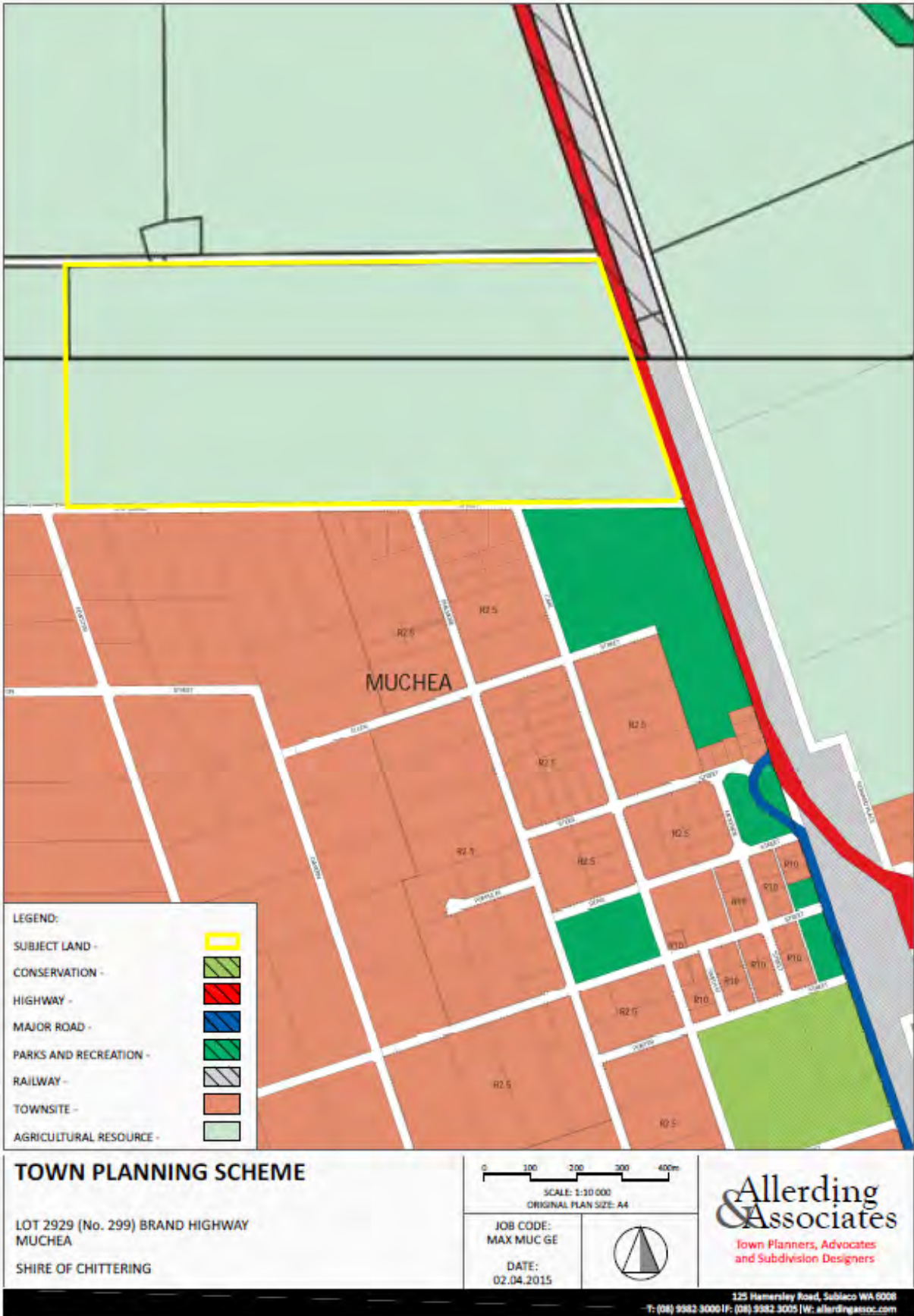
4.4 Shire of Chittering Local Planning Strategy 2001-2015

Lot 2929 Brand Highway is located within the ‘Ellen Brook Palusplain’, which is further identified and addressed in the Strategy:

Aims

- To protect and enhance the rivers, lesser flow lines and wetlands as a measure to arrest land degradation and improve water quality with appropriate buffer widths determined using biophysical criteria;
- To include the recommendation of the Ellen Brook Integrated Catchment Plan as to land uses and nutrient control by encouraging improved land management practices;
- To prohibit any non-agricultural development which may contribute to pollution of the surface water or sub-surface water regimes;
- To apply the recommendations for the Ellen Brook Catchment Management Plan to achieve the objectives and liaise with relevant agencies for any applications for development or change of land use.

It is considered the broad issues outlined in Section 7.0 of the Strategy are relevant to the proposal. Due to the subject property being zoned ‘Agricultural Resource’; Section 8.8 of the Strategy outlines the aims of the zone and applies to this application. Section 10.0 of the Strategy makes reference to the Special Control Areas identified on the Scheme Maps, with the subject property being situated within the Water Prone Area – Ellen Brook Palusplain Special Control Area. These have been contemplated within these development additions in context of the approval already granted by the Shire.



5.0 ENVIRONMENT

5.1 Stone Washing Facility

As part of its cleaning operations, the stonewashing process plant will require the use of high volume low pressure water (or high pressure water) which will displace and flush away minimal debris (residual clay, fines and organic material) from the granite and quartz stone.

The Shire has previously undertaken an assessment in relation to contamination matters and the interference of the waterways and wetlands on the Site as part of the Rural Industry and Transport Depot use. Notwithstanding, Whitestone have obtained the services of an environmental consultant who has prepared a report which concludes that the recycled use of water will not present any impediments to the water flow through the property, and that there is no intention of using any surface water flows.

That report (refer to **Annexure 4**) acknowledges that the water usage of the process plant in two parallel processes, which can be described with reference to the plans under **Annexure 2**:

1. Water is drawn from the east pond ('Main Pond' Area 'N') and enters the stone washing plant, described under paragraph 3.1.1 of this report, to assist in the removal of the debris from the stone product. After the cleaning process is complete, the water will be directed to the west pond ('Water Return Pond' or Area 'K') via the 'Water Return Flume' (Area 'C'); and
2. Water is then drawn from the west pond towards the east pond through a 'Filter Wall' (Area 'L') which filters the clay and stone dust from the water which was removed from the stone during the washing process. This clay and dust is collected from the water return pond and removed from the Site on an as required basis.

Importantly, there are no chemicals used in the process and no contamination arising from the washing of natural clay and fibrous organic material. The recycling initiatives incorporated into the operation of the stonewashing plant means that no ground water extraction is practically required. Furthermore, because the water is collected and filtered after each cycle, the plant does not dispose of any waste water on Site. Instead, any clay or fines removed from the stone product during the washing process is to be collected from the 'water return pond' and disposed of offsite accordingly. On this basis the processing plant does not present any adverse environmental consequences and would otherwise inform Whitestone's existing environmental obligations as part of Council's conditional approval of 20 March 2013.

5.2 Water Allocation for Processing Plant

Because there is arguably no extraction of water, because all water is retained or recycled on site, it is not considered that a water allocation for the use is necessary. However, to the extent that there is any doubt, Whitestone has entered into a licence agreement with a third party licensee to take 4,000kL of water per annum. That agreement has been approved by the Department of Water (**DoW**) under regulation 30 of the *Rights in Water and Irrigation Regulation 2000* (WA) and clause 30 of the *Rights in Water and Irrigation Act 1914* (WA). The water will be used as part of the stonewashing plant's operations and also for dust suppression of the Site's existing and approved use. However Whitestone anticipates that the use of water for the purposes of dust suppression will be minimal, acknowledging that Whitestone have applied a limestone and granite surface treatment to the approved 'hardstand' (or 'laydown') areas (refer to **Figures 18** and **19** above) to mitigate against excessive dust exposure.

5.3 Landscaping

Conditions 2(h) and (i) of the Councils development approval granted on 20 March 2013 require Whitestone to establish and maintain vegetation screening. In 2012 Whitestone undertook the extensive the planting of trees and shrubs at the Site's southern, western and eastern boundaries. This initially involved the planting of over 8,000 trees to give effect to these conditions. However because of natural intermittent and seasonal flooding at the Site's boundary lines, only 2,570 of these have survived. A further 5,630 trees planted to satisfy conditions 2(h) and (j) have also died as a result of flooding issues and at a cost of \$35,000 to Whitestone (\$25,000 for cost of trees and a further \$10,000 plantation cost).

Whilst landscaping is not considered necessary in order to visually mitigate the development, which essentially presents from public areas as a rural use comprising rural sheds, the use of strategic landscaping is, however, seen to be of benefit.

Accordingly, Whitestone now proposed to relocate their landscaping screening along the southern edge of the western 'laydown' area as illustrated by **Figure 19** and **Annexure 2**. This amendment to Council's prior approval recognises the practical difficulties and wasted costs of attempting to maintain landscaping at the Site's boundaries whilst still ensuring the objectives of conditions 2(h) and (j) are satisfied.

Species to be used will be in consultation with Shire staff to ensure the best opportunity for successful vegetation in context with the pre-existing site conditions.

5.4 Acoustics

The use of the land is not an inherently noisy use. Potentially the most noise would be generated by the washing of rocks associated with the trammel and high volume and/or high pressure water use. However this aspect of the plant is located in the northernmost portion of the site in excess of 400m from the closest residential dwelling. The development and overall use has maintained a minimum buffer of 200m overall from sensitive residential premises. The use of the trammel is already operational and noise generated from that use can already be considered.

In that regard, Whitestone are confident that the product process line does not pose any issues of noise or amenity for neighbouring properties and their obligations to ensure that they meet the Environmental Protection Act (Noise Regulations) would apply to them in the normal way. However, if Council considers this to be a specific matter that ought to be addressed, Whitestone would accept a condition of development approval requiring an acoustic assessment report to be prepared and for any noise mitigation measures to be implemented as recommended in that report.

6.0 CONCLUSION


The development works detailed as part of this application are consistent with Council’s approval of the Site’s ‘Industry – Rural’ and ‘Transport Depot’ land uses and Whitestone’s existing business operations already contemplated by the Shire at its Ordinary Council meeting of 20 March 2013.

There are sound reasons for the Shire to exercise its discretion under clause 8.4.1 of TPS6 and to also grant development approval with respect to the other proposed works. In particular, we contend that in relation to the Site:

- The works merely extend the existing ‘Industry – Rural’ and ‘Transport Depot’ land uses approved by the Shire on 20 March 2013;
- The existing stonewash processing plant employs environmentally sound water recycling initiatives. It does not involve any chemical cleaning nor contamination, instead, simply using high volume/high pressure water to remove clay and fibrous debris from rocks sourced from the quarry. It does not practically require any water extraction from the Site for its continued operation and will not result in the disposal of any waste water on Site. Water is continually recycled and reused on the site via the two ponds with the only by-product being the material removed from the washed stones that will be removed from the ponds and disposed offsite. Notwithstanding, the DoW have already approved Whitestone’s license agreement to take 4,000kL of water from a third party licensee. This water will also be used to suppress any issues of dust arising from the Site’s business operations although observed dust is minimal given the construction of the laydown area with granite fines compared with exposed limestone;
- The extension of the internal road towards the western boundary and construction of a cul-de-sac merely gives effect to condition 2(j) of Council’s approval of 20 March 2013 by constructing a bitumen seal over a designated portion of the ‘laydown’ area already contemplated by the Shire for that surface treatment;
- The northern ‘laydown’ area merely reduces the site coverage of an already approved ‘hardstand area’ per Council’s development approval of 20 March 2013;
- The clarification for the treatment limestone and granite surface seal over the ‘laydown’ areas shown on **Figure 19** and **Appendix 2** will mitigate foreseeable issues of dust and ensuring adequate drainage and hydrocarbon catchment compared with bitumen seal;
- The relocation of vegetation screening towards the southern edge of the western ‘laydown’ area will respond to the Site’s environmental constraints in planting and maintain such screening at its boundary lines, and will ensure the objectives of conditions 2(h) and (j) are satisfied.
- The ancillary structures comprising the weigh bridge, equipments sheds, stock feed extension and roof extension are compliant with the provisions of the Shire’s TPS6 and strategic planning framework.

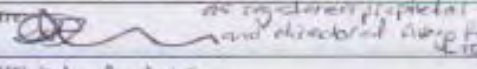
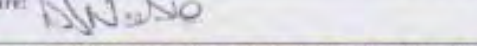

For these reasons we respectfully seek the Shire’s support for these existing and proposed works on Lot 2929 Brand Highway, Muchea.

ANNEXURE 1 –APPLICATION FORM SCHEDULE 7



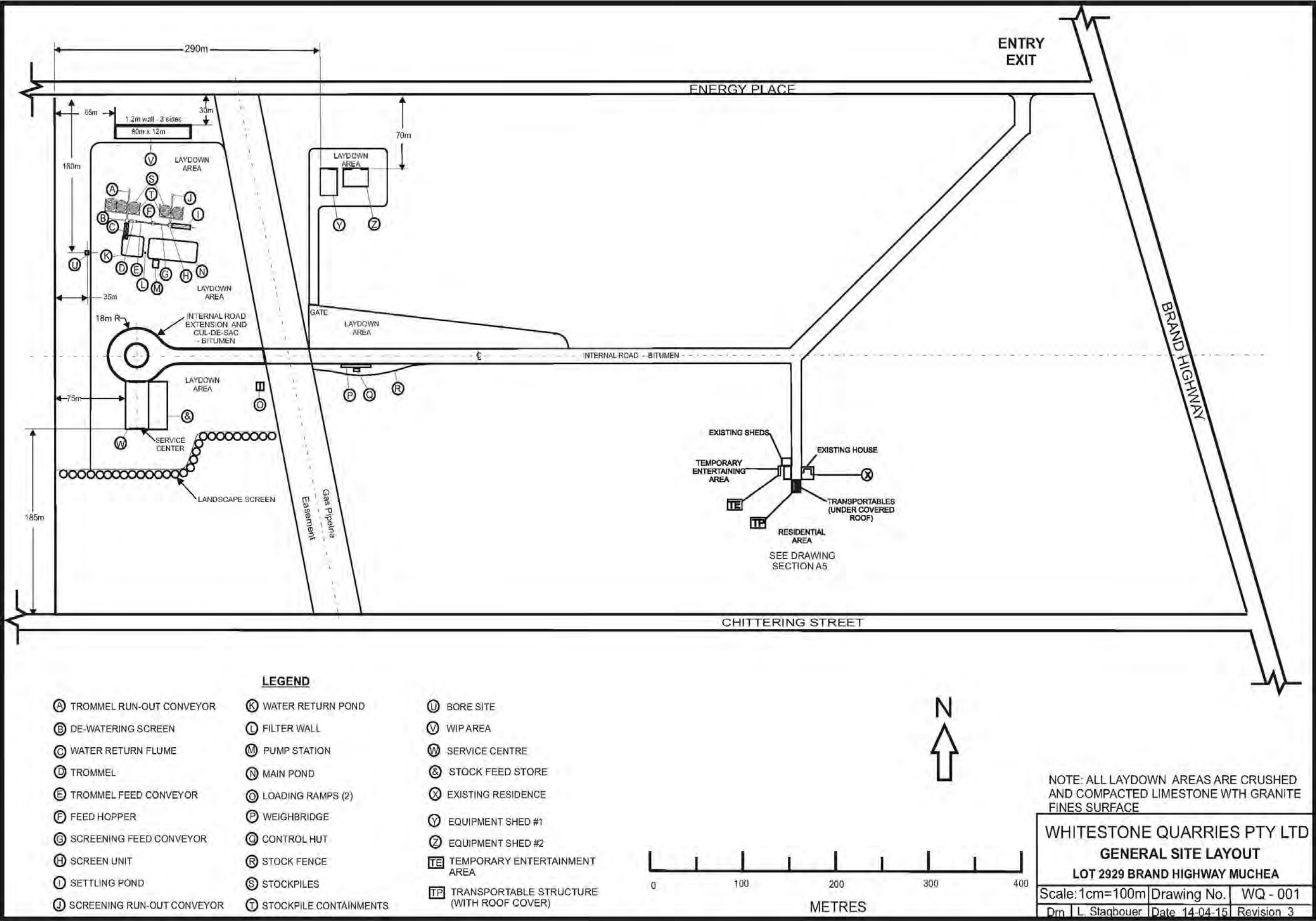
Schedule Planning Scheme No 8

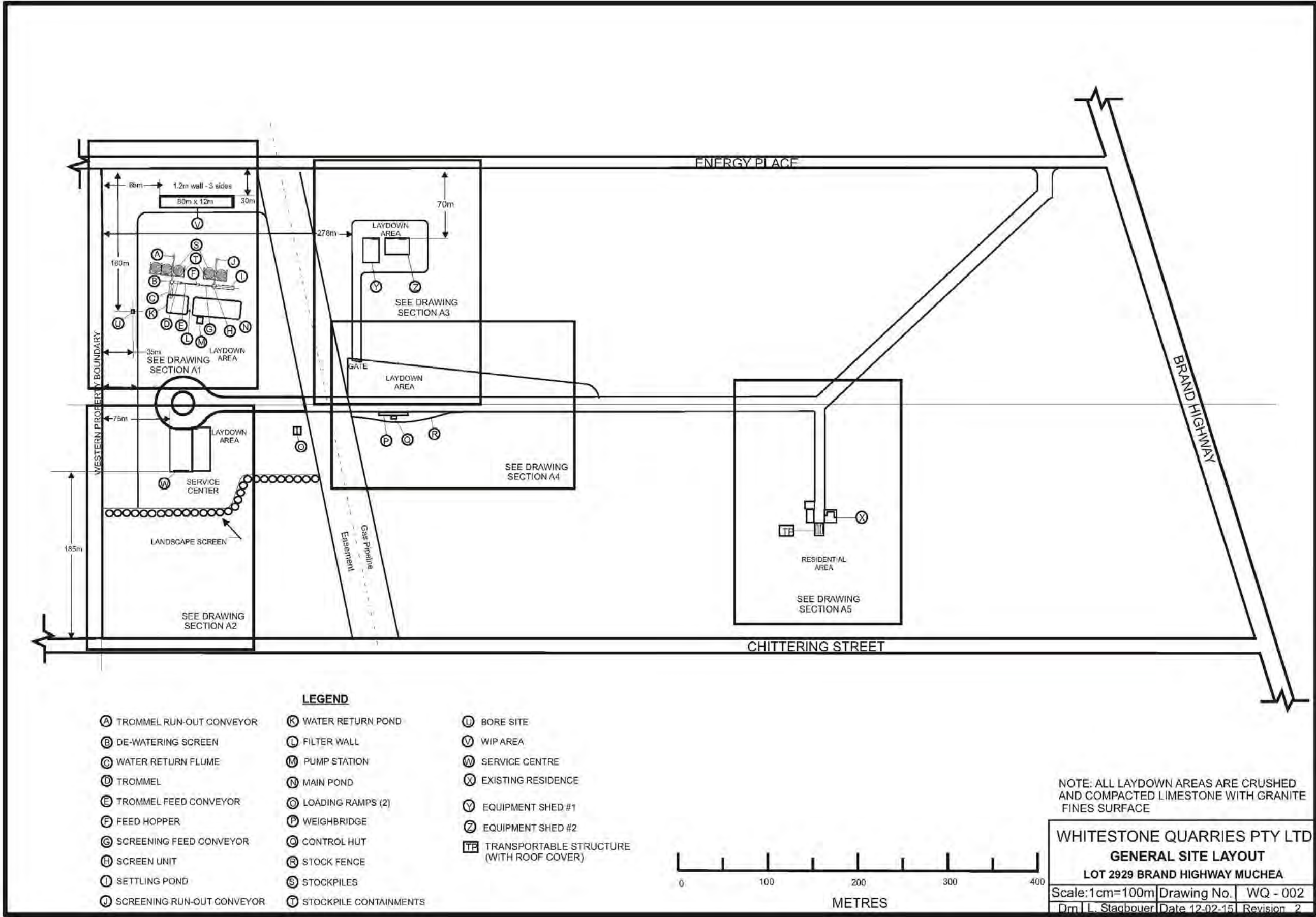
SCHEDULE SEVEN
APPLICATION FOR PLANNING APPROVAL

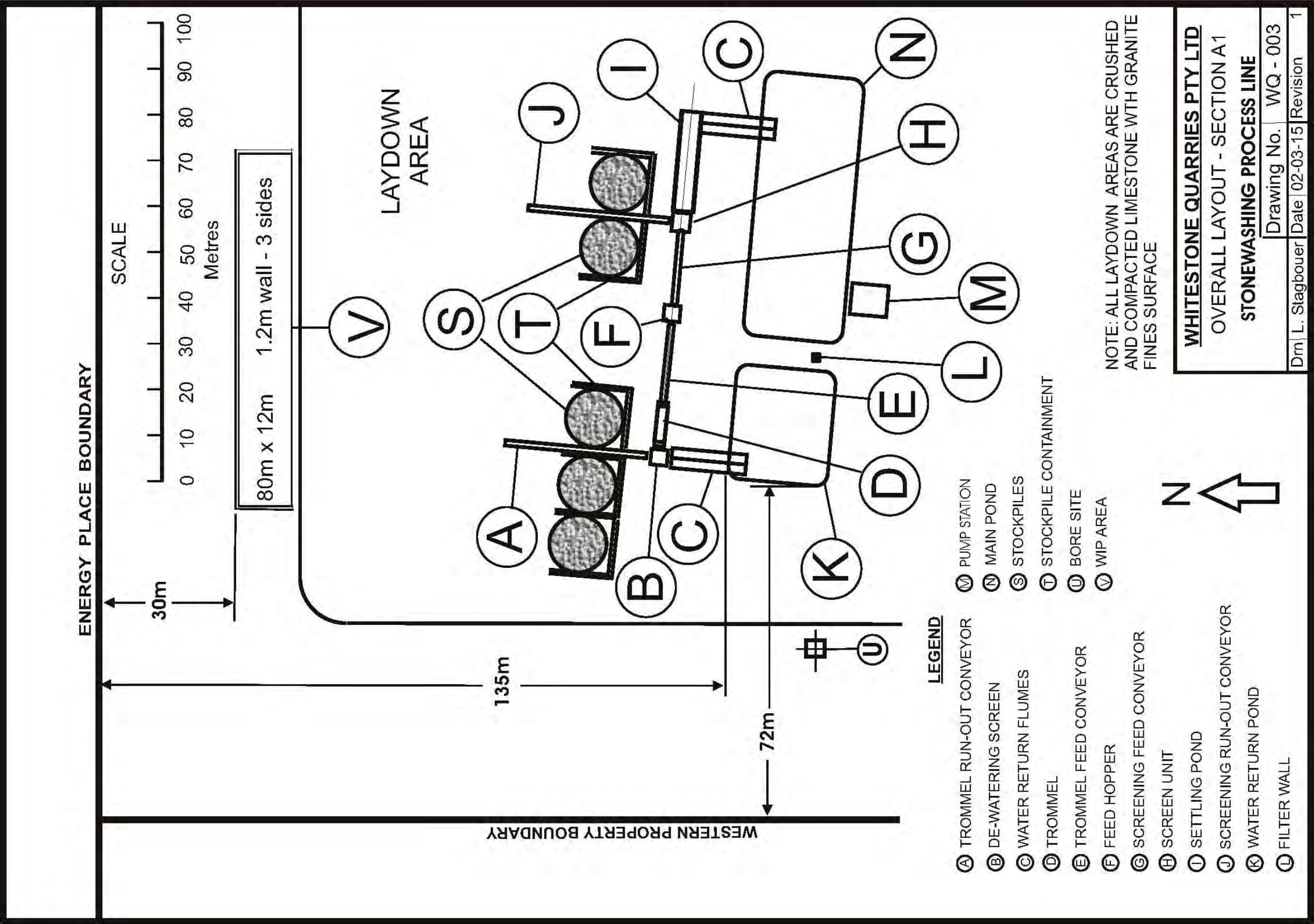
Developer Details		
Name: Leonie Joy Noble, Terrence David Chisholm and Avago Pty Ltd		
Address: Lot 2929 Brand Highway, Muchea		
Postcode: 6501		
Contact Numbers:		
Home: (08) 9571 0500	Work:	Fax:
Mobile: 0428 948 340		
Email: winchester.quarry@bigpond.com		
Contact Person: Allerding and Associates (as agents for the landowners)		
Signature: 		Date: 22 APRIL 2015
Signature: 		Date: 22/4/2015
The signature of the owner(s) is required on all applications. This application will not proceed without that signature.		
Applicant Details		
Name: Allerding and Associates		
Address: 125 Hamersley Road, Subiaco WA		
Postcode: 6008		
Contact Numbers:		
Home: N/A	Work: 9382 3000	Fax: 9382 3005
Mobile: N/A		
Email: lewis@allerdingassoc.com and steve@allerdingassoc.com		
Contact Person for Correspondence: Lewis Page or Steve Allerding		
Signature: 		Date: 22/4/15
Property Details		
Lot No: 2929	House/Street No:	Location No:
Diagram or Plan No: 254600	Certificate of Title Vol. No: 350	Folio: 154A
Title encumbrances (e.g. easements, restrictive covenants): Refer to Annexure 3 (certificate of title)		
Street name: Brand Highway		Suburb: Muchea
Nearest Street Intersection: Energy Place		
Proposed Development Details		
Description of proposed development and/or use: Retrospective & Prospective Industry-Rural/Transport Depot		
Nature of any existing buildings and/or use: Industry - Rural, Transport Depot & Residential Dwelling		
Approximate cost of proposed development (incl GST): \$441,000		
Estimated time of completion: 2 years		

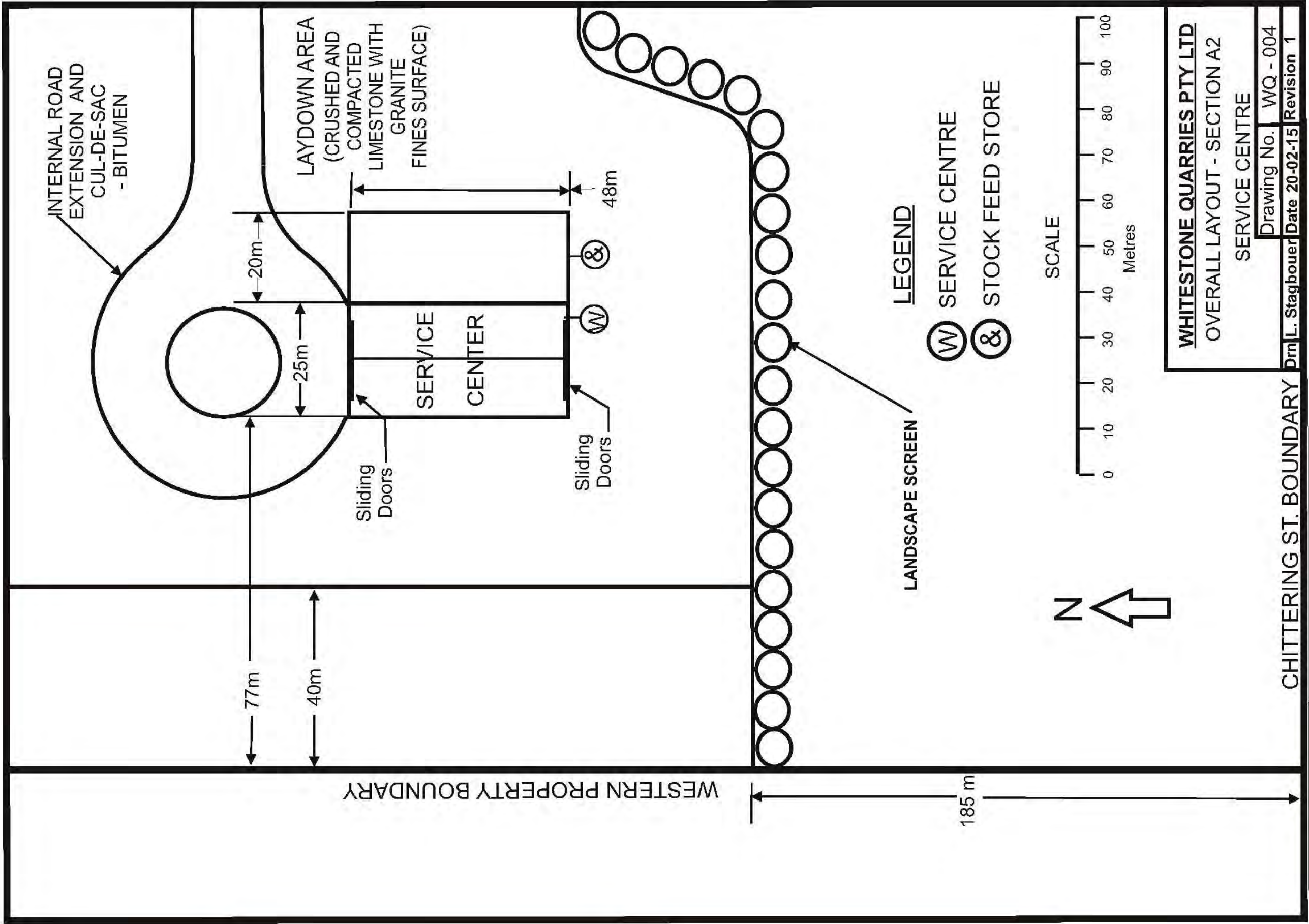
This application is to be submitted with two copies of all plans no larger than A3 size.
A separate application is required for a Building License.

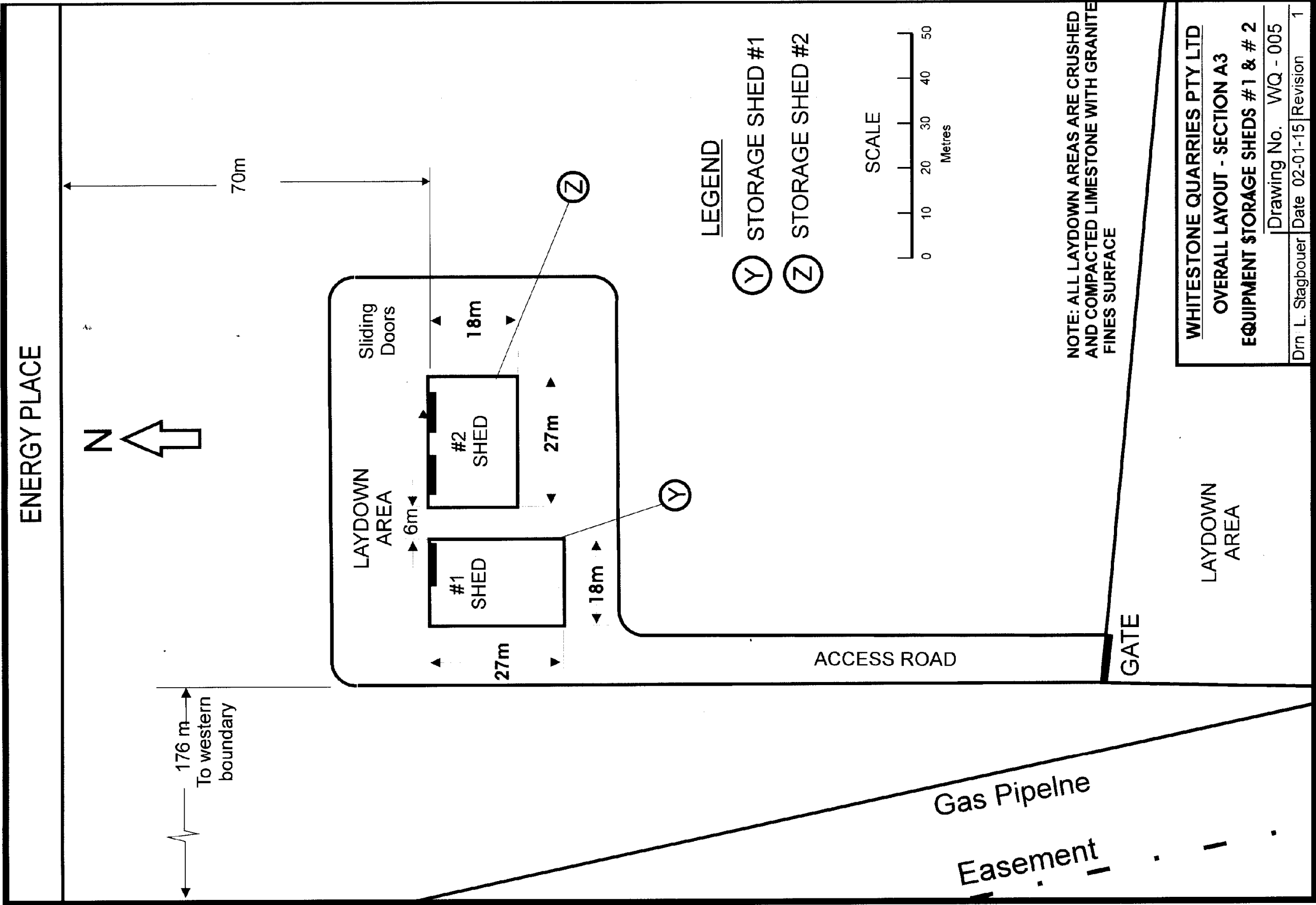
ANNEXURE 2 – DEVELOPMENT APPLICATION PLANS

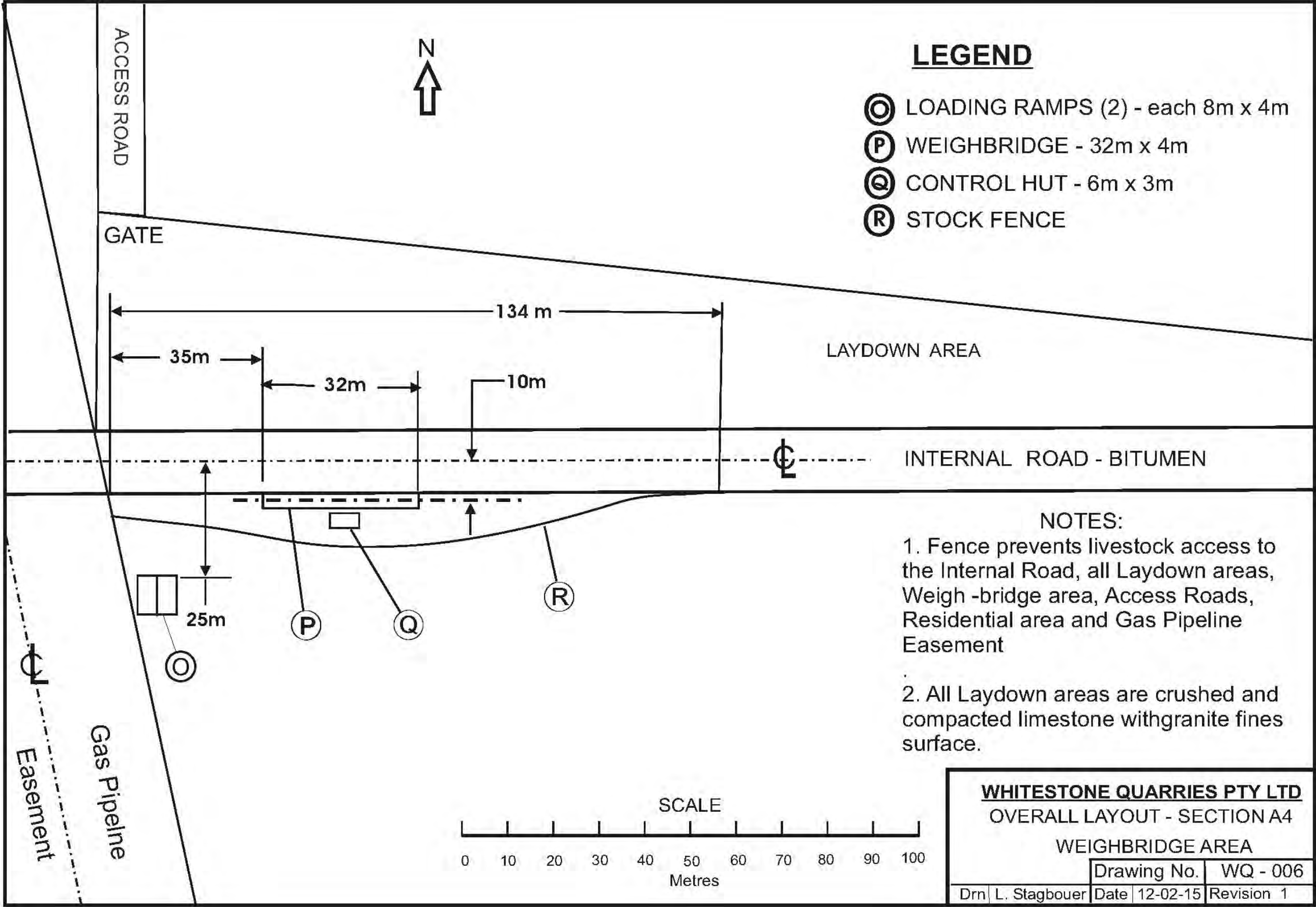


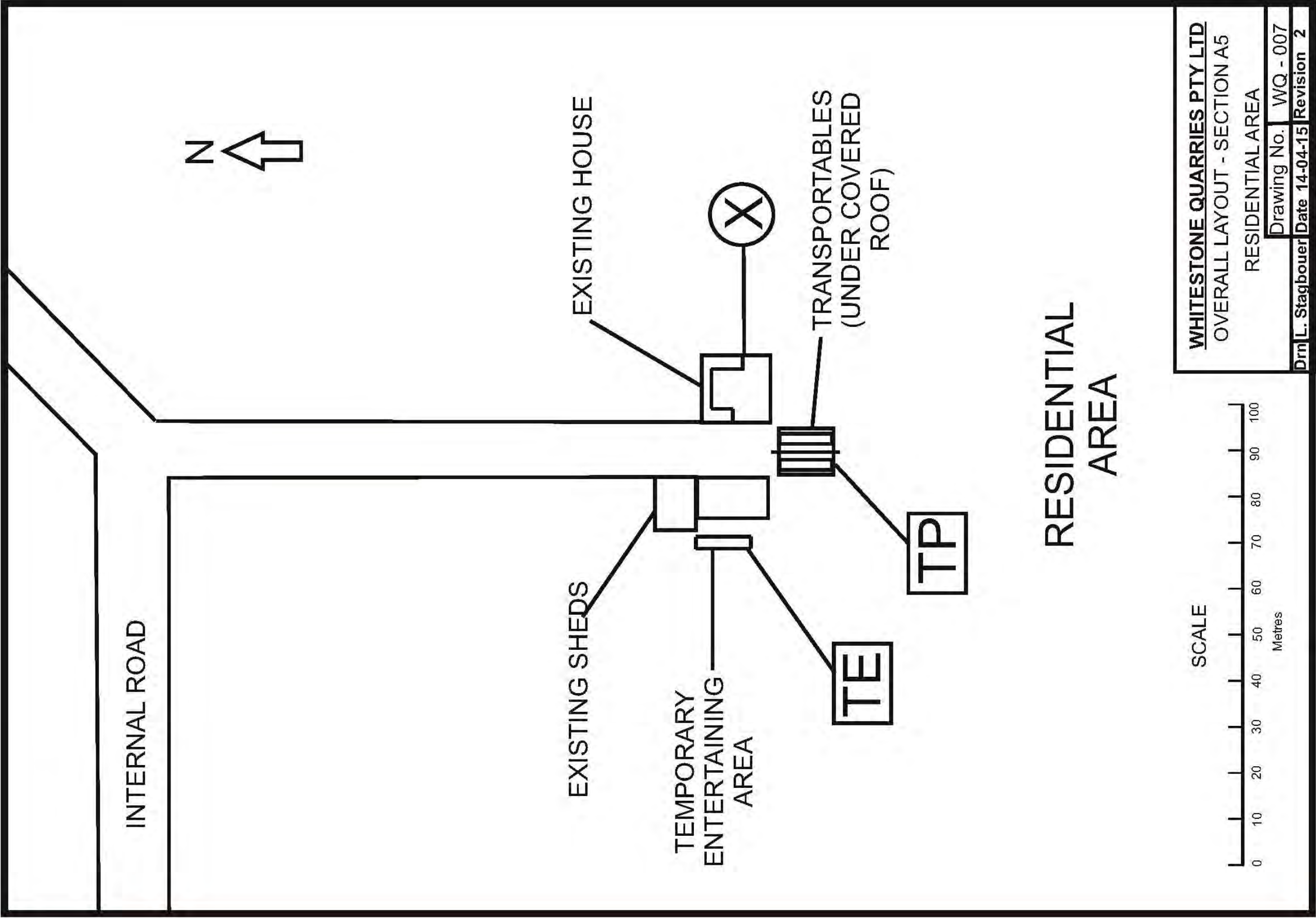


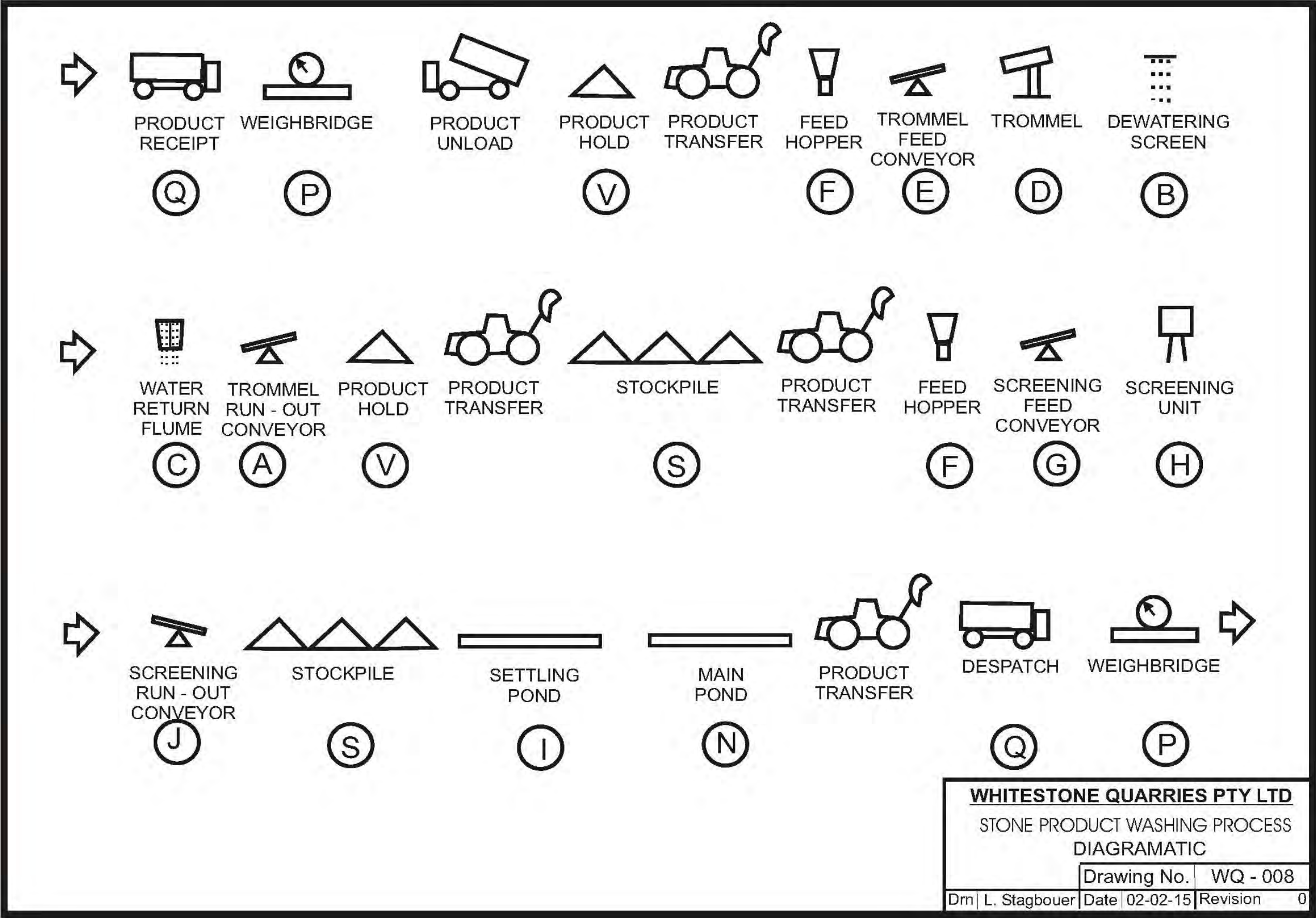













ANNEXURE 3 – CERTIFICATE OF TITLE

31

WESTERN AUSTRALIA



REGISTER NUMBER
2929/DP254600

Duplicate Edition
N/A

Duplicate Issued
N/A

VOLUME
350

FOLIO
154A

RECORD OF CERTIFICATE OF TITLE
UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 2929 ON DEPOSITED PLAN 254600

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

LEONIE JOY NOBLE
TERRENCE DAVID CHISHOLM
AS JOINT TENANTS IN 1/2 SHARE
AVAGO PTY LTD
IN 1/2 SHARE
ALL OF POST OFFICE BOX 70, CARNAMAH
AS TENANTS IN COMMON

(T L944268) REGISTERED 24 MAY 2012

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1.

TITLE EXCLUDES THE LAND SHOWN ON DIAGRAM 100184.

2.

C420738 EASEMENT TO THE STATE ENERGY COMMISSION OF WESTERN AUSTRALIA. SEE INSTRUMENT C420738. REGISTERED 9.9.1982.

*H604804

SUNDRY. THE GRANTEE OF TRANSFER C420738 IS NOW THE DBNGP LAND ACCESS MINISTER PURSUANT TO THE DAMPIER TO BUNBURY PIPELINE ACT 1997. REGISTERED 23.11.2000.

3.

H604804 SUNDRY. PORTION OF THE LAND HEREIN IS WITHIN THE DBNGP CORRIDOR PURSUANT TO THE DAMPIER TO BUNBURY PIPELINE ACT 1997. SEE LAND ADMINISTRATION PLAN 15560. REGISTERED 23.11.2000.

4.

*I210359 TAKING ORDER. THE DESIGNATED PURPOSE OF THE INTEREST TAKEN IS STATE CORRIDOR RIGHTS TO THE DBNGP LAND ACCESS MINISTER UNDER THE PROVISIONS OF THE DAMPIER TO BUNBURY PIPELINE ACT 1997. AS TO THE PORTION OF THE WITHIN LAND SHOWN ON DEPOSITED PLAN 215560 ONLY. REGISTERED 20.8.2002.

5.

*L944269 MORTGAGE TO AUSTRALIA & NEW ZEALAND BANKING GROUP LTD. REGISTERED 24.5.2012.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
See as described in the land description may be a lot or location.

END OF CERTIFICATE OF TITLE

END OF PAGE 1 - CONTINUED OVER

LANDGATE COPY OF ORIGINAL NOT TO SCALE Mon Aug 13 10:53:18 2012 JOB 39798532

30

RECORD OF CERTIFICATE OF TITLE

REGISTER NUMBER: 2929/DP254600 VOLUME/FOLIO: 350-154A PAGE 2

STATEMENTS:
The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:

350-154A (2929/DP254600).

PREVIOUS TITLE:

1021-246.

PROPERTY STREET ADDRESS:

299 BRAND HWY. MUCHEA.

LOCAL GOVERNMENT AREA:

SHIRE OF CHITTERING.

NOTE 1:

A000001A LAND PARCEL IDENTIFIER OF SWAN LOCATION 2929 (OR THE PART THEREOF) ON SUPERSEDED PAPER CERTIFICATE OF TITLE CHANGED TO LOT 2929 ON DEPOSITED PLAN 254600 ON 01-MAY-02 TO ENABLE ISSUE OF A DIGITAL CERTIFICATE OF TITLE.

NOTE 2:

THE ABOVE NOTE MAY NOT BE SHOWN ON THE SUPERSEDED PAPER CERTIFICATE OF TITLE OR ON THE CURRENT EDITION OF DUPLICATE CERTIFICATE OF TITLE.

NOTE 3:

DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING L944269

LANDGATE COPY OF ORIGINAL NOT TO SCALE Mon Aug 13 10:53:18 2012 JOB 39798532

ANNEXURE 4 – WATER RECYCLING REPORT

Water recycling by the business activity

Whitestone Quarries WA Pty Ltd

299 Brand Highway Muchea

Prepared by Wheatbelt Timber Pty Ltd
From independent research and information provided by Terry Chisholm and Leonie Noble March 2015

The Business

The owners of 299 Brand Highway Muchea are Mr Terry Chisholm and Ms Leonie Noble who operate hard-rock quarries at Carnamah, Bencubbin and Mukinbudin which together act as the source for the stone materials delivered to and processed at 299 Brand Highway.

The property is ~64 hectares in size and is bounded by the Brand Highway, Chittering Street, Energy Place and private property to the west.

The business activity that utilises water is the washing of the size graded stone material from the other quarry sites removing vegetable matter and any residual clay and fines from the stone. This is a requirement for the purchasers of the stone for a variety of ornamental and structural processes. The site was selected for its proximity to the Perth market and the zoning that permits the activities to be carried out.

Water Issues

A common design criterion in identifying the various water needs for an agricultural or industrial business activity is that water from one catchment or aquifer is not removed from one aquifer and returned to another catchment or aquifer, i.e. a dam that requires banks to divert water from one surface water catchment into another is generally considered poor design.

The situation that has developed at 299 Brand Highway does not move water from one aquifer to another or removes water from a watercourse but utilises the water which is then returned to the same aquifer from which it was sourced. Combined with the alteration of the total evapotranspiration loss from the dominant grass pasture by the establishment of crushed limestone covered laydown areas results in nil to minimal water loss from the aquifer, certainly less than the atmospheric loss from the grass pasture.

However the shallow groundwater system that the Whitestone business utilises can only be described as 'leaky'. There are leaks to the atmosphere and to lower aquifers, (albeit slow downward movement that may not seem relevant to an annual seasonal water cycle at the surface).

This discussion paper sets out the argument for the various water uses and losses created by the business activity at 299 Brand Highway

Surface water flows

There are two surface water flows onto the property from the west, (agricultural land and bush) and two surface water flows from the south, (Muchea townsite). There is one discharge point for surface water from the property into Ellen Brook under the Brand Highway through a Main Roads culvert. The flow through the property mimics the natural flow.

The property has been actively farmed for many years resulting in modification of the original surface water flow which is fairly typical for farmland throughout Western Australia.

The southern of the flows into the property from the west seems to be a manmade depression that appears to deliver runoff water from the upslope irrigated pastures and market gardens operated by the neighbours. This surface water flow is relatively minor and has been adjusted by a shallow relief drain that directs this flow back into what is the main surface water flow from the west. A shallow relief drain existed at the time of purchase and that drain has been more defined by the current owners.

The surface water flow from the seasonally wet area to the northerly west flow is fed by natural bush and some irrigated pasture and market garden flows into the property north of the centreline of the property. The neighbour to the immediate west has straightened up the naturally meandering flow with a very shallow relief drain and that drain has been continued through the 299 Brand highway property, albeit slightly deeper through the 299 Brand Highway property to the main creekline. The shallow relief drain is discontinuous across the Dampier to Bunbury Gas Pipeline, (DBGP) exclusion reserve. The relief drain also mimics the natural flow. This drain pre-existed the current owners although they have made the drain wider and maintain a better weed management regime for the drain than existed.

The most easterly of the surface water flows from the Muchea townsite feeds into the larger natural creek depression on the property that due to the construction of Chittering Street has become a flood overflow entry source only. For this surface water to impact on the 299 Brand Highway property significant areas of the Muchea townsite will be flooded. The culvert itself will barely cope with a 5 year flood event, however there appears to be other factors that will impact the utilisation of this culvert.

The westerly culvert from the Muchea townsite is capable of coping with a 5 year flood event and flows on an annual basis. This entry flow activates as frequently as the northern west surface water entry point. The water entering 299 Brand Highway from the Muchea townsite comes up against the slightly elevated surface created by the DBGP and spreads out causing a seasonally shallow flooded area that combines with surface water from the southern east surface water entry point. Eventually the water level rises above the surface of the DBGP exclusion reserve and flows easterly joining with water from the west leaving the property at a Main Roads culvert under Brand Highway.

The Main Roads Brand Highway culvert causes minor flooding on an annual basis into 299 Brand Highway although the flooding is more or less confined to the creekline.

There is no use of the surface water by the business and the internal culverts are all designed to cope with a 20 year rainfall event, (they all exceed the 20 year design criteria) so there are no impediments to the water flow through the property. There is no intention of making use of any surface water flows.

The evapotranspiration from the grassland is arguably 1.5 times greater than the evaporation from the soil surface during the growing season. The property at 299 Brand Highway has an extended growing season significantly due to the shallow water table at <1.5m from the ground level.

The only valid impact on water loss from the shallow groundwater is the difference between the bare surface water loss to the atmosphere and the evapotranspiration if the site was left as grassland. Using the Penman-Monteith model data “evapotranspiration over the grassland is 1.5 times greater than evaporation from the soil surface during the growing season” Reiji Mimura; et al; 2005. This corresponds well with the outcome using the Bowen Ratio for the evaporative fraction of different surfaces, (“Temperate Forests and Grasslands 0.4 -0.8 the difference is 20 – 40 cm on an annual basis”).

So if the surface water evaporation from a water surface is 1.82m per annum the loss from grassland is arguably 1.42m per annum and 1.02m from an exposed soil surface, (the surface roughness and radiation reflection have a bearing on the equations). The difference between grassland and a crushed limestone surface is easily in the order of 0.20m of annual evaporative loss. This calculates out to 500 kilolitres per annum or using the higher figure of 0.4m, 1000 kilolitres per annum.

Either way there is no net loss from the property ecosystem of water from the shallow ground water system for water used as a dust suppressant on the crushed limestone surface and arguably a net gain in water compared to the pre-existing grassland.

Daily evaporation rate. (Penman-Monteith Model)

where

E = total evaporation rate, (cm d-1)

En = evaporation rate due to net radiation, (in cm d-1)

Δ = saturation vapour pressure gradient (mb 0C-1)

 = modified psychrometric constant, (mb 0C-1)

Ea = evaporation rate due to mass transfer, (cm d-1)

Ref: Evapotranspiration over the grassland field in the Liudaogou Basin of the Loess Plateau; Reiji Kimura; Jun Fan; et al July 2005.

An evaluation of grassland evapotranspiration; Lawrence C Nkemdirim & Paul F Haley; 1972.

Other water usage

The owners utilise a 240V submersible pump located near the house for drinking water and for garden use. There is no information known about this bore such as depth or construction details as it predates the current owners.

A new bore has been excavated south west of the West Pond. The drill log is attached. The plan for this water is to provide emergency water for firefighting.

Discussion

The water used to wash the stone is immediately recycled into the same water source that it is drawn from and in a very short time frame resulting in water use but no water loss to the aquifer or to the environment.

Returning to the evaporation loss from the open water surface where previously the loss to the atmosphere was determined to be ~2490 kilolitres. This in reality is countered by the evapotranspiration from the site if still covered by grassland. The difference between the two atmospheric losses to the system is 0.40m per year which calculates to 550 kilolitres which is the actual atmospheric loss to the groundwater system, i.e. not 2490 kilolitres.

The water decrease from the crushed limestone laydown area compared to the pre-existing grassland calculates to between ~500 kilolitres and ~1000 kilolitres which replaces any evaporative loss from the pond surface.

The owners acknowledge the requirement for the Department of Water to control the scarce water resources in Western Australia however the current requirement centres on use of water with the Legislative definition cited in the Rights in Water Act 1914 as to take water as:-
take ; means to remove water from a watercourse, or reduce the flow of water in, a watercourse, wetland or underground water source including by –
(a) Pumping or siphoning, or
(b) Stopping, including or diverting the flow of water, or
(c) Releasing water from a wetland, or
(d) Permitting water to flow under natural pressure from a well, or
(e) Permitting stock to drink from a watercourse or wetland
and includes storm water during, or ancillary to any of those processes or activities.

The Act is silent on returning the same water to the water source being utilised.

The argument being put forward by the owners of 299 Brand Highway Muchea is that the planned activities whilst they do remove water from the shallow ground water the same water is returned in a very short recycling exercise with nil to minor loss to the ecological system.

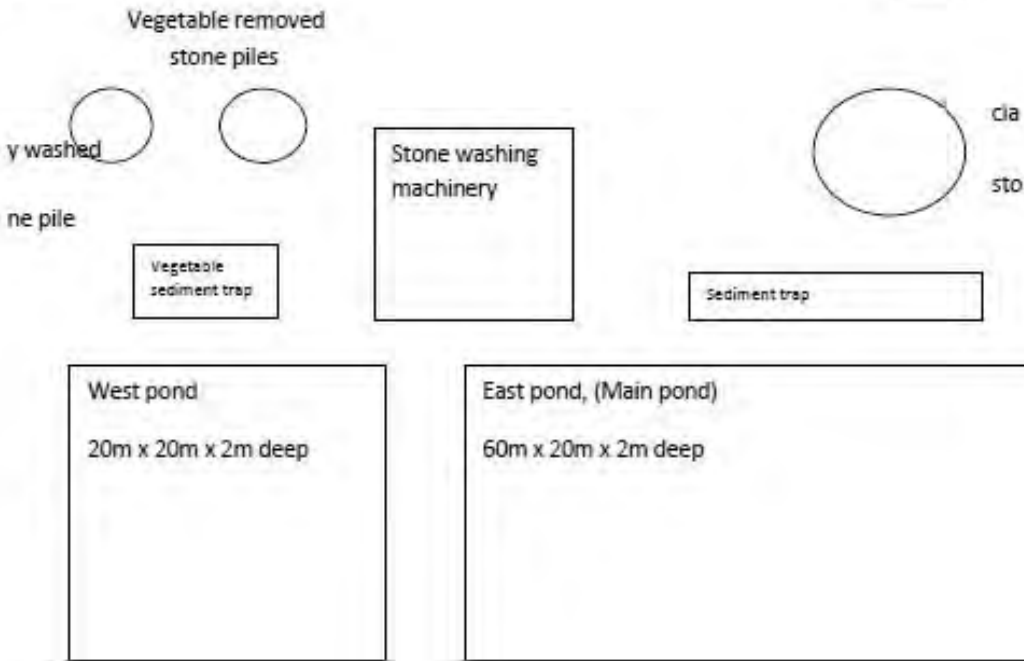
Additionally the business has altered the pre-existing grassland to a system that reduces the atmospheric evapotranspiration losses in a way that closely compensates the environment for the temporary use of the shallow groundwater with minimal disturbance

This type of activity meets all the sustainability requirements for a commercial business. The business is also designed to principally be sustainable both environmentally and commercially with planned handover to the next family generation meeting a clear market niche.

Appendix 1

Muchea Stone Washing Facility

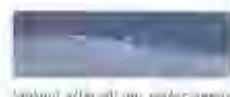
Final stone
product



ANNEXURE 5 – DoW APPROVAL OF WATER ALLOCATION AGREEMENT



Government of Western Australia
Department of Water
Swan Avon Region



Our ref: RF11209
Enquiries: Amy Evangelista
Tel: (08) 6250 8020

Whitestone Quarries W.A. Pty Ltd
PO Box 20
MUCHEA WA 6501

Attn: Mr Terence Chisholm – Director

Dear Mr Chisholm,

Re: Your application to enter into an Agreement to take water under Clause 30 of the Rights in Water and Irrigation Act (1914)
Property: Lot 2929 Brand Highway, Muchea

Please find enclosed the following:

- Your Approval of Agreement to Take Water – AGR180922(1)
- Meter Water Use Card x 1
- Meter Water Use Card Example
- Attachment – Your rights for review

Please take time to read these documents as they contain important information about your rights and responsibilities.

Your Agreement restricts you to a total annual water entitlement of **4,000kL**, which is the maximum amount of water that may be drawn over the irrigation year (defined as **1 April** to **31 March** twelve months later).

Please note that you are required to comply with the conditions of Mr N Gianatti's licence to take water GWL180922(4). Please contact the licensee for a copy of their licence.

It is recognised that the majority of your revised water use is water lost through evaporation from your excavated ponds. However, the water drawn through the pump(s) located within your excavations must be recorded in accordance with the department's *Strategic Policy 5.03: Metering the taking of water*, specifically section 3.4, where the licensee has an agreement regarding the use of part of a water entitlement.

Please be advised that you are required to install an approved water meter to each draw-point through which water is taken under this licence, by no later than **60 days** from the date of issue of this licence. You must notify the department when installation of the meter(s) is complete and provide the meter type, serial number, units and installation date to the department.

You are required to record your meter readings and volume pumped, monthly and forward the information to the Department of Water by **7 April** each year.

254 Fitzgerald Street Northam, Western Australia 6401
PO Box 497 Northam, Western Australia 6401
Telephone (08) 9600 2600 Facsimile (08) 9622 7155
www.water.wa.gov.au
wa.gov.au

It is your responsibility to record the meter readings and make appropriate adjustments to your watering regime when necessary to ensure you remain within your annual water entitlement. Further meter water use cards are available from the Department of Water.

Under Section 5C of the *Rights in Water and Irrigation Act 1914*, the unauthorised taking of water in excess of your agreement annual entitlement is prohibited and may incur a penalty.

Please also note that the production bore drilled by Mr Gianatti on the 1/1/2014 was constructed within the Perth – Mirrabooka aquifer. In this regard, this bore cannot be utilised for any purposes beyond emergency fire fighting, as it is screened within a different water resource to that which you are authorised to draw from under this Agreement.

Please see the attachment regarding your rights for a review of the department's decision.

If you wish to continue taking water after this Agreement expires, it is your responsibility to apply to the Department of water for its renewal. Your past performance in complying with this Agreement will determine the terms, conditions or restrictions of any renewal.

If this Approval of Agreement to Take Water expires and you have not applied to renew it, then the taking of water must cease, or you will be in breach of the *Rights in Water and Irrigation Act 1914*. It is suggested that an application for renewal be made at least one month in advance of the Approval of Agreement to Take water expiry date.

The department may amend, suspend or cancel this Agreement in certain circumstances.

For further information on water licensing, please refer to the frequently asked questions (FAQ's) series on the department's website, under the *Business with water* tab.

Please note that the department maintains 'Water Register' containing information on Western Australia's water availability and licensing details. An extract of this agreement has been placed on the register and can be viewed online at <http://www.water.wa.gov.au/ags/WaterRegister/>.

If you have any queries about this or any other water licensing matter please contact Amy Evangelista by telephone on 6250 8020.

Yours sincerely,

Paul Gherghetta
A/Regional Manager
Swan Avon Region

8.14.2015

Cc:
Mr Lance Staggbauer via email to
Minister1@bigpond.com

ATTACHMENT - YOUR RIGHTS FOR REVIEW

You can ask for more information about our decision in relation to your licence. Upon request we will provide a Statement of Reasons for the period for which the licence is granted or the inclusion of any term, condition or restriction. The request for more information must be in writing to the Department of Water within 28 days.

You may also apply to the State Administrative Tribunal (SAT) within 28 days for a review of our decision, by contacting the SAT office directly.

- In person

State Administrative Tribunal
4th floor, 12 St Georges Terrace Perth WA 6000
- In writing:

State Administrative Tribunal
GPO Box U1991
Perth WA 6845
- By telephone:

Metro: (08) 9219 3111
Regional: 1300 306 017 (for the cost of a local call)
- By fax:

(08) 9325 5099

For more information about the State Administrative Tribunal please visit their website www.sat.justice.wa.gov.au.

File No: RF11209



Government of Western Australia
Department of Water

Page 1 of 1
Instrument No. AGR180922(1)

APPROVAL OF AGREEMENT TO TAKE WATER

Granted by the Minister under clause 30, Schedule 1 of the Rights in Water and Irrigation Act 1914

This agreement relates to: LICENCE TO TAKE WATER GWL102190(4)

Third Party to Agreement	Whitestone Quarries W.A. Pty Ltd		
Description of Water Resource	Gingin Perth - Superficial Swan	Agreement Annual Water Entitlement	4000 kL
Location of Water Source	Swan Location 2929 - Volume/Folio 350/154A - Lot 2929 Brand Hwy Muchea		
Authorised Activities	Taking of water for	Location of Activity	
	Dust suppression for industrial purposes	Swan Location 2929 - Volume/Folio 350/154A - Lot 2929 Brand Hwy Muchea	
	Water for Industrial purposes		
Duration of Agreement	From 8 April 2015 to 7 April 2017		

This Agreement is subject to the following terms, conditions and restrictions:
End of terms, conditions and restrictions

This Agreement is issued subject to the Rights in Water and Irrigation Regulations 2000.



EcoAcoustics

Whitestone Quarries 299 Brand Hwy Muchea Wash Plant Noise Assessment

8 June 2015

Report Number: 15030185-01

www.ecoacoustics.com.au

ACN 135 697 095
10 Alyxia Place
Ferndale Western Australia 6148
Telephone: (08) 9258 9009



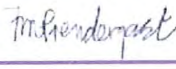

Report: 15030185-01

EcoAcoustics Pty Ltd		
ACN: 135697095		
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EcoAcoustics has prepared this report for the sole use of the Client and for the intended purposes as stated in the agreement between the Client and EcoAcoustics. The report may not be relied upon by any other party without the written permission of EcoAcoustics.

EcoAcoustics has exercised due and customary care in conducting this assessment but has not, save as specifically stated, independently verified any information provided by others. Therefore, EcoAcoustics assumes no liability or loss resulting from errors, omissions or misrepresentations made by others. This report has been prepared at the request of the Client. The use of this report by unauthorised third parties without the written permission of EcoAcoustics shall be at their own risk and EcoAcoustics accept no duty of care to any such third party.

Any recommendations, opinions or findings stated in this report are based on facts as they existed at the time EcoAcoustics performed the work. Any changes in such circumstances and facts upon which this report is based may adversely affect any recommendations, opinions or findings contained within this report.

Document Information			
Author:	Francis Prendergast <i>Approved Noise Officer No. 11043</i>	Verified:	Rebecca Ireland
Position:	Consultant	Position:	Company Director
Signature:		Signature	
Date of Issue:	8 June 2015		

Revision History				
Revision	Description	Date	Author	Checked



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Executive Summary

EcoAcoustics Pty Ltd was commissioned by Whitestone Quarries to conduct a noise assessment of the wash plant at 299 Brand Highway Muchea. The Shire of Chittering requires a noise assessment of the site, after complaints about the operations. The purpose of this report is to assess the noise emissions from the wash plant in accordance with the prescribed standards contained in the *Environmental Protection (Noise) Regulations 1997*.

The results of the noise measurements and predictions show that the wash plant at 299 Brand Highway Muchea comply with the assigned noise levels associated with the *Environmental Protection (Noise) Regulations 1997*.



1 Introduction

EcoAcoustics Pty Ltd was commissioned by Whitestone Quarries to conduct a noise assessment of the wash plant at 299 Brand Highway Muchea. The Shire of Chittering requires a noise assessment of the site, after complaints about the operations. The purpose of this report is to assess the noise emissions from the wash plant in accordance with the prescribed standards contained in the *Environmental Protection (Noise) Regulations 1997*.

Appendix A contains a description of some of the terminology used throughout this report.

1.1 Site Locality& Surroundings

The site is located in Muchea, and is currently rural industry. The site and surroundings are shown in an aerial photo in *Figure 1.1*.

Across Chittering Road to the south of the site are residential premises. There is also one residential premises to the west. The Brand Highway is located to east of the site.



Figure 1.1: Site and Surroundings (Source: Google Earth)

1.2 Site Layout

The site washes, stores and dispatches decorative stone to the wholesale landscape market. It is understood that the wash plant has recently been added to the site. The site generally operates between 7am and 5pm, Monday to Saturday.



2 Criteria

In Western Australia all Environmental noise is regulated by the *Environmental Protection Act 1986* and the *Environmental Protection (Noise) Regulations 1997*. Noise emissions are required to satisfy the assigned noise levels specified in Regulations 7, 8 and 9.

The standard stipulated in Regulation 7 of the Environmental Protection (Noise) Regulations 1997 states:

7. (1) Noise emitted from any premises or public place when received at other premises –
- a) Must not cause or significantly contribute to, a level of noise which exceeds the assigned level in respect of noise received at premises of that kind; and
 - b) Must be free of –
 - o Tonality;
 - o Impulsiveness; and
 - o Modulation.

A...noise emission is taken to significantly contribute to a level of noise if the noise emission exceeds a value which is 5dB below the assigned level...

Regulation 9 defines tonality, impulsiveness and modulation. It is regarded that noise is free of these characteristics if:

- a) Tonality, impulsiveness and modulation cannot be equitably removed by means other than decreasing the overall level of noise emission; and
- b) Subsequent to any adjustments as displayed in *Table 2.1*, noise emissions remain compliant with the required standards when measured at the point of reception.

Table 2.1 Adjustments for Intrusive Characteristics

Tonality	Modulation	Impulsiveness
+ 5dB	+ 5dB	+ 10dB

The baseline assigned levels (prescribed standards) are specified in Regulation 8 and are shown below in *Table 2.2*.



Table 2.2 Baseline Assigned Noise Levels

- 8 -

Premises Receiving Noise	Time Of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise Sensitive	0700 to 1900 hours Monday to Saturday (Day)	45 + influencing factor	55 + influencing factor	65 + influencing factor
	0900 to 1900 hours Sunday and public holidays (Sunday)	40 + influencing factor	50 + influencing factor	65 + influencing factor
	1900 to 2200 hours all days (Evening)	40 + influencing factor	50 + influencing factor	55 + influencing factor
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	35 + influencing factor	45 + influencing factor	55 + influencing factor
Commercial	All hours	60	75	80
Industrial	All hours	65	80	90
Industrial and utility premises in the Kwinana Industrial Area	All Hours	75	85	90

For the residences closest located on Chittering Road, an influencing factor of 5 has been determined. The influencing factor has been based on the current zoning for the site. It is understood that the current land use zoning for the site is rural industry, landscape supplies, transport depot and warehouse. The assigned noise levels are shown in Table 2.3.



Table 2.3 Assigned Noise Levels

Premises Receiving Noise	Time Of Day	Assigned Level (dB)		
		L _{A10}	L _{A1}	L _{Amax}
Noise Sensitive	0700 to 1900 hours Monday to Saturday (Day)	50	60	70
	0900 to 1900 hours Sunday and public holidays (Sunday)	45	55	70
	1900 to 2200 hours all days (Evening)	45	55	60
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	40	50	60



3 Methodology

3.1 Site Measurements

The Regulations specify certain requirements when conducting noise measurements. These requirements are defined in Regulations 19, 20, 22 and 23 and Schedule 4. Site noise measurements have satisfied these requirements, with the following detailed:

- Measurements were completed on the site and at nearby locations using a Type 1 Sound Level Meters Norsonic 140 (S/N 1405472);
- The meter holds current laboratory certificate of calibration, available upon request;
- The meter records slow and fast time weighted sound levels, allowing relevant data to be collected;
- The microphone was both fitted with a standard wind screen;
- During the measurements, the microphone was at least 1.2 metres above the ground level and at least 3 metres from reflecting facades (other than the ground plane), as such no adjustments have been applied for reflected noise.

Noise level measurements were completed on 18th May 2015 between 12:00pm and 1:00pm. Meteorological conditions at the time, recorded at the Bureau of Meteorology's Pearce Site, were:

- Temperature: 15° to 18°C
- Relative Humidity: not recorded
- Wind Speed: 9 km/h (2.5 m/s)
- Wind Direction: SSW

Noise level measurements were conducted at a number of locations within the Site and also at locations adjacent to site boundary.

3.2 Noise Modelling

Digital terrain noise modelling of the site and surroundings has been completed using Noise Mapping Australia PEN3D2000, noise modelling software. Noise modelling is used as it is not effected by background noise sources and can provide the noise level for various weather conditions.

The software incorporates a complex variation of the CONCAWE algorithms enabling the modelling to include the influence of wind and atmospheric stability. Input data required in the model are:

- Meteorological Information;
- Topographical data, intervening barriers and buildings;
- Ground Absorption; and
- Source sound power levels.



4 Noise Measurement Results

Figure 4.1 shows the measured noise levels on the site. A summary of the noise levels are presented in Table 4.1. Table 4.2 presents the predicted L_{A10} noise levels at the closest residences on Chittering Road. The L_{A10} parameter has been presented as the plant operates constantly during the day period, making this parameter the most relevant. Figure 4.2 presents a chart showing the characteristics of the noise associated with the wash plant. As can be seen from this figure, the noise associated with the wash plant is not considered tonal, therefore a penalty adjustment does not apply.



Figure 4.1: Site and Surroundings (Source: Google Earth)



Table 4.1: Summary of Measured Noise Levels

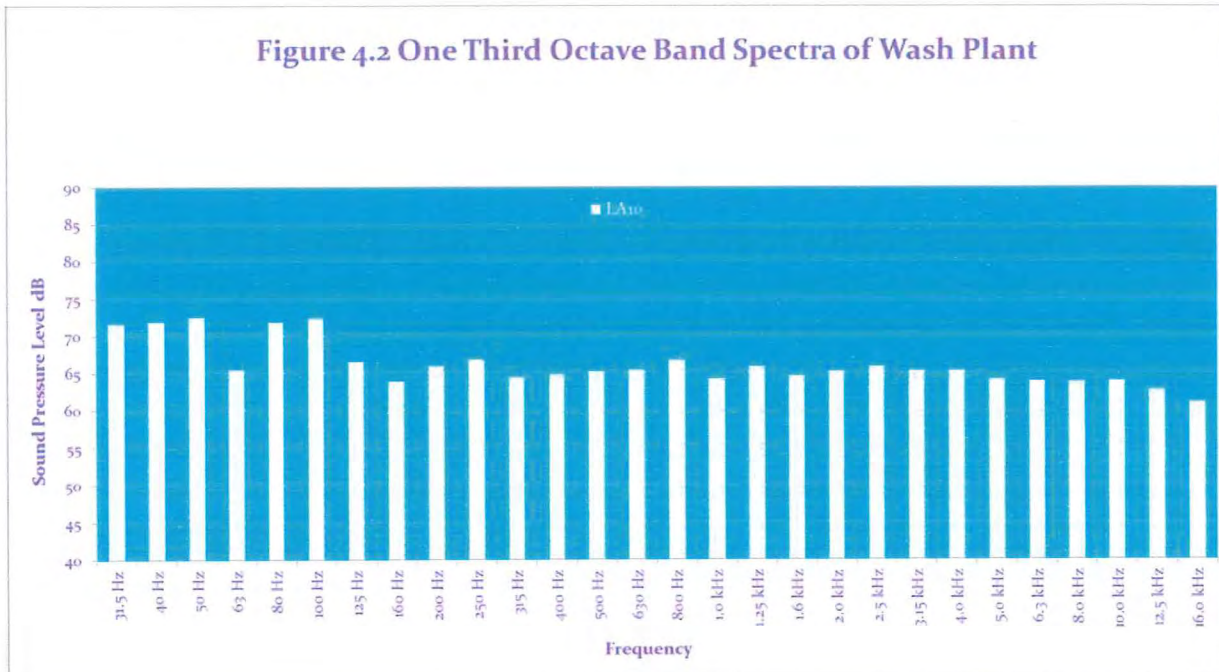
Measurement Location No. (Refer Fig 4.1)	Measured Level, dB(A)		
	L _{A1}	L _{A10}	L _{Amax}
1	75	75	76
2	71	71	71
3	75	75	75
4	64	64	67
5	49	46	52
6	38	36	42
7	47	42	49

Table 4.2: Chattering Road Noise Levels

Residence	Measured Level, dB(A)	Complies
	L _{A10}	
R 1	31	Yes
R 2	31	Yes



Figure 4.2 One Third Octave Band Spectra of Wash Plant





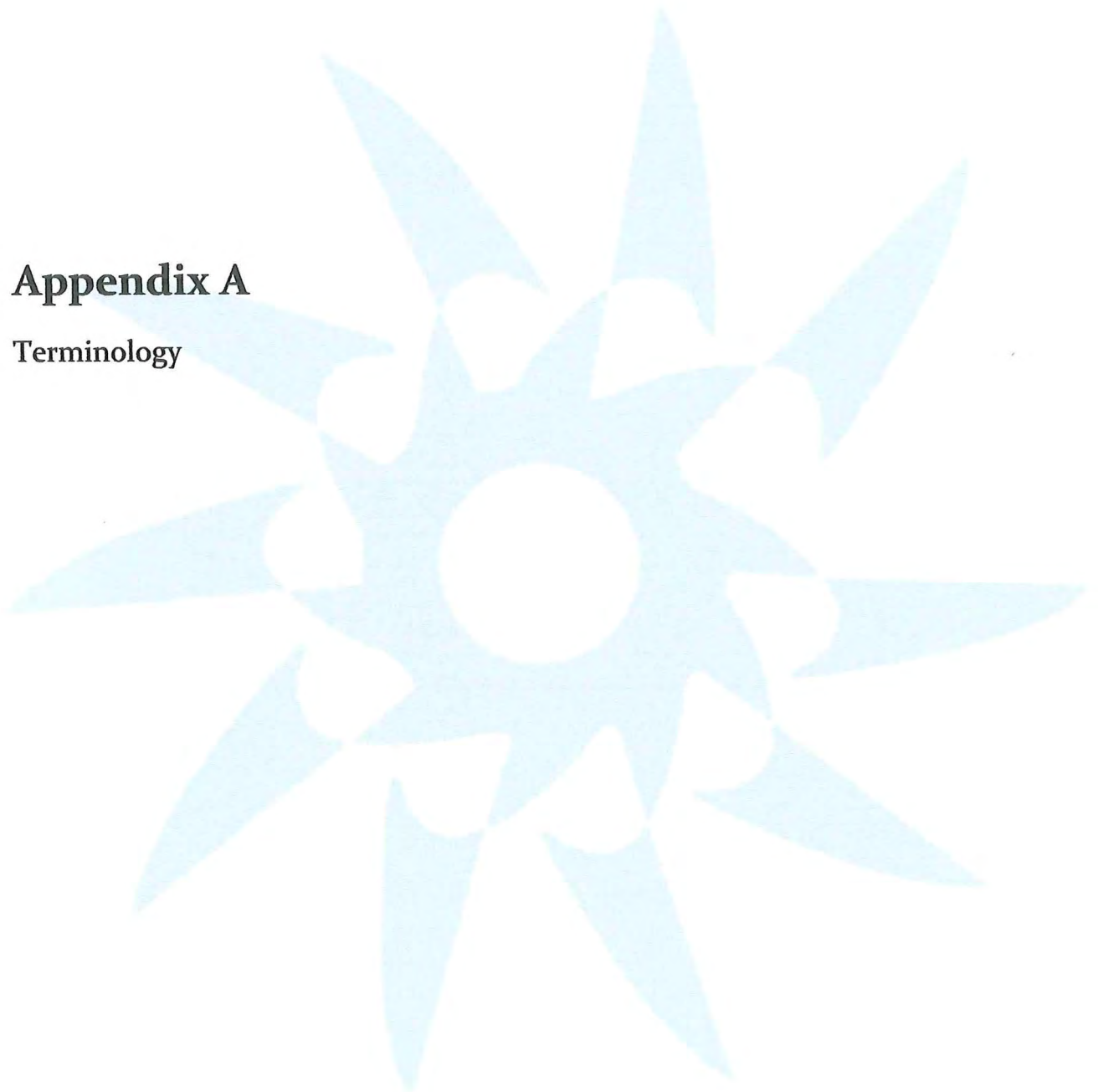
5 Conclusion

The results of the noise measurements and predictions show that the wash plant at 299 Brand Highway Muchea comply with the assigned noise levels associated with the Environmental Protection (Noise) Regulations 1997



Appendix A

Terminology





Terminology

Ambient Noise

Ambient noise refers to the level of noise from all sources, including background noise as well as the source of interest.

A-Weighting

An A-weighted noise level is a noise level that has been filtered as to represent the way in which the human ear distinguishes sound. This weighting indicates the human ear is more sensitive to higher frequencies than lower frequencies. The A-weighted sound level is described as L_A dB.

Background Noise

Background noise is the noise level from sources other than the source of interest. Background may originate from such things as traffic noise, wind induced noise, industrial noise etc.

Decibel (dB)

The decibel is the unit that characterises the sound power levels and sound pressure of a noise source. It is a logarithmic scale with regard to the threshold of hearing.

Impulsive Noise

An impulsive noise source is a short-term impact noise which may originate from such things as banging, clunking or explosive sound.

Influencing factor

$$= 1/10 (\% \text{ Type } A_{100} + \% \text{ Type } A_{450}) + 1/20 (\% \text{ Type } B_{100} + \% \text{ Type } B_{450})$$

Where:

% Type A_{100} = The percentage of industrial land within a 100m radius of the premises receiving noise

% Type A_{450} = The percentage of industrial land within a 450m radius of the premises receiving noise

% Type B_{100} = The percentage of commercial land within a 100m radius of the premises receiving noise

% Type B_{450} = The percentage of commercial land within a 450m radius of the premises receiving noise

+ Traffic factor (maximum 6dB)

= 2 for each secondary road within 100m

= 2 for each major road within 450m

= 6 for each major road within 450m

 L_{A1}

An L_{A1} level is the A-weighted noise level which is overreached for one percent of a measurement period. It represents the average of the maximum noise levels measured.

 L_{A1} assigned level

An assigned L_{A1} level which is not to be exceeded for more than 1% of a delegated assessment period.

 L_{A10} assigned level

An assigned L_{A10} level which is not to be exceeded for more than 10% of a delegated assessment period.

 L_{A10}

An L_{A10} level is the A-weighted noise level which is exceeded for 10 percent of the measurement period and is considered to represent the “intrusive” noise level.

 L_{A90}

An L_{A90} level is the A-weighted noise level which is overreached for 90 percent of the measurement period. It represents the “background” noise level.

 L_{Aeq}

L_{Aeq} refers to the comparable steady state of an A-weighted sound which, over a specified time period, contains the same acoustic energy as the time-varying level during the specified time period. It represents the “average” noise level.

 L_{AFast}

The noise level in decibels, obtained using the A frequency weighting and the F time weighting as specified in AS1259.1-1990. L_{AFast} is used when examining the presence of modulation.

 L_{Amax}

The L_{Amax} level is the maximum A-weighted noise level throughout a specified measurement.

 L_{Amax} assigned level

The L_{Amax} assigned level describes a level which is not to be exceeded at any time.

 L_{APeak}

The L_{APeak} level is the maximum reading (measured in decibels) during a measurement period, using the A frequency weighting and P time weighting AS1259.1-1990.



L_{ASlow}

A L_{ASlow} level is the noise level (measured in decibels) obtained using the A frequency weighting and S time weighting as specified in AS1259.1-1990

Major Road

A Major road has an estimated average daily traffic count of more than 15,000 vehicles.

Maximum Design Sound Level

Maximum Design Sound Level is the level of noise beyond hearing range of most people occupying the space start, become dissatisfied with the level of noise.

Modulating Noise

A modulating source is an audible, cyclic and regular source. It is present for at least 10% of a measurement period. The quantitative definition of tonality is:

a fluctuation in the discharge of noise which;

- a) is more than 3 dB $L_{A Fast}$ or is more than 3 dB $L_{A Fast}$ in any one-third octave band;
- b) is present for at least 10% of the representative

One-Third-Octave Band

One-Third-Octave-Band are frequencies that span one-third of an octave which have a centre frequency between 25 Hz and 20 000 Hz inclusive.

Representative Assessment Period

Representative Assessment Period describes a period of time not less than 15 minutes, and not surpassing four hours. It is determined by an inspector or authorised person to be suitable for the assessment of noise emissions.

Reverberation Time

Reverberation time refers to an enclosure for a sound of a specified frequency or frequency band as well as the time that would be necessary for the reverberantly decaying sound pressure level in the enclosure to decrease by 60 decibels.

RMS

The root mean square level is used to represent the average level of a wave form such as vibration.

Satisfactory Design Sound Level

Satisfactory Design Sound Level refers to the level of noise that has been found to be acceptable for the environment in question, which is also to be non-intrusive.



Secondary / Minor Road

A Secondary / Minor road has an estimated average daily traffic count of between 6,000 and 15,000 vehicles.

Sound Pressure Level (L_p)

Sound Pressure Level refers to a noise source which is dependent upon surroundings, and is influenced by meteorological conditions, topography, ground absorption; distance etc. Sound Pressure Level is what the human ear actually hears. Noise modelling predicts the sound pressure level from the sound power levels whilst taking into account the effect of relevant factors (meteorological conditions, topography, ground absorption; distance etc).

Sound Power Level (L_w)

A sound power level of a noise source cannot be directly measured using a sound level meter. It is calculated based on measured sound pressure levels at recognised distances. Noise modelling includes source sound power levels as part of the input data.

Specific Noise

Specific Noise relates to the component of the ambient noise of interest. It can be specified as the noise of interest or the noise of concern.

Tonal Noise

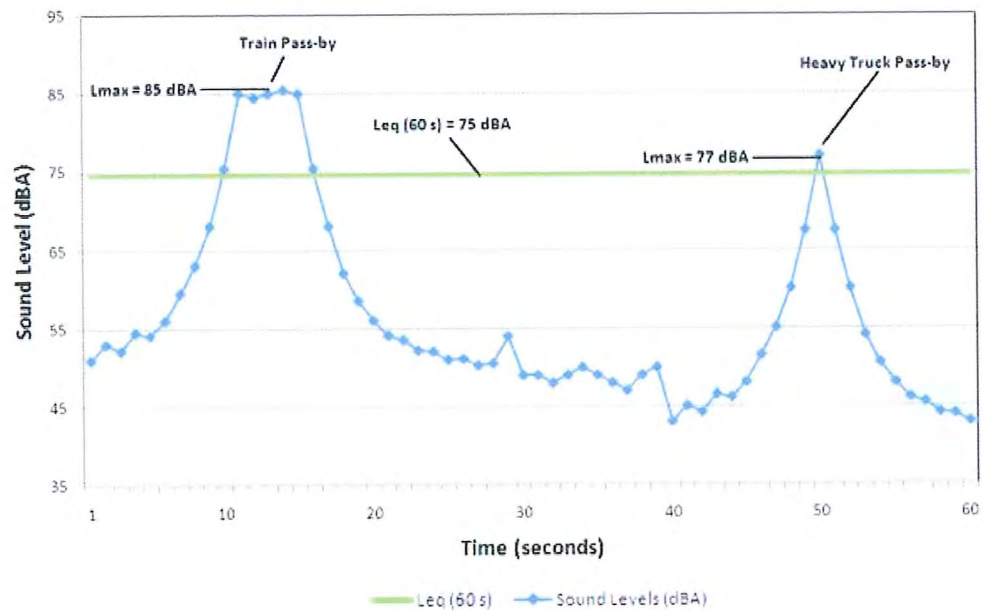
A tonal noise source can be designated as a source that has a specific noise emission over one or several frequencies, such as droning. The quantitative definition of tonality is:

the presence in the noise emission of tonal characteristics where the difference between —

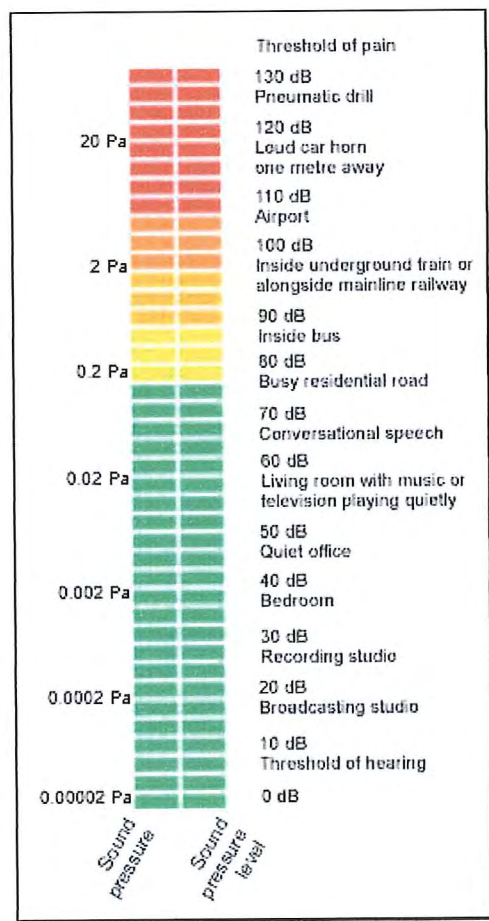
- a) the A-weighted sound pressure level in any one-third octave band; and
- b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands, is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as $L_{A\ Slow}$ levels.



Chart of Noise Level Descriptors



Typical Noise Levels





EcoAcoustics Pty Ltd ATF Ireland Family Trust ABN: 26 450 946 619

Tax Invoice

Invoice To:

Whitestone Quarries WA Pty Ltd
PO BOX 20
MUCHEA WA 6501
AUSTRALIA

Invoice No:

00014682

Date:

8/06/2015

P/Order:

DESCRIPTION	JOB NUMBER	EX AMOUNT
Consulting services by way of conducting Noise Assessment of Wash Plant for Whitestone Quarries on 299 Brand Highway Muchea.	15030185	\$1,800.00

Terms: Net 7

GST: \$180.00

EFT Details: Bank of Queensland
BSB: 124-001

Total Inc GST: \$1,980.00

Account No: 22304127
Please include Invoice Number in EFT
Description

Balance Due:	\$1,980.00
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www.ecoacoustics.com.au
ACN: 135 697 095
10 Alyxia Place, Ferndale WA 6148
Phone: 08 9258 9009
email: accounts@ecoacoustics.com.au



Report Name:

Catchment Property Management Plan
299 Brand Highway - Muchea

Project Title:

Development Approval for Operations on Lot 2929 Brand Highway
Muchea

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1. PREAMBLE

The subject property is located immediately north of the Muchea Townsite at Lot 2929 (No 299) Brand Highway and is located in the Ellen Brook catchment area. The Chittering Landcare Centre website features a draft 'Catchment Management Plan', (CMP) for the Ellen Brook prepared in 2000 by Evangelisti & Associates (Aust) Pty Ltd that is the basis for this Property Management Plan (PMP). This PMP is consistent with the more expansive Catchment Management Plan. The property is subject to numerous environmental imposts from neighbours that are outside of the control or influence of the landowners and as such the PMP confines itself to those environmental and management aspects that the landowners actually have control over.

The Catchment Management Plan prepared for the Chittering Landcare Centre has no official authority or standing as a land management document and has no statutory authority over landowners in the catchment area.

However this document, (PMP) does not in any way challenge the Catchment Management Plan and as stated is wholly consistent with the objectives and principles stated in the CMP.

The PMP does not replace the catchment scale plan but does contain specific information relevant to the practical operation by the landowners of the zoned rural property 299 Brand Highway.

Property Management Plan (PMP)

A property management plan is a plan that shows what the property is like now, what is intended with it, how and when you intend to do things and what the likely impacts will be. It describes the layout of the property, the physical characteristics of the land in terms of soil type, slope, condition of rivers or streams and other physical features including dams, wood lots, vegetation, fences and any other physical improvements proposed.

The plan also describes the current and intended use of the land as it relates to the proposed development and use of the land as a rural industry and transport depot. The plan provides site location details, size and scope of any proposed developments. It also gives an indication as to the reason the proposed developments are thought necessary.

The PMP serves to assist Council to make a judgement as to whether the intended development encompassing the business model of the enterprise will meet Council's planning guidelines. These guidelines include planning, environmental, land use, zoning, cultural heritage, infrastructure and community considerations. Separate and distinct planning proposals will set out in greater detail the intentions of the enterprise.

The PMP demonstrates to Council what the landowners intend to do and at the same time encourage the landowner to think more clearly about the possible outcomes of what is intended. The PMP shows how and by whom the property will be managed and demonstrate the level of expertise and knowledge the manager and landowners have and how any gap in knowledge or skill will be addressed.

Ms Noble and Mr Chisholm of Whitestone Quarries Pty Ltd (**Whitestone**) have engaged Peritas Group.

A Catchment Management Plan refers to just that a 'Catchment' and is generally based on a surface water flow catchment which would encompass several properties dealing with landscape scale units not limited to an individual property.

Catchment planning involves engagement of the community along with commitment by the community otherwise it is simply a study with general themes rather than specific measureable outcomes. This property management plan concentrates on those environmental factors that the landowners have control over.

2. INTRODUCTION

2.1 Property Location & Ownership

The site is located at Lot 2929 (NO 299) Brand Highway, Muchea and identified on Deposited Plan 254600 and Certificate of title Volume 350, Folio 154A. The property occupies a total area of 64.8 hectares.

The property is owned by Terry Chisholm and Leonie Noble and had been used as a grazing property for many years.

The landowners received an approval in 2013 for a Rural Industry and Transport Depot use in addition to the continuation of the existing grazing of the property.

The current application before the Shire seeks to continue the use of the Rural Industry through the introduction of a stonewashing process facility and ancillary structures. This PMP applies to the approved use and development in 2013 in addition to the current application for the stonewashing process facility.

Figure 1 – Site Location Plan



Figure 2 – Aerial Photo of Subject Property



2.2 Property Ownership

The property was purchased for development as an agricultural industry activity in 2010 by Terry Chisholm and Leonie Noble which is in keeping with the current zoning of the property although requiring Shire Council approval for the development. The property is 64.8 hectares in size and has been used as a grazing property for many years. The pasture is predominately a mixed Kikuyu grass, *Pennisetum clandestinum* and Dock, *Rumex vesicarius* pasture that has stabilised the soil allowing relatively productive animal growth while protecting the surface from wind erosion. The dominant weeds act as a barrier to the establishment of farm trees and as such require treatment to kill or suppress the weeds while the trees establish.

There is one residence on the property located at -31.571516, 115.967603 with associated sheds near the house. The house is serviced with a septic system and is connected to mains electric power. The water for the property is sourced from a submersible electric powered bore connected to the house and sheds reticulation system. Entrance to the house is via a tree lined avenue from Brand Highway.

The Dampier to Bunbury Gas pipeline crosses the property north to south immediately east of the Resource processing and service centre area towards the western end of the property. The presence of the gas pipeline imposes some proximity restrictions on development including the establishment of buffer zones between the proposed development, and the owner residence and neighbours.

The native vegetation on the property has been majorly altered over the decades of farming activity and the only clearly native species that survives to now be a few scattered and isolated Swamp paperbark, *Melaleuca raphiophylla* located in the creekline to the north of the entrance tree avenue, in the north-east corner of the property and on the northern boundary. The entrance tree avenue comprises introduced Australian species *Eucalyptus camaldulensis*, *Eucalyptus sideroxylon*, *Eucalyptus botryoides*, *Corymbia cladocalyx*, and local species *Eucalyptus rudis*, *Eucalyptus gomphocephala*, *Eucalyptus calophylla*, *Casuarina obesa*. There is one serious weed species beyond the pasture species which is three small areas of Arum Lily, *Zantedeschia aethiopica* which will be physically grubbed out, removing them along with root matter and then burning all the vegetation material followed by on-going monitoring to prevent them from re-establishing on the property.

(Source: Preliminary Report by Wheatbelt Timber Pty Ltd – March 2015)

Chisolm & Noble (the landowners)

Terry Chisholm and Leonie Noble have successfully operated a granite quarry and a mixed farming operation near Carnamah, ~300km north of Perth on a ~2500 hectare property trading as Whitestone Quarries Pty Ltd. The quarry supplies the majority of the granitic roadbase and concreting stone for the Midwest. Additionally a Quartzite and Feldspar, (whitestone) quarry located in the Mt Marshall and Mukinbudin Shires provides white coloured stone for landscape and decorative uses.

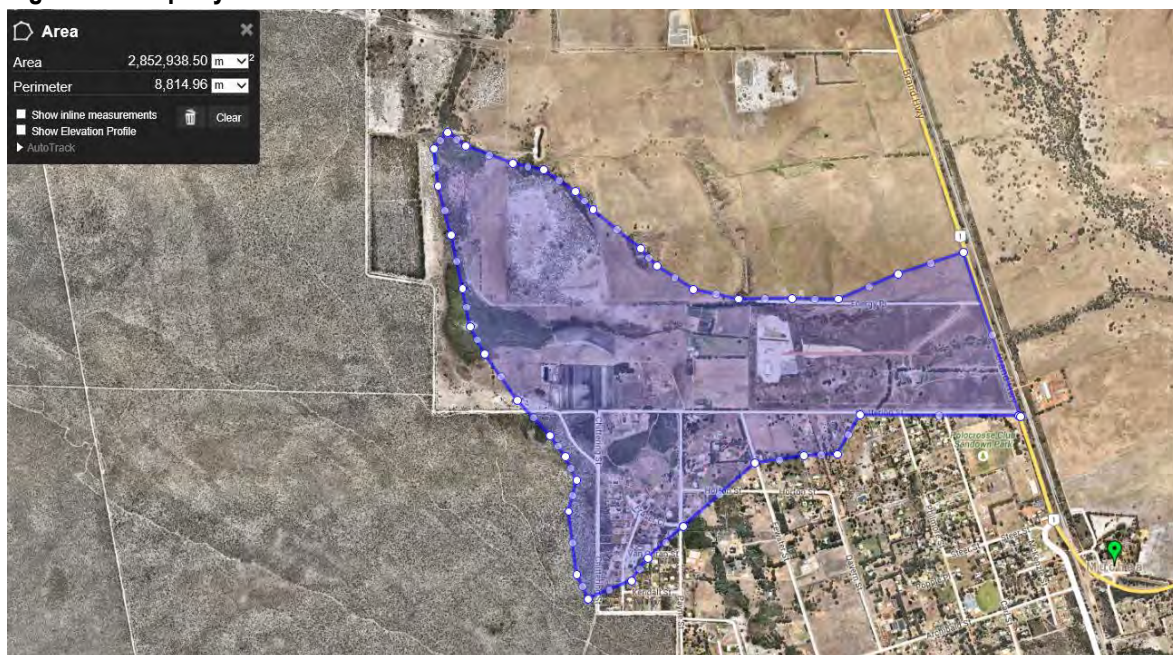
The business enterprise currently employs four people full time at the Muchea facility along with generating significant additional local employment through the construction phase.

2.3 Property Catchment

The property ultimately forms part of the upper reaches of the Ellen Brook Catchment. The Ellen Brook Catchment has an area of $\sim 720\text{km}^2$ and is significantly situated in the Chittering Shire area extending more or less north south $\sim 20\text{km}$ north of Perth. The Ellen Brook Catchment forms part of the Avon Catchment which has a total area of $\sim 122,000\text{km}^2$. The Ellen Brook Catchment has been extensively cleared for agriculture, urban and industrial development although there is significant remnant bush remaining on the Bassendean sand land unit.

The immediate catchment west of Brand Highway within which the property is located can be seen in Figure 3 below and has an approximate total area of **285.29 Ha**. The upstream sub-catchments of the property catchment comprise a western agricultural sub-catchment area of approximately 132.84 ha and a smaller 23.47 ha catchment immediately west of the property adjacent to Chittering Street and a southern townsite sub-catchment area of approximately 64.18 ha.

Figure 3 – Property Catchment Location - Total Catchment



These three sub-catchments discharge surface waters to the subject property which is then conveyed towards Brand Highway where it crosses the highway as a culvert to continue downstream via the Ellenbrook catchment system. The sub-catchment characteristics are described below in **table 2.1** and further identified in **Figures 4-9** below.

Table 2.1 – Sub-catchment Characteristics

Catchment Description	Area (ha)	Streamflow length (m) /Slope (%)
Western Agricultural sub-catchment 1	132.84	2,017m / 0.50%
Western Agricultural sub-catchment 2	23.47	513m / 1.00%
Southern Townsite sub-catchment	64.18	1,931m / 0.80%
Total Catchment (incl. Property area of 64.8 ha)	285.29	Not Applicable

A summary of the land use areas for the Subject land is presented in Table 2.2 below:

Table 2.2 – Land Use areas Summary

Land Use	Area (ha)
Residence and associated infrastructure (Sheds etc)	0.165
Roads & sealed pavements	1.356
Process Line area and Laydown for resource (Stone washing Process line, ponds and associated pavements)	2.850
Service Centre and Laydown areas (Service area and associated permeable pavements)	2.372
Equipment storage and central laydown area	0.954
Balance rural property	57.103
TOTAL	64.800

Figure 4 – Property Catchment Location – Western Agricultural sub-catchment 1

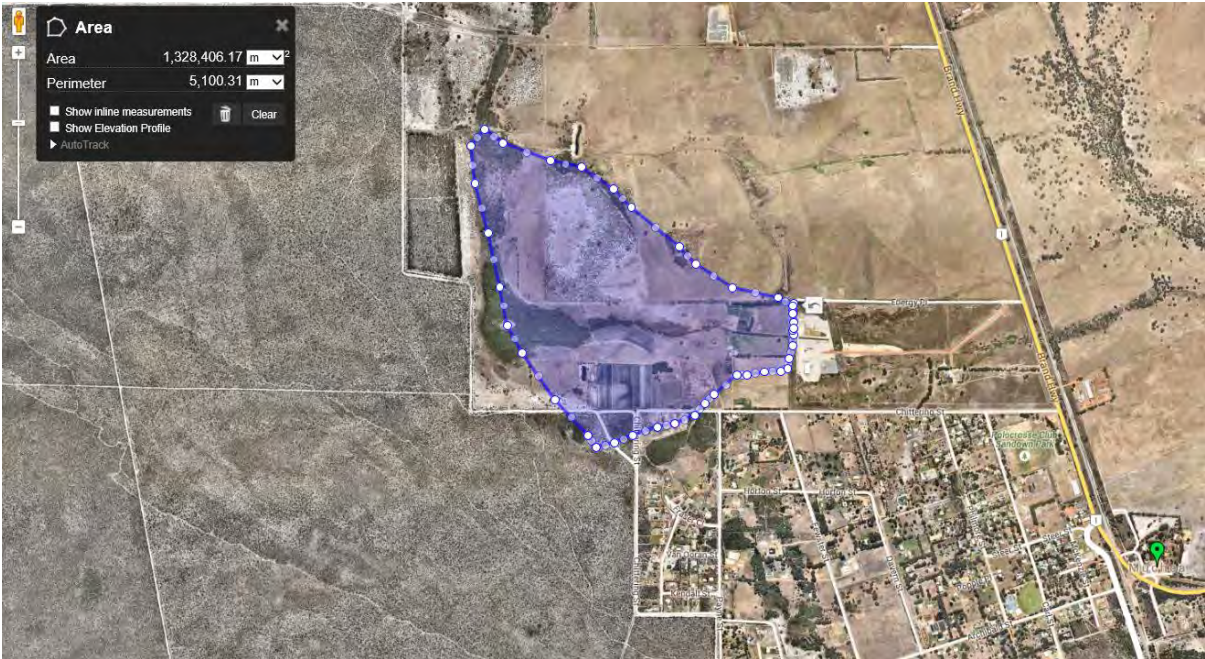


Figure 5 – Western Agricultural sub-catchment 1 – Overland Flow Path of sub-catchment streamflow upstream of property (2,017m with an average slope of 0.50%)

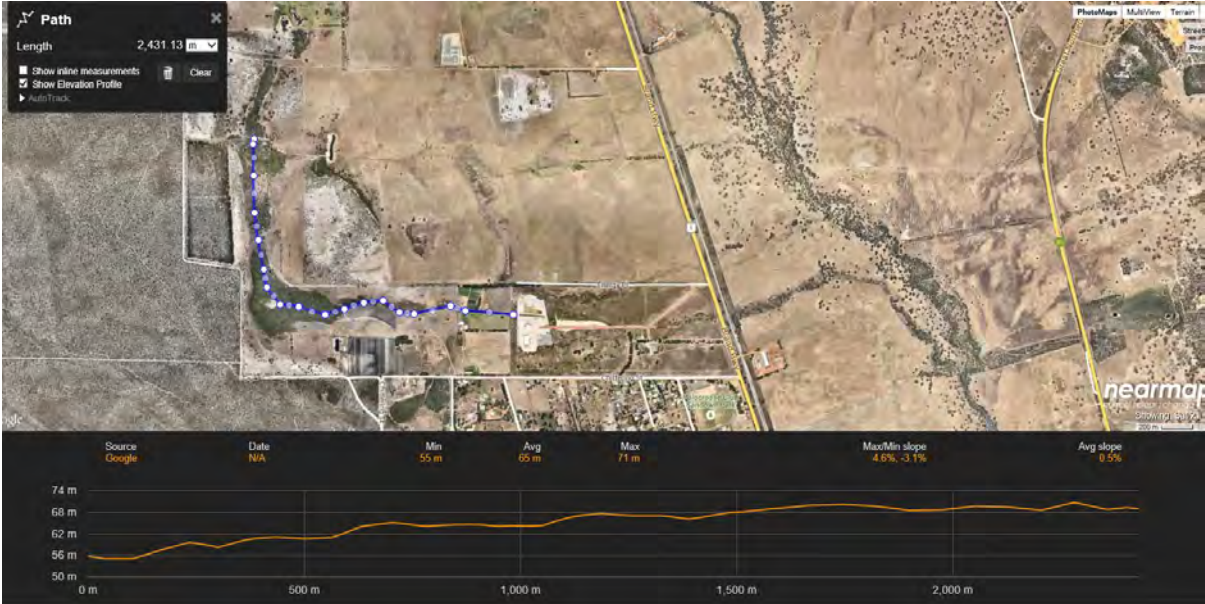


Figure 6 – Property Catchment Location – Western Agricultural sub-catchment 2



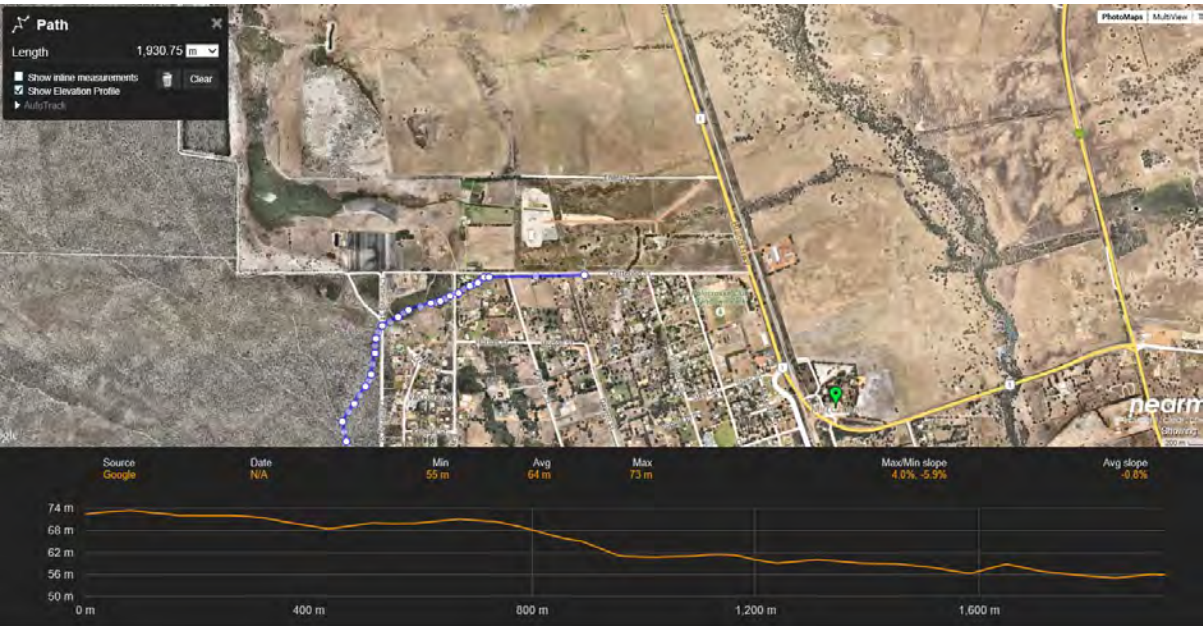
Figure 7 – Western Agricultural sub-catchment 2 – Overland Flow Path of sub-catchment streamflow upstream of property (513m with an average slope of 1.0%)



Figure 8 – Property Catchment Location – Southern Townsite sub-catchment



Figure 9 – Southern Townsite sub-catchment – Overland Flow Path of sub-catchment streamflow upstream of property (1,931m with an average slope of 0.80%)



3. BIOPHYSICAL INFORMATION – EXISTING ENVIRONMENT

3.1 Climate & Rainfall

The climate and rainfall of the property is typical of the Ellen Brook catchment and experiences a Mediterranean climate of hot dry summers and cool wet winters. Temperatures typically range from 17°C to 29°C in summer and from 9°C to 18°C in winter (Thurlow, et. al., 1986).

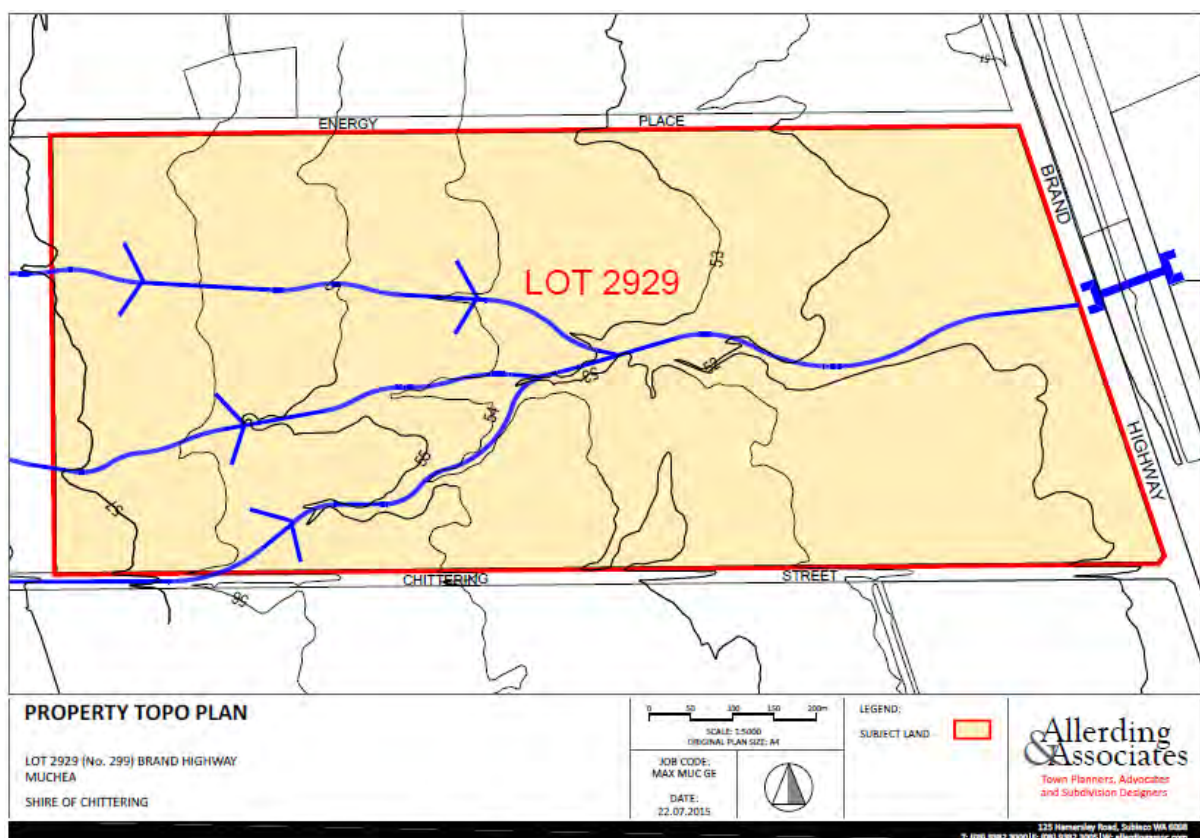
Average rainfall for the southern portion of the Ellen Brook catchment is 820mm/yr and this decreases to less than 660 mm/yr in the northern regions of the catchment (Hammond and Mauger, 1985). Ninety percent of the rainfall occurs between May and October. The break of season is usually mid-April to mid-May and the growing season lasts about seven months. Annual pan evaporation is 1934 mm and the average daily evaporation is 10.8 mm in January falling to 1.8 mm in June.

3.2 Topography

The subject land is currently used for various rural uses including rural industry with accommodation (homestead) and predominantly cleared of vegetation. The site is well graded and gently slopes from west to east with a high point long the western boundary of approximately RL 57 AHD to RL 51 AHD (Australian Height Datum) at the eastern (Brand Highway) boundary.

Gradients vary from 1 in 100 to 1 in 300 with an average slope of 1 in 200. Refer to the existing contour plan in **Figure 10** Below.

Figure 10 – Subject Land Topography



3.3 Geology and Soils

Four Land Resource Surveys describe the land units found within the Ellen Brook catchment, the Chittering survey (Bessel-Browne, in prep.), the Gnangara survey (McArthur and Mattiske, 1985), the Darling Range survey (King and Wells, 1990) and the Metro North survey (McArthur and Bartle, 1980).

The soils of the Swan Coastal Plain are formed by silica sands deposited from river and wind action. The land unit is bounded to the east by the Yilgarn Block which formed from a rift valley some 50 million years ago. The resultant erosion action from the Yilgarn Craton was deposited onto what became the Swan Coastal Plain.

The Ellen Brook catchment can be divided into three major geomorphic regions including the Darling Plateau to the east; the Dandaragan Plateau which covers the north eastern part of the catchment and the Swan Coastal Plain which covers the western portion of the catchment (King & Wells, 1990). The geological setting of the Ellen Brook is strongly linked to nutrient transport, with a noticeable difference in nutrient levels in the east and west of the catchment.

Soil types are grouped according to their geomorphic setting. Aeolian deposits in the Swan Coastal Plain are characterised by the Bassendean dune system. These are well drained porous soils with very poor phosphorous retention capacity. The alluvial deposits in the centre of the catchment are part of the Pinjarra Plain landform, and contain soils made up of coalescing alluvial fans with varying sand and clay content subject to waterlogging in low-lying areas. Soils of this landform often contain a duplex of impermeable clay layers overlain by deep sandy soils (Russell, 2001).

Whilst a formal Geotechnical investigation was not undertaken for this report, a desktop study utilising existing Geological Maps was used for a global review of general soil conditions.

Reference to the Geological Survey Map series indicates that the primary soil condition for the area is classified as Sand (S7 & S8) overlaying Sandy Gravels and clays. This is consistent with site observations. Soils are easily excavated and are very permeable in the surficial layers allowing good drainage via soakage and retention above groundwater.

The Western Australian Planning Commission's Bulletin 64, Acid Sulfate Soils (ASS) Maps shows the site is located in the Medium to Low Risk of Actual (ASS) and Potential (PASS) Acid Sulfate Soils at depths of >3m. In consideration of the topographical and geological location of the site coupled with the Medium to Low Risk Classification of the site, and the proposed depth to which works are proposed (less than 2m) ASS is not considered to be a constraint on the site.

3.4 Groundwater

The groundwater levels move seasonally and is generally ~1.0 metre below ground level and the observed lateral movement is +/- 30cm.

Groundwater quality is observed by sampling from a number of monitoring bores established on the property to record water quality and are located on the incoming and outgoing surface water locations.

Whitestone has entered into a license agreement with a third party license to take 4,000 kL of water per annum. The agreement has been approved by the Department of Water (DoW) under the regulation 30 of the Rights in Water and Irrigation Regulation 2000 (WA) and clause 30 of the Rights in Water and Irrigation Act 1914 (WA).

The water will be used as part of the stonewashing plant's operations and also for dust suppression of the site's existing and approved use, however, water usage will be minimised by the use of water recovery and recycling for the washing process and the use of water for dust suppressions will be minimal acknowledging that Whitestone have applied a limestone and crushed granite surface treatment to the approved hardstand areas and laydown areas to mitigate against excessive dust exposure.

3.5 District Practice

Land use within the catchment can be grouped into grazing, annual and perennial horticulture, fodder production, timber production, mining/basic material extraction, industrial and urban. Specific land uses include vineyards and other intensive horticulture, cattle grazing, piggeries, abattoir, chicken farms, gravel and sand extraction, mining, golf courses and residential developments (KBR, 2003).

Pasture and grazing are the largest land-uses in the region, covering over 31,000ha and representing over 85% of all recorded land uses (KBR, 2003). Land use generally changes from cattle grazing and horticulture in the northern parts of the catchment to more urban settlements and small scale light industry in the southern parts.

Cattle's grazing contributes large amounts of nutrients to the Ellen Brook as the cattle tend to congregate in or around unprotected waterways causing soil compaction and erosion, and directly excreting nutrients into the waterway. The pasture needed to support the cattle is fertilised. This results in a total of over 20kg/ha/yr of phosphorus input (DECMP 2001). The only other way that added nutrients leave the district is the nutrient contained in the animal and plant products themselves, i.e. meat, wool or fruit.

Although the pasture does fix a small amount of nitrogen, most of the nutrients associated with this land use nutrient end up in the waterways as the soil has very poor ability to retain the nutrients for long and this is exacerbated by over stocking and erosion.

In comparison, although on a smaller scale with regards to area, horticulture has even more concentrated nutrient run off potential. For example, orchards in the north of the catchment are supplied with 65kg/ha/yr of phosphorus, although more established vineyards over ten years old were supplied with half of this amount (Gerritse 1996). The adjoining property to the west operates an inefficient vegetable growing enterprise, (an observation based on over a decade in horticultural research and commercial production and easily viewed physical observation of insect infestation and inefficient weed control), that contributes ground extracted irrigation water onto the property via a shallow relief drain with a second shallow relief drain controlling water from a natural system. The water from the neighbours irrigated area may contain contaminants.

Urban expansion is a significant pressure in the catchment, particularly in the southern part of the region where many large farms have been subdivided into small "lifestyle" sized blocks. It is difficult to predict whether this change in land use will be beneficial or detrimental to water quality in the Ellen Brook.

The excessive nutrient load in the Ellen Brook appears to be diffuse because of the nature of the erosion prone, sandy, draining soils and high water table which is ideal for the transport of nutrients.

All land uses contribute nutrient run-off to the Ellen Brook, particularly phosphorus which does not bind in the sediment as effectively as nitrogen (Horwood 1997). This nutrient load does not have as much effect on the local environment as it does to the Swan-Canning system.

As described in surface water quality later the property is being monitored regularly at both incoming and outgoing waters and the results to date indicate that the property is having a net positive effect on the quality of incoming waters which generally have a higher levels of nutrients and hydrocarbon pollutants which the property is managed to treat naturally to reduce the pollutant load of the outgoing water at Brand Highway.

The proposed operations if the site will not detrimentally affect this balance and with the water recycling and re-use practices being employed will limit transport of any potential pollutants from external to the site.

3.6 Land degradation hazards

Phosphorus

Preliminary analysis of the Agriculture Western Australia land resource data indicates that low lying soils with very low P binding capacity are most at risk of losing P to drainage. This assessment shows that most of the low lying areas along the central axis of the coastal plain are highly susceptible to phosphorus export. This is not surprising as the Ellenbrook catchment has been identified as one of the greatest contributors of phosphorus into the Swan River estuary.

There has been no application of phosphate fertiliser to date and none is proposed as part of the ongoing grazing use of the property or the rural industry and transport depot uses on the property.

Nitrogen

Annual total nitrogen loads from the Ellen Brook catchment have been estimated at 77 tonnes which equates to seven percent of the total TN load to the Swan-Canning estuary (Donohue et al, 1994).

The pasture on the subject land whilst dominated by grasses does include nitrogen fixing plants that to date have not required nitrogenous fertiliser application.

Waterlogging

Preliminary analysis of the Agriculture Western Australia land resource data indicates that the land units most susceptible to waterlogging and seasonal inundation are associated with the central portion of the coastal catchment. Some of these very low-lying areas remain waterlogged from July to mid-September each year. These areas are highly productive in terms of pasture production in spring when plentiful water, light and nutrients stimulate lush pasture growth. Unfortunately these are the very areas that of most concern for nutrient export because they need draining to establish grazing pastures and consequently lose fertilizer nutrients to drainage.

The subject property has a gently undulating land surface with a low profile slope to the east discharging into the Ellen Brook with poorly defined creek systems on the property. Some pre-existing drains have been cleaned out to assist the water to move through the property without significantly altering the natural drainage system through the property.

The current drainage system does not restrict the flow of water through the property and all of the culverts introduced will cope with greater than a 20 year rainfall event. The only seasonal flooding occurs in relation to the Main Roads culvert under Brand Highway where minor annual flooding occurs that is confined to the creek bed.

Salinity

The *Chittering Salinity and Erosion Study* published by Agriculture Western Australia represents the only significant source of data available on the extent of existing soil salinity and soil erosion problems within the Shire of Chittering, and probably also the remainder of the Catchment Management Plan study area. Along with land unit attribute data associated with the Agriculture Western Australia land resource mapping, this information may be used to determine land degradation 'hot spots' for salinity (both existing and potential) within the Shire.

There is no salinisation evident on the property.

4. MANAGEMENT THEMES

The Ellen Brook Catchment Management Plan outlines a series of themes to achieve the objectives of the plan. Terry Chisholm and Leonie Noble intend to comply with the following themes in the development of the 299 Brand Highway property and at the same time meet all environmental requirements relevant to this application.

4.1 Theme 6a Vegetation and remnants

Plant a visual Landscape buffer to the southern side of the western Laydown area as shown in the Planning Report Figure 19 in Annexure 2. Steps to achieve target (note revegetation has already commenced and is being monitored) will include:

- Identify extent that will be planted to achieve screening requirements
- Identify resources required to undertake planting Identify ongoing management, evaluating and monitoring Formulate works program
- Undertake works and plant trees
- Review progress and develop following works.

4.2 Theme 9c Participation, education & promotion

Establish a minimum of 100ha of demonstration area undergoing rehabilitation.

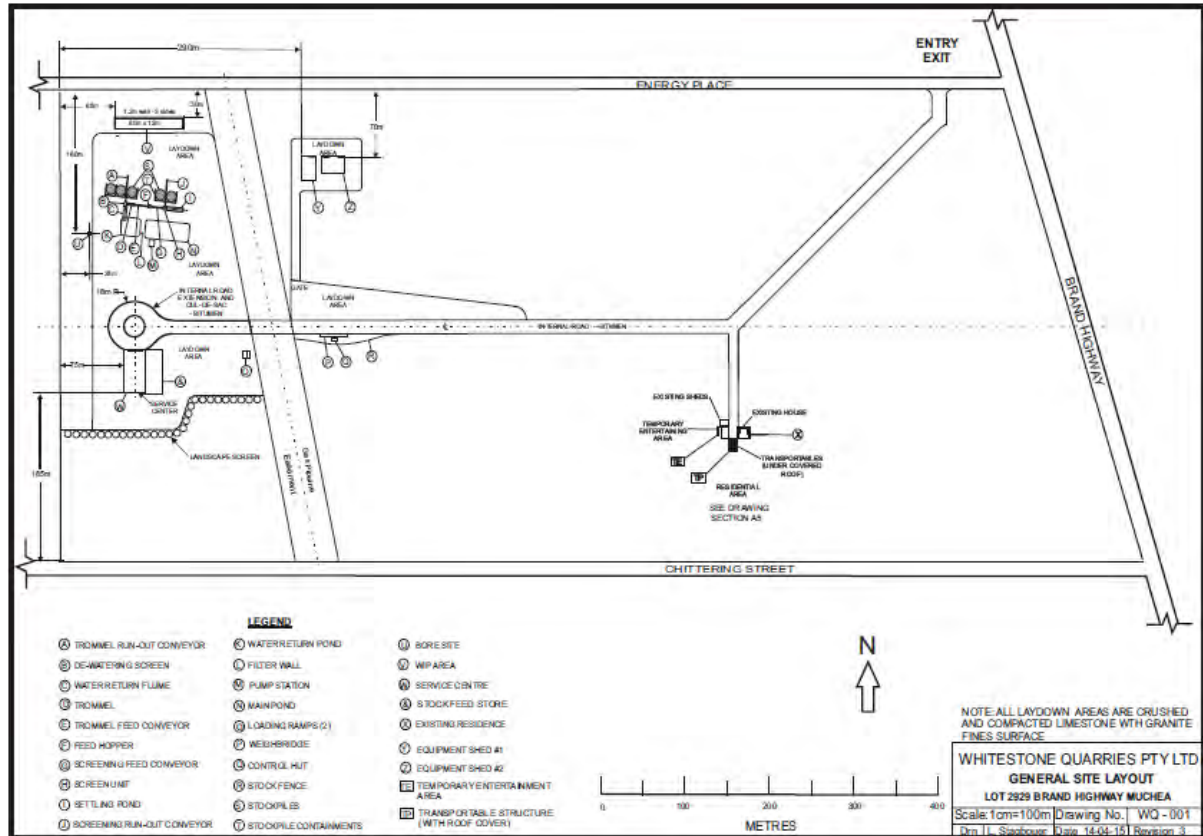
The establishment of a visual Landscape buffer to the southern side of the western Laydown area of the property will contribute to the achievement of the 100ha objective in addition to the boundary planting already undertaken by the landowners pursuant to the earlier planning approval. The revegetation of this area within the property will be implemented from 2015 onwards.

5. FARM & SITE OPERATIONS MANAGEMENT ISSUES

5.1 General

Refer to the Development Application prepared by Allering & Associates (dated April 2015) for a detailed summary of the operation of the site. Below is the site plan (**Figure 11**) showing the facilities (existing and proposed) on the subject land.

Figure 11 – Subject Land – General Site Layout



5.2 Surrounding Land use and interfaces

5.2.1 Neighbour - Farming

There is no impact arising from the proposed use to the immediate neighbour to the west who operates an organic certified cattle business. Dangerous chemicals and other similar products will not be stored on the property and suitable contained wash down areas established, protocols developed and enforced amongst staff employed on the property. The north of the property is bounded by Energy place and the neighbour to the north of Energy place carries on a similar grazing operation.

Water delivered onto the property via the shallow relief drain from the neighbouring property will not be impeded in any way and allowed to flow through the property into the Ellen Brook.

The proponent agrees to take water samples annually in late winter and analyse them through an accredited laboratory for Phosphorus content, Nitrogen content, pH, Total soluble salts, and total petroleum hydrocarbons for a period of two years. Samples will be taken at the water entry points at the shallow relief drain and the altered main flow to the west, the culverts from the residential and Shire road at Chattering Street to the south and near Brand Highway, just inside the east boundary where water leaves the property.

5.2.2 Neighbour – Urban

The Muchea residential development features several neighbours to the south of the property across Chittering Street and a significant residential area backing up from the Chittering Street residences. The screening zone to the south side of the western laydown area will provide a visual and physical break to reduce the amenity impact of the development. Access to the laydown area will be from Energy Place and traffic movements will include private utes, pocket road trains, small trucks and trailers along with some larger vehicles. The development of the site will not alter the volume of trucks accessing the premises.

The surface water runoff from the residential areas, the neighbouring farm and the Shire roads is expected to contain significant urban generated contamination. Whilst the treatment of this contamination is a matter for the Shire to manage, in any event, the proposed revegetation of the property will act to clean the surface water by natural remediation such that any water leaving the property will be in better condition than that entering.

5.3 Stocking rates

The plan for the farm is to basically utilise the property as a store and re-distribution centre for the two quarry operations. The overall plan for the property is to serve the purposes listed in the application above and to provide a family residence for the owners relatively close to Perth.

In that capacity stock will be run to eat the grass in the remaining non-vegetated areas and control the potential to be a fire hazard if the grass is not eaten down. The number of stock will be managed by use of agisted or owned stock and the plant growth will determine the stock number at any point in time. The enterprise has a stock handling structure located near the centre of the property, (stockyards) which will be maintained in an operational condition and this includes loading and unloading capability.

5.4 Revegetation

The environmental plan is designed to complement and fit into the staged development of the business unit development yet allow for the particular set of existing environmental conditions presented by the physical state of the property.

The 'seasonal wetland area' located in the south western precinct of the property is the result of the extensive clearing in the sub-catchment, where the major incoming waters from external catchments meet at a confluence on the property before moving on through the property towards the east and to the Brand Highway crossing. The extent of clearing feeding the wet area includes runoff from the sheds and houses in the residential area south of Chittering Street and the Chittering Shire road reserve plus the cleared land west of the property. The adjoining property has an irrigated vegetable patch as does the next neighbour to the west again.

The landowners will maintain a cleared and grassed area through the low lying drainage line to allow water to flow through the property.

Conditions 2(h) and (i) of the Council development approval granted on 20 March 2013 require Whitestone to establish and maintain vegetation screening. In 2012 Whitestone undertook extensive planting of trees and shrubs to establish a buffer zone of trees and shrubs around the planned development area and the southern, western and half of the eastern boundary. This planting commenced in 2012 and was largely to be completed in 2013. The buffer was five rows of trees and shrubs thick and to be placed inside the property boundary, (allowing for Chittering Shire Council firebreak provisions).

This initially involved the planting of 8,000 trees to give effect to the development approval conditions. However, because of natural intermittent and seasonal flooding at the site's boundaries, only 2570 of these have survived. A further 5,630 trees planted to satisfy the conditions 2(h) and (i) have also died as a result of flooding issues and at a considerable cost to Whitestone.

Whilst peripheral boundary landscaping is not considered necessary in order to visually mitigate the development, which

essentially presents from public areas as a rural use comprising rural sheds, the use of strategic landscaping is, however, seen as a benefit. Accordingly, Whitestone now propose to provide additional and complementary landscaping screening along the southern edge of the western “laydown” area as illustrated by Figure 19, Annexure 2 of the Planning Report. This amendment to council’s prior approval recognises the practical difficulties and wasted costs of attempting to maintain landscaping at the Site’s boundaries whilst still ensuring the objectives of conditions 2(h) and (i). Consequently the new planting in addition to the planting previously undertaken will replace the previous proposals for landscaping treatments.

The species to be used in the proposed landscaped screening zone will be selected in consultation with Shire staff to ensure the best opportunity for successful vegetation in context with the pre-existing site conditions.

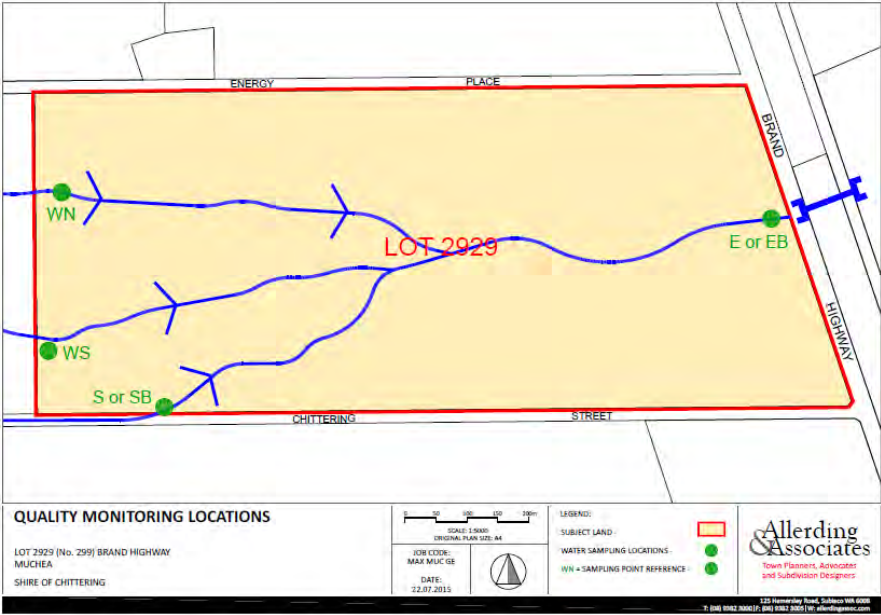
The Ellen Brook Catchment Plan identifies revegetation and agroforestry as a Land Management strategy to generally contribute to the overall benefit of the catchment. Specifically the plan states to promote the use of local species with appropriate preparation and establishment techniques, plant trees along ecological planting lines, (*natural drainage and creek lines*) and to locate trees where they will assist salinity or control of nutrient loss.

5.5 Groundwater Management & Water Usage

Groundwater management is key part of the business development with water used during the stone washing process recycled immediately after use via sediment traps, one each for vegetable matter and the clay and stone fines. The solid materials from the sediment traps is removed mechanically and utilised elsewhere, i.e. removed from the property. There are no chemicals used in the stone washing process.

The groundwater at the surface water entry points is sampled and analysed for hydrocarbon, organophosphates and organochlorides. The analysis indicates hydrocarbon contamination from the Muchea townsite at levels that would trigger an Environmental Investigation based on the NEPM standard. Refer to the **Figure 12** below showing water quality measurements location across the site. **Refer to Appendix 1 for typical monitoring results.**

Figure 12 – Water Quality Monitoring Locations across the site



The groundwater analysis at the exit point for surface water does not indicate hydrocarbon contamination. Analysis of the groundwater at the entry points and exit point for surface water will continue to be taken.

There is no use of the shallow groundwater for agricultural pursuits.

Whitestone has entered into a license agreement with a third party license to take 4,000 kL of water per annum. The

agreement has been approved by the Department of Water (DoW) under the regulation 30 of the Rights in Water and Irrigation Regulation 2000 (WA) and clause 30 of the Rights in Water and Irrigation Act 1914 (WA).

The water will be used as part of the stonewashing plant's operations and also for dust suppression of the site's existing and approved use, however, water usage will be minimised by the use of water recovery and recycling for the washing process and the use of water for dust suppressions will be minimal acknowledging that Whitestone have applied a limestone and crushed granite surface treatment to the approved hardstand areas and laydown areas to mitigate against excessive dust exposure.

There is a bore equipped with a 240V submersible pump that supplies domestic and garden water for the residence, this water is not used for any other purpose. A second bore has been excavated at the western end of the property that is unrelated to the proposed used and application and is not equipped at present. A water license from the Department of Water has been granted for this bore.

5.6 Seasonal Wetland

As described earlier in this report, there are no natural wetlands on the property although there are several areas of sluggish drainage from very low relief landscape. The previous owner has installed a series of open drains that are now overgrown with Kikuyu grass. The drain was surveyed and considered in the design of the proposed development and in concert with the development of the road, laydown area and access for the development of the business.

The areas of seasonal wetland that develop during parts of winter and spring will be allowed to drain naturally via the natural drainage relief and the centre of the drainage relief will be kept free of trees leaving the central water flow free to drain away.

5.7 Hydrocarbon Contamination Management

The issue of all forms of hydrocarbon contamination by the landowners has been a consistent factor in the planning and design of the development at 299 Brand Highway. The range of factors include spills of diesel, accidental droplets of oils and greases from vehicles by normal wear and tear causes and the materials that form the laydown itself.

The first and most important safety and management measure is storage. The Owners have adopted a containerised storage system with a bunded interior capable of holding the volume of contents should there be a spill. This storage containers are is skid mounted so that it can be easily relocated to the requirements of the site containment from time to time. Refer to the photos below showing a typical containerised storage unit.



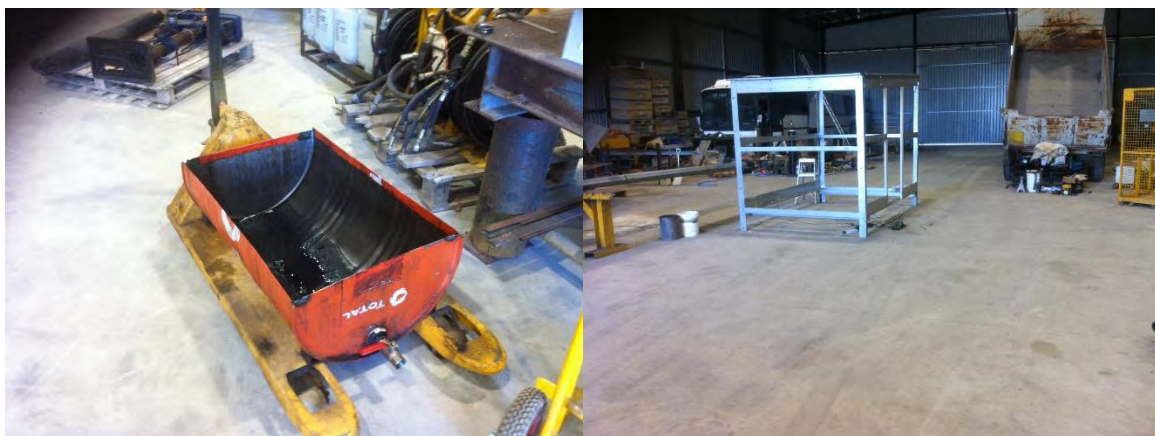


The operational procedures for the site will further address the diesel and leakage from vehicles by constructing the hardstand from a thick layer of crushed limestone (150-200mm) covered by a thinner layer of crushed granitic rock fines (74mm thick). The limestone will absorb accidental spills and confine the leakage to the limestone layer itself. The granules of the crushed limestone have a large surface area related to the extent of the crush size that acts as a point of attachment for the spilt materials; additionally the pore spaces provide more surface area for the spilt material to stick. The sticking is a factor of electrostatic forces on the surface of the granules and when the pores are filled the material is held in place by surface tension.

When spills occur, the limestone and crushed rock will be removed and treated at an approved facility set-up and accredited to process such materials. The limestone laydown allows for easy removal and processing.

Concrete has many disadvantages compared to crushed limestone and irrespective of the cost, concrete, without inclusion of a sealing agent is a poor surface to control or prevent most spills entering the environment. The workshop will have a concrete floor that incorporates sealing and a drain point to provide a window to contain a spill in the workshop locale. The workshop drain will not discharge outside the workshop.

Workshop spills will also be limited as handling and containment measures will include a large mobile storage unit that will be placed under works areas when oils are being handled (see below photos) and will be limited to specified areas within the workshops and service area facility.



The revegetation area and other plant species, soil and water microbiota is a well- documented process as a way to naturally reduce the pollutants to 'safe' compounds.

5.8 Dust

The nature of the laydown, (Granitic stone over crushed Limestone) will limit any dust generation issues. Additionally the landowners are committed to reducing or eliminating any nuisance that their business activity may generate and have made a commitment to maintain a water tanker in the work area that can be used to wet-down the hardstand in the unlikely event that dust ever becomes a real issue.

5.9 Surface Water Flows

Refer to section 5.12 for a more comprehensive discussion regarding stormwater management proposed for the site.

Generally site stormwater is conveyed utilising open drains and existing water outfalls. Four internal culverts have been placed in the drainage line to allow access to all areas of the property. The creeklines and shallow relief drains in and through the property are well grassed and stable with no evident erosion issues. Refer to photos below for typical drain views (A to D clockwise).

Photo A – Existing Paddock south of Services area (stable grassland with central natural soakage area that overflow to the east to the creek-line through the property).

Photo B – New open drains / swales alongside new bitumen road (Stabilised by topsoil coverage and regrowth)



Photo C – Stable Natural creek line embankments fully grassed and maintained to ensure erosion is minimised.

Photo D – New culverts under access road.

5.9.1 Design Concept

The main objective of the design approach to be adopted for Lot 2929 is to minimise stormwater conveyance after collection, and maximise the amount of stormwater which can be locally recharged and managed by direct infiltration to the superficial aquifer, in accordance with Department of Water (DOW) urban water management objectives. This in turn reduces the

potential for entrained contaminants to be exported from the site in surface runoff to receiving water bodies, thereby reducing the risk of poor water quality in the downstream systems.

The site's roof runoff will generally be collected for re-use at individual facility allotments that have sufficient sand fill or permeable pavements or collected and piped to swales or pen drains on site. Allowance has been made in the stormwater infiltration swale and basin sizing for these additional contributing flows.

The drainage system will consist of:

- Water Harvesting rainwater tanks will contain the 1 in 1 year, 1 hour event with overflows to natural soakage area to recharge the groundwater.
- Concrete drainage culverts below the main access road. The drainage swales and open drains will be designed and constructed in accordance with Local authority standards (typically to contain up to 1 in 20 year ARI flows).
- Overland flow paths for major flows during severe storms. These flows will generally travel along roads and open drains and will convey peak flows up to 100 year ARI storm event.

All storm flows up to and including the 1 in 100 year storm will be directed to either the existing soakage basins and /or proposed swales located throughout the site. The on-site retention and infiltration basin/swales will include an acceptable treatment train to strip nutrients which will help to limit the impact of the development upon the surrounding catchments water quality.

Wherever practically possible the design incorporates aspects of water sensitive design through the use of dry infiltration swales and basins & off shoulder drainage for roads to convey water to the natural water courses that run through the site after provision of sediment traps at strategic locations long the treatment train systems incorporating the natural grasses and soakage areas across the site as detailed previously.

Peak flow calculations for each of the four culverts indicate that they are all capable of handling the 20 year rainfall event, which is put into context by the fact that the Main Roads culvert under Brand Highway just meets the requirement to handle a 10 year rainfall event. The 20 year rainfall event is the standard used in agricultural planning. The peak flow calculation used is:

$$Q_p = cA_d n \quad \text{where } Q_p \text{ is the peak flow, } A_d \text{ is the catchment area, and } c \text{ is the catchment coefficient, which varies according to vegetation cover and rainfall event.}$$

The peak flow then fits into the calculation allowing for the diameter of the pipe using a Western Australian Department of Agriculture formula:

$$v = \frac{1}{n} R^{2/3} s^{1/2} \quad \text{where } v = \text{average velocity of flow}$$

$$R = \text{hydraulic radius} = \frac{\text{cross sectional area}}{\text{wetted perimeter}}$$

$$s = \text{slope of bed}$$

$$n = \text{Manning's roughness coefficient}$$

As mentioned the Main Roads culvert system under the Brand Highway does cause flooding into the property during a rainfall event greater than the 10 year event. Significantly the culvert under Chittering Street maintained by the Chittering Shire is also inadequate in size and will continue to cause flooding of the upstream residential area south of the property.

There will be no extraction or use from any surface water flows from any water surface either water entering the property or exiting through the property. There will be no damming or restriction on any surface water flow through the property.

The quality of the surface water entering the property has been monitored, samples taken for analysis and the results indicate that the water entering from the Muchea townsite contains hydrocarbon contamination. **Refer to the Figure 12 showing water quality measurements** location across the site. **Refer to Appendix 1 for typical monitoring results.**

The water entering from the agricultural land does not contain any significant contamination, other than one sample that indicated the presence of hydrocarbon.

The water is analysed for hydrocarbon, organophosphates and organochlorides and thermotolerant faecal coliforms. The water leaving the property has not presented any analysis with contamination indicating that the grasses and microorganisms on the property are processing the hydrocarbon contaminants through natural remediation. Analysis of the water flows into and exiting the property will continue to be taken for two years to monitor progress of the proposed use on water quality

5.10 Stormwater Management

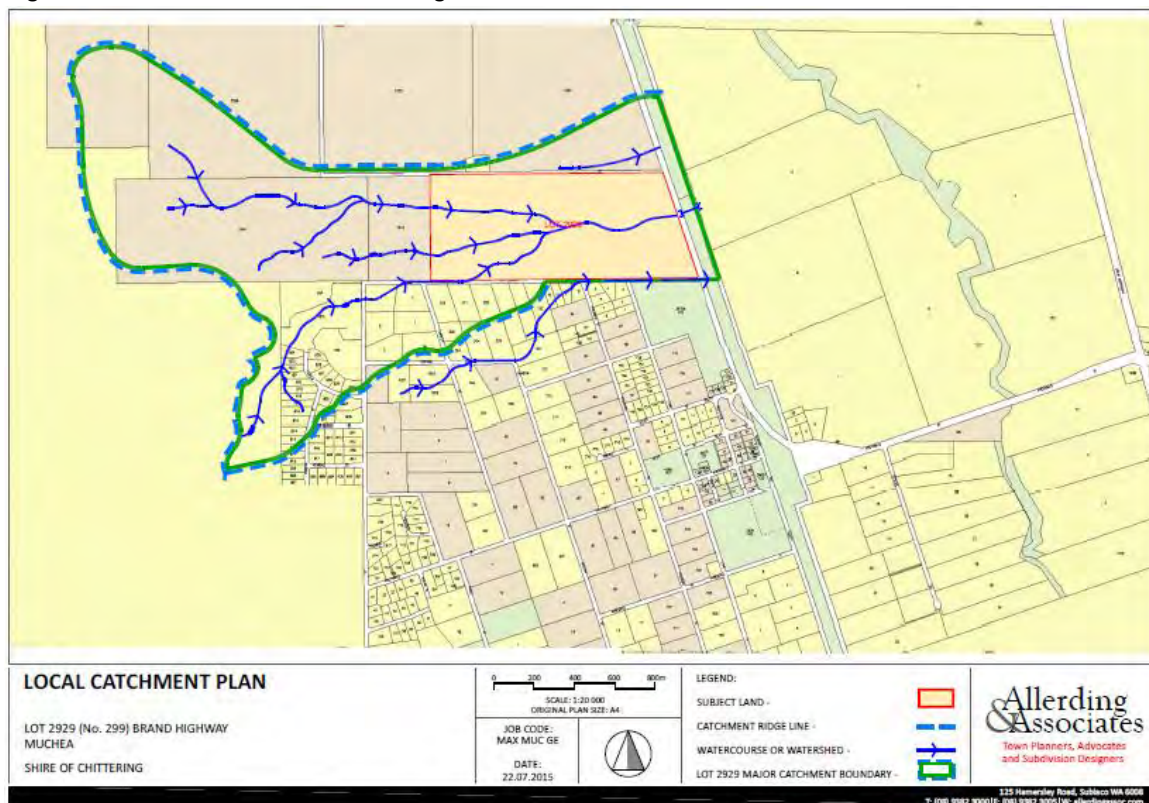
This summarised Stormwater Management Strategy as described in context with the above water usage and other management initiatives addresses water usage, groundwater and stormwater management for this site.

This has been prepared in accordance with the design objectives outlined in “*Better Urban Water Management*” (2008) and seeks to:

- Maximise water conservation by minimising the amount of potable water used outside of homes and buildings to achieve efficient water use;
- Provide water quality management by seeking to maintain post development annual discharge volumes and peak flows to predevelopment conditions and seeking to maintain the surface water and ground water quality to pre development levels; and

As described in Section 2.3- Property Catchment the site has 3 main entering waters, two from the west (agricultural) and one from the south (townsite). Refer to Figure 13 Below.

Figure 13 – Local Catchments entering the site.



Catchment characteristics are again summarised in tables previously presented and shown below.

Table 5.1 (previously 2.1) – Sub-catchment Characteristics

Catchment Description	Area (ha)	Streamflow length (m) /Slope (%)
Western Agricultural sub-catchment 1	132.84	2,017m / 0.50%
Western Agricultural sub-catchment 2	23.47	513m / 1.00%
Southern Townsite sub-catchment	0.311	1,931m / 0.80%
Total Catchment (incl. Property area of 64.8 ha)	285.29	Not Applicable

A summary of the land use areas for the Subject land is presented in Table 2.2 below:

Table 5.2 (Previously 2.2) – Land Use areas Summary

Land Use	Area (ha)
Residence and associated infrastructure (Sheds etc)	0.165
Roads & sealed pavements	1.356
Process Line area and Laydown for resource (Stone washing Process line, ponds and associated pavements)	2.850
Service Centre and Laydown areas (Service area and associated permeable pavements)	2.372
Equipment storage and central laydown area	0.954
Balance rural property	57.103
TOTAL	64.800

Table 5.3 Pre-development Catchment Flows

ARI	Pre-development Parameter	Catchment Area 64.8 ha
		Rational Method
1-year	Q (m³/s)	0.675
	C	0.131
10-year	Q (m³/s)	1.293
	Coefficient C	0.138
100-year	Q (m³/s)	2.183
	Coefficient C	0.166

The total volume of runoff is determined by the amount of rainfall less the losses, largely infiltration whilst the rate of runoff is determined by the slope and roughness (Manning's n) of the surface. The initial loss-continuing loss model has been adopted in the hydrological model with loss rates and roughness land types:

Table 5.3 - Catchment Characteristics

Infiltration Land Type	Manning's n	Initial Loss (mm)	Proportional Continuing Loss (mm)
Short grass	0.15	0.0	Varies according to C-value

A comparison of pre- and post-development flows indicates that the development of the subject land will not increase stormwater flows into the downstream environment:

Table 5.4 - Pre- and Post-Development Peak Discharges

ARI (years)	Pre-Development Peak Discharge from Site (m ³ /s)	Post-Development Peak Discharge (m ³ /s)
1-year ARI	0.675	0.675 (Balance retained on site)
10-year ARI	1.293	1.293 (Retained on site)
100-year ARI	2.183	2.183 (Retained on site)

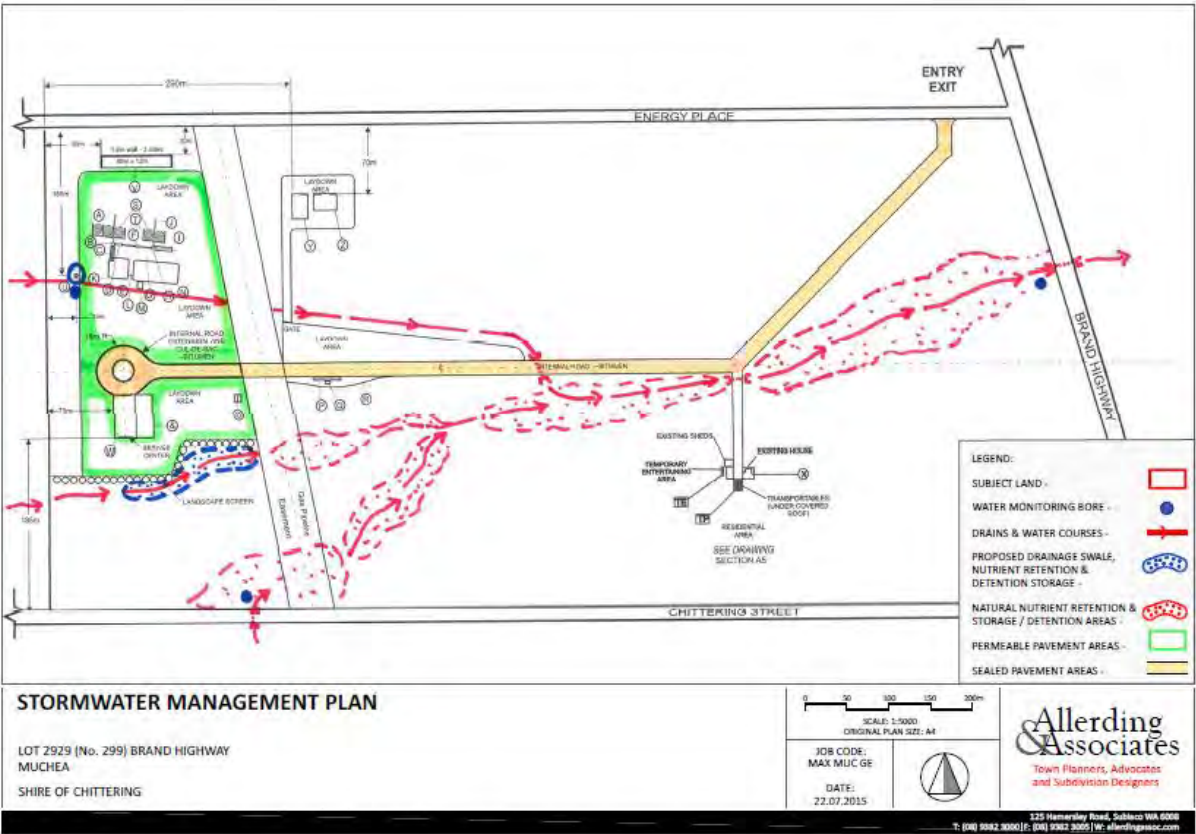
Post development catchment and infiltration swales (predominately immediately south of the service area) areas are in similar proximity to areas where pre-development infiltration would have occurred, hence pre and post conditions are maintained. All storm events from the major catchments will be contained within the infiltration basins hence there will be no post development discharge from these catchments other than via infiltration.

The small amount of additional runoff generated from the roof of the services and maintenance facility is initially stored in two rainwater tanks located at the south-western and south-eastern ends of the facility (refer to photo below). This is also part of the rainwater harvesting and re-use initiatives utilised around the site wherever the opportunity is available.



Once the tanks are full and in cases of heavy downpours where they may be filled to capacity, the owners have connected the tanks to an overflow system that pipes the overflow to a recharge area to the south of the facility band adjacent to the Landscaped "Screening" area as shown on Figure 19 and Annexure 2 of the Planning Report. It will be necessary to formalise a landscaped swale so that will be incorporated in the natural low lying soakage zone which is the natural confluence between the southern townsite entering waters and the smaller of the two agricultural catchments.

The storage volume required to attenuate the services facility roof to predevelopment flows (2,160m² of catchment) is 26.0 m³ in a 1 in 100 yr event, Refer to table 5.2 below.



The volumes of runoff that are to be retained for the service area for the respective return period storms are identified below in Table 5.5. Calculation in Appendix 3.

Table 5.5 – Swale to south end of Service area – Required volumes

Catchment	Catchment Gross Area (m2)	Area containing swale (m2)	ARI	TWL (mAHD)	Storage Volume (m³)	Surface Area at TWL (m²)	Swale Details	
							Base Level (m AHD)	Side Slope (v:h)
Service area Swale	2,160	10,000	1-yr	Stored within Above ground storage tanks	Overflow soaks away without need for storage in swales	N/A as no storage depth Req'd (100m2)	RL55.00	1:6
			10-yr	RL 55.058	6.0	104		
			100-yr	RL 55.241	26.0	110		

5.11 Water Sustainability Initiatives

The site will be developed following “waterwise” principles with water conservation strategies for household use, irrigation and processing water with water recycling and re-use as a central feature.

5.12 Water Efficient Measures

5.12.1 Household water efficiency

Extensions or additions to the homestead will be required to comply with the 5Star Plus Codes; Energy Use in Houses Code and Water Use in Houses Code, published by the Department of Housing. The following mandatory requirements will be the responsibility of the landowners:

- A hot water system with a minimum of 5 star WELS rating;
- Fittings and fixtures are to have a minimum of 3 or 4 WELS star rating;
- Where practicable, hot water outlets are to be located as close as possible to the hot water system;
- New homes are to be designed to enable connection to an alternative water supply; and
- New homes are to be designed to enable connection to a grey water recycling system in the future.

5.12.2 Waterwise Landscaping

All landowners will be required to follow waterwise watering and for gardens including waterwise species and a water conservation irrigation.

5.12.3 Water Supply

Potable water for dwellings will be supplied from the existing water bore for the existing dwelling.

5.12.4 Waste Water Management

All wastewater will be disposed of via the existing on site effluent disposal facility (existing facility on site).

5.12.5 Process Water Recycling

As noted in previous sections of this report, the wash plant and other associated facilities are designed for maximum water efficiency and re-use. In this way water usage has been maintained across the site with adequate back-up for other purposes including firefighting, dust control and dry weather spells. 3 x 25kl tanks are located within the process area for all water supply purposes for the site with water recycling utilised to the maximum potential which limits the water use on site to well within the annual extraction allocation by DoW.

6. CONCLUSIONS AND RECOMMENDATIONS

This Catchment Management Plan, which is more properly described as a Property Management Plan (PMP) in regards to this application in support of the operations undertaken on the subject site has been prepared in line with the Shire of Chittering Town Planning Scheme guidelines.

The PMP does not replace the catchment scale plan but does contain specific information relevant to the practical operation by the landowners of the zoned rural property 299 Brand Highway.

We summarise our findings as follows:

- The site has no problematic soils or ASS issues that require attention in relation to the proposed operations and works.
- The proposed operations are based on maintaining strong environmental management of the catchment by:
 - Ensuring process water from the quarry material washing processes is collected and recycled
 - Resource material storage for processing is stockpiled on a pavement base that encourages containment of quarry product at the surface and graded to ensure that surface water is collected to containment ponds for recycling.
 - Reuse of water along with water harvesting techniques adopted on site minimise the volume of water extracted from the local aquifer under an approved extraction license which is monitored in line with DoW approvals.
 - Water Quality monitoring for surface water and stormwater entering the site and leaving the site is undertaken on a regular basis for a period of two years and recorded to advise of any potential changes in water quality (results indicate that incoming waters from the townsite contain hydrocarbons, whilst incoming waters from the agricultural land does not contain any significant contamination but does contain some nutrients which may potentially increase the nutrient load within the site). As discussed the water leaving the property has not presented any analysis with contamination indicating that the grasses and microorganisms on the property are processing the hydrocarbon contaminants through natural remediation. Analysis of the water flows into and exiting the property will continue to be taken.
 - Surface water conveyance through the property is further managed by monitoring of creek line embankments and limiting erosion by regular maintenance. Any new storage and surface water management features proposed will also be designed and constructed to ensure minimal maintenance is required.
 - Hydrocarbon contamination risk is rigidly managed by containerised (bunded) storage and limiting risk to defined work areas so that any potential contamination is quickly managed and the risk of this occurring is minimised.
- Sustainability Initiatives will continue on site with the use of rainwater tanks, process water recycling and recharge of clean waters and surface waters.

Based on the proposed measures and close monitoring processes that the proponents undertaken and maintained the land is both capable of sustaining the operations to acceptable standards with the facilities proposed to be incorporated in the extensions to the facility will adequately manage the stormwater runoff to maintain the balanced catchment requirements by limiting flows to pre-development conditions and to maintaining water quality within the development that will add any load to the incoming waters to the site.

7. ACKNOWLEDGEMENTS

The following sources were used to prepare this report and are acknowledged to from part of references for this application:

- Development Application – Lot 2929 (No 299) Brand Highway Muchea
Extension of Whitestone Quarries Rural Industry Product Processing Plant
Prepared by Allarding & Associates, April 2015
- Water Recycling by the Business Activity – Whitestone Quarries WA Pty Ltd 299 Brand Highway, Muchea,
Prepared by Wheatbelt Timber Pty Ltd, March 2015
- Preliminary (unfinished) – Catchment Property Management Plan– Whitestone Quarries WA Pty Ltd 299
Brand Highway, Muchea,
Prepared by Wheatbelt Timber Pty Ltd, March 2015

Appendix 1 – Typical Water Quality Monitoring results

**REPORT OF ANALYSIS****Laboratory Reference:** A14/5719 [R00]**Client:** Midwest Concepts & Solutions Pty Ltd
60 Ocean Place
NILGEN WA 6044**Contact:** Phil Bellamy**Order No:**
Project: Whitestone Quarry Water
Sample Type: water
No. of Samples: 6
Date Received: 13/10/2014
Date Completed: 22/10/2014

Laboratory Contact Details:**Client Services Manager:** Jane Struthers
Technical Enquiries: Andrew Bradbury
Telephone: +61 8 9325 9799
Fax: +61 8 9325 4299
Email: perth@advancedanalytical.com.au
andrew.bradbury@advancedanalytical.com.au

Attached Results Approved By:**Ian Eckhard**
Technical Director**Comments:**

All samples tested as submitted by client. All attached results have been checked and approved for release.
This is the Final Report and supersedes any reports previously issued with this reference number.
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Issue Date: 22 October 2014**Page 1 of 6****Advanced Analytical Australia Pty Ltd**
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Batch Number: A14/5719 [R00]
Project Reference: Whitestone Quarry Water

Laboratory Reference:	-	-	1	2	3	4
Client Reference:	-	-	E bore	E surface	WN bore	WS bore
Date Sampled:	-	-	13/10/2014	13/10/2014	13/10/2014	13/10/2014
Analysis Description	Method	Units				
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	µg/L	<25	<25	<25	<25
TPHC10-14	04-030	µg/L	<50	<50	<50	<50
TPHC15-28	04-030	µg/L	<100	<100	<100	<100
TPHC29-36	04-030	µg/L	<100	<100	110	<100
Surrogate Recovery	04-030	%	85	87	91	89
Date Extracted	04-030	-	17/10/2014	17/10/2014	17/10/2014	17/10/2014
Date Analysed	04-030	-	21/10/2014	21/10/2014	21/10/2014	21/10/2014
Total Recoverable Hydrocarbons						
TRHC6-C10	04-021	µg/L	<25	<25	<25	<25
TRH>C10-C16	04-030	µg/L	<50	<50	<50	<50
TRH>C16-C34	04-030	µg/L	150	140	170	140
TRH>C34-C40	04-030	µg/L	<100	<100	<100	<100
Surrogate Recovery	04-030	%	85	87	91	89
Date Extracted	04-030	-	17/10/2014	17/10/2014	17/10/2014	17/10/2014
Date Analysed	04-030	-	21/10/2014	21/10/2014	21/10/2014	21/10/2014
BTEX & Naphthalene						
Benzene	04-021	µg/L	<1.0	<1.0	<1.0	<1.0
Toluene	04-021	µg/L	<2.0	<2.0	<2.0	<2.0
Ethyl Benzene	04-021	µg/L	<2.0	<2.0	<2.0	<2.0
m+p xylenes	04-021	µg/L	<4.0	<4.0	<4.0	<4.0
o-xylene	04-021	µg/L	<2.0	<2.0	<2.0	<2.0
Total BTEX	04-021	µg/L	<11	<11	<11	<11
Naphthalene	04-047	µg/L	<4.0	<4.0	<4.0	<4.0
Surrogate 1 Recovery	04-021	%	129	140	121	114
Surrogate 2 Recovery	04-021	%	93	98	100	92
Surrogate 3 Recovery	04-021	%	89	95	92	83
Date Extracted	04-021	-	15/10/2014	15/10/2014	15/10/2014	15/10/2014
Date Analysed	04-021	-	15/10/2014	15/10/2014	15/10/2014	15/10/2014



Batch Number: A14/5719 [R00]
Project Reference: Whitestone Quarry Water

Laboratory Reference:	-	-	5	6
Client Reference:	-	-	S bore	S surface
Date Sampled:	-	-	13/10/2014	13/10/2014
Analysis Description	Method	Units		
Total Petroleum Hydrocarbons				
TPHC6-C9	04-021	µg/L	<25	<25
TPHC10-14	04-030	µg/L	<50	<50
TPHC15-28	04-030	µg/L	<100	160
TPHC29-36	04-030	µg/L	<100	150
Surrogate Recovery	04-030	%	92	84
Date Extracted	04-030	-	17/10/2014	17/10/2014
Date Analysed	04-030	-	21/10/2014	21/10/2014
Total Recoverable Hydrocarbons				
TRHC6-C10	04-021	µg/L	<25	<25
TRH>C10-C16	04-030	µg/L	<50	<50
TRH>C16-C34	04-030	µg/L	<100	270
TRH>C34-C40	04-030	µg/L	<100	140
Surrogate Recovery	04-030	%	92	84
Date Extracted	04-030	-	17/10/2014	17/10/2014
Date Analysed	04-030	-	21/10/2014	21/10/2014
BTEX & Naphthalene				
Benzene	04-021	µg/L	<1.0	<1.0
Toluene	04-021	µg/L	<2.0	<2.0
Ethyl Benzene	04-021	µg/L	<2.0	<2.0
m+p xylenes	04-021	µg/L	<4.0	<4.0
o-xylene	04-021	µg/L	<2.0	<2.0
Total BTEX	04-021	µg/L	<11	<11
Naphthalene	04-047	µg/L	<4.0	<4.0
Surrogate 1 Recovery	04-021	%	111	119
Surrogate 2 Recovery	04-021	%	96	96
Surrogate 3 Recovery	04-021	%	86	97
Date Extracted	04-021	-	15/10/2014	15/10/2014
Date Analysed	04-021	-	15/10/2014	15/10/2014

Issue Date: 22 October 2014

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Batch Number: A14/5719 [R00]
Project Reference: Whitestone Quarry Water

Method	Method Description
04-021	TRH C6-9 & BTEX by P&T GCMS, µg/L
04-030	TRH by GC-FID, µg/L
04-047	VOC compounds by P&T GCMS, µg/L

Result Comments

[<] Less than

[INS] Insufficient sample for this test

[NA] Test not required

Results reported on an 'as received' basis.



Batch Number: A14/5719 [R00]
Project Reference: Whitestone Quarry Water

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPHC6-C9	µg/L	<25	A14/5719-1	<25 <25	A14/5719-1	63%
TPHC10-14	µg/L	<50	A14/5719-1	<50 <50	A14/5719-1	[NT]
TPHC15-28	µg/L	<100	A14/5719-1	<100 110	A14/5719-1	[NT]
TPHC29-36	µg/L	<100	A14/5719-1	<100 110	A14/5719-1	[NT]
Surrogate Recovery	%	98	A14/5719-1	85 94 RPD: 10	A14/5719-1	90%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TRHC6-C10	µg/L	<25	A14/5719-1	<25 <25	A14/5719-1	57%
TRH>C10-C16	µg/L	<50	A14/5719-1	<50 <50	A14/5719-1	[NT]
TRH>C16-C34	µg/L	<100	A14/5719-1	150 180 RPD: 18	A14/5719-1	[NT]
TRH>C34-C40	µg/L	<100	A14/5719-1	<100 <100	A14/5719-1	[NT]
Surrogate Recovery	%	98	A14/5719-1	85 94 RPD: 10	A14/5719-1	90%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	µg/L	<1.0	A14/5719-1	<1.0 <1.0	A14/5719-1	94%
Toluene	µg/L	<2.0	A14/5719-1	<2.0 <2.0	A14/5719-1	94%
Ethyl Benzene	µg/L	<2.0	A14/5719-1	<2.0 <2.0	A14/5719-1	91%
m+p xylenes	µg/L	<4.0	A14/5719-1	<4.0 <4.0	A14/5719-1	89%
o-xylene	µg/L	<2.0	A14/5719-1	<2.0 <2.0	A14/5719-1	92%
Total BTEX	µg/L	<11	A14/5719-1	<11 <11	A14/5719-1	[NA]
Naphthalene	µg/L	<4.0	A14/5719-1	<4.0 <4.0	A14/5719-1	92%
Surrogate 1 Recovery	%	115	A14/5719-1	129 136 RPD: 5	A14/5719-1	99%
Surrogate 2 Recovery	%	88	A14/5719-1	93 93 RPD: 0	A14/5719-1	90%
Surrogate 3 Recovery	%	83	A14/5719-1	89 87 RPD: 2	A14/5719-1	89%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPHC6-C9	µg/L	[NT]	[NT]	[NT]	External	75%
TPHC10-14	µg/L	[NT]	[NT]	[NT]	External	89%
TPHC15-28	µg/L	[NT]	[NT]	[NT]	External	97%
TPHC29-36	µg/L	[NT]	[NT]	[NT]	External	100%
Surrogate Recovery	%	[NT]	[NT]	[NT]	External	93%

Issue Date: 22 October 2014

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Batch Number: A14/5719 [R00]
Project Reference: Whitestone Quarry Water

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TRHC6-C10	µg/L	[NT]	[NT]	[NT]	External	72%
TRH>C10-C16	µg/L	[NT]	[NT]	[NT]	External	93%
TRH>C16-C34	µg/L	[NT]	[NT]	[NT]	External	99%
TRH>C34-C40	µg/L	[NT]	[NT]	[NT]	External	102%
Surrogate Recovery	%	[NT]	[NT]	[NT]	External	93%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	µg/L	[NT]	[NT]	[NT]	External	90%
Toluene	µg/L	[NT]	[NT]	[NT]	External	91%
Ethyl Benzene	µg/L	[NT]	[NT]	[NT]	External	90%
m+p xylenes	µg/L	[NT]	[NT]	[NT]	External	92%
o-xylene	µg/L	[NT]	[NT]	[NT]	External	88%
Total BTEX	µg/L	[NT]	[NT]	[NT]	External	[NA]
Naphthalene	µg/L	[NT]	[NT]	[NT]	External	96%
Surrogate 1 Recovery	%	[NT]	[NT]	[NT]	External	93%
Surrogate 2 Recovery	%	[NT]	[NT]	[NT]	External	91%
Surrogate 3 Recovery	%	[NT]	[NT]	[NT]	External	91%

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

'#' = Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD: Results < 10 times LOR: no limits.

Results > 10 times LOR: 0% - 50%.

Acceptable matrix spike & LCS recovery limits:

Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

**REPORT OF ANALYSIS****Laboratory Reference:** A14/5909 [R00]**Client:** Midwest Concepts & Solutions Pty Ltd
60 Ocean Place
NILGEN WA 6044**Contact:** Phil Bellamy**Order No:**
Project: Carnamah - Soil
Sample Type: Soil
No. of Samples: 7
Date Received: 22/10/2014
Date Completed: 28/10/2014

Laboratory Contact Details:**Client Services Manager:** Jane Struthers
Technical Enquiries: Andrew Bradbury
Telephone: +61 8 9325 9799
Fax: +61 8 9325 4299
Email: perth@advancedanalytical.com.au
andrew.bradbury@advancedanalytical.com.au

Attached Results Approved By:**Ian Eckhard**
Technical Director**Comments:**

All samples tested as submitted by client. All attached results have been checked and approved for release.
This is the Final Report and supersedes any reports previously issued with this reference number.
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Issue Date: 30 October 2014

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Batch Number: A14/5909 [R00]
Project Reference: Carnamah - Soil

Laboratory Reference:	-	-	1	2	3	4
Client Reference:	-	-	Sample 1	Sample 2	Sample 3	Sample 4
Date Sampled:	-	-	15/10/14	15/10/14	15/10/14	15/10/14
Analysis Description	Method	Units				
Total Solids						
Total Solids	04-004	%	96.2	95.4	93.8	90.5
BTEX & Naphthalene						
Benzene	04-021	mg/kg	<0.20	<0.20	<0.20	<0.20
Toluene	04-021	mg/kg	<0.20	<0.20	<0.20	<0.20
Ethyl Benzene	04-021	mg/kg	<0.20	<0.20	<0.20	<0.20
m+p xylenes	04-021	mg/kg	<0.40	<0.40	<0.40	<0.40
o-xylene	04-021	mg/kg	<0.20	<0.20	<0.20	<0.20
Total BTEX	04-021	mg/kg	<1.2	<1.2	<1.2	<1.2
Naphthalene	04-047	mg/kg	<0.40	<0.40	<0.40	<0.40
Surrogate 1 Recovery	04-021	%	98	81	96	92
Surrogate 2 Recovery	04-021	%	79	78	80	79
Surrogate 3 Recovery	04-021	%	95	90	94	96
Date Extracted	04-021	-	24/10/2014	24/10/2014	24/10/2014	24/10/2014
Date Analysed	04-021	-	27/10/2014	27/10/2014	27/10/2014	27/10/2014
Total Recoverable Hydrocarbons						
TRH C6-C10	04-021	mg/kg	<25	<25	<25	<25
TRH >C10-C16	04-020	mg/kg	440	660	590	1,100
TRH >C16-C34	04-020	mg/kg	1,900	3,100	2,200	3,400
TRH >C34-C40	04-020	mg/kg	<100	<100	<100	<100
Surrogate Recovery	04-020	%	107	108	99	106
Date Extracted	04-020	-	27/10/2014	27/10/2014	27/10/2014	27/10/2014
Date Analysed	04-020	-	27/10/2014	27/10/2014	27/10/2014	27/10/2014

Issue Date: 30 October 2014

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Batch Number: A14/5909 [R00]
Project Reference: Carnamah - Soil

Laboratory Reference:	-	-	5	6	7
Client Reference:	-	-	Sample 5	Sample 6	Sample 7
Date Sampled:	-	-	15/10/14	15/10/14	15/10/14
Analysis Description	Method	Units			
Total Solids					
Total Solids	04-004	%	94.5	92.9	94.5
BTEX & Naphthalene					
Benzene	04-021	mg/kg	<0.20	<0.20	<0.20
Toluene	04-021	mg/kg	<0.20	<0.20	<0.20
Ethyl Benzene	04-021	mg/kg	<0.20	<0.20	<0.20
m+p xylenes	04-021	mg/kg	<0.40	<0.40	<0.40
o-xylene	04-021	mg/kg	<0.20	<0.20	<0.20
Total BTEX	04-021	mg/kg	<1.2	<1.2	<1.2
Naphthalene	04-047	mg/kg	<0.40	<0.40	<0.40
Surrogate 1 Recovery	04-021	%	87	84	69
Surrogate 2 Recovery	04-021	%	81	79	77
Surrogate 3 Recovery	04-021	%	93	93	86
Date Extracted	04-021	-	24/10/2014	24/10/2014	24/10/2014
Date Analysed	04-021	-	27/10/2014	27/10/2014	27/10/2014
Total Recoverable Hydrocarbons					
TRH C6-C10	04-021	mg/kg	<25	<25	<25
TRH >C10-C16	04-020	mg/kg	900	720	750
TRH >C16-C34	04-020	mg/kg	3,300	2,500	2,700
TRH >C34-C40	04-020	mg/kg	<100	<100	<100
Surrogate Recovery	04-020	%	103	100	111
Date Extracted	04-020	-	27/10/2014	27/10/2014	27/10/2014
Date Analysed	04-020	-	27/10/2014	27/10/2014	27/10/2014

Method	Method Description
04-004	Total Solids by gravimetric, %
04-021	TRH C6-9 & BTEX by P&T GCMS, mg/kg
04-047	VOC compounds by P&T GCMS, mg/kg
04-020	TRH by GC-FID, mg/kg

Issue Date: 30 October 2014

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Batch Number: A14/5909 [R00]
Project Reference: Carnamah - Soil

Result Comments

[<] Less than

[INS] Insufficient sample for this test

[NA] Test not required

Solid sample results are reported on a dry weight basis.



Batch Number: A14/5909 [R00]
Project Reference: Carnamah - Soil

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results
Total Solids	%	[NA]	A14/5909-1	96.2 96.4 RPD:0

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	mg/kg	<0.20	A14/5909-1	<0.20 <0.20	A14/5909-1	93%
Toluene	mg/kg	<0.20	A14/5909-1	<0.20 <0.20	A14/5909-1	82%
Ethyl Benzene	mg/kg	<0.20	A14/5909-1	<0.20 <0.20	A14/5909-1	78%
m+p xylenes	mg/kg	<0.40	A14/5909-1	<0.40 <0.40	A14/5909-1	83%
o-xylene	mg/kg	<0.20	A14/5909-1	<0.20 <0.20	A14/5909-1	95%
Total BTEX	mg/kg	<1.2	A14/5909-1	<1.2 <1.2	A14/5909-1	[NA]
Naphthalene	mg/kg	<0.40	A14/5909-1	<0.40 <0.40	A14/5909-1	91%
Surrogate 1 Recovery	%	106	A14/5909-1	98 90 RPD:9	A14/5909-1	95%
Surrogate 2 Recovery	%	79	A14/5909-1	79 83 RPD:5	A14/5909-1	76%
Surrogate 3 Recovery	%	89	A14/5909-1	95 92 RPD:3	A14/5909-1	96%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TRH C6-C10	mg/kg	<25	A14/5909-1	<25 <25	A14/5909-1	61%
TRH>C10-C16	mg/kg	<50	A14/5909-1	440 480 RPD:9	A14/5909-1	118%
TRH>C16-C34	mg/kg	<100	A14/5909-1	1900 2000 RPD:5	A14/5909-1	120%
TRH>C34-C40	mg/kg	<100	A14/5909-1	<100 <100	A14/5909-1	114%
Surrogate Recovery	%	95	A14/5909-1	107 102 RPD:5	A14/5909-1	103%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Benzene	mg/kg	[NT]	[NT]	[NT]	External	91%
Toluene	mg/kg	[NT]	[NT]	[NT]	External	81%
Ethyl Benzene	mg/kg	[NT]	[NT]	[NT]	External	75%
m+p xylenes	mg/kg	[NT]	[NT]	[NT]	External	87%
o-xylene	mg/kg	[NT]	[NT]	[NT]	External	92%
Total BTEX	mg/kg	[NT]	[NT]	[NT]	External	[NA]
Naphthalene	mg/kg	[NT]	[NT]	[NT]	External	91%
Surrogate 1 Recovery	%	[NT]	[NT]	[NT]	External	95%
Surrogate 2 Recovery	%	[NT]	[NT]	[NT]	External	78%
Surrogate 3 Recovery	%	[NT]	[NT]	[NT]	External	94%

Issue Date: 30 October 2014

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Batch Number: A14/5909 [R00]
Project Reference: Carnamah - Soil

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TRHC6-C10	mg/kg	[NT]	[NT]	[NT]	External	70%
TRH>C10-C16	mg/kg	[NT]	[NT]	[NT]	External	114%
TRH>C16-C34	mg/kg	[NT]	[NT]	[NT]	External	115%
TRH>C34-C40	mg/kg	[NT]	[NT]	[NT]	External	110%
Surrogate Recovery	%	[NT]	[NT]	[NT]	External	99%

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

= Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD: Results < 10 times LOR: no limits.
 Results > 10 times LOR: 0% - 50%.

Acceptable matrix spike & LCS recovery limits: Trace elements 70-130%
 Organic analyses 50-150%
 SVOC & speciated phenols 10-140%
 Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

**REPORT OF ANALYSIS****Laboratory Reference:** A13/5734 [R00]**Client:** Midwest Concepts & Solutions Pty Ltd
60 Ocean Place
NILGEN WA 6044**Contact:** Phil Bellamy**Order No:**
Project: Water Whitestone Quarry
Sample Type: water
No. of Samples: 4
Date Received: 19/11/2013
Date Completed: 27/11/2013

Laboratory Contact Details:**Client Services Manager:** Jane Struthers
Technical Enquiries: Andrew Bradbury
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Fax: +61 89325 4299
Email: perth@advancedanalytical.com.au
andrew.bradbury@advancedanalytical.com.au

Attached Results Approved By:**Ian Eckhard**
Technical Director**Comments:**

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this reference number. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Issue Date: 3 December 2013

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Batch Number: A13/5734 [R00]
Project Reference: Water Whitestone Quarry

Laboratory Reference:	-	-	1	2	3	4
Client Reference:	-	-	WN	WS	S	E
Date Sampled:	-	-	14/11/2013	14/11/2013	14/11/2013	14/11/2013
Analysis Description	Method	Units				
Total Petroleum Hydrocarbons						
TPHC6-C9	04-021	µg/L	<25	<25	<25	<25
TPHC10-14	04-030	µg/L	<50	95	86	<50
TPHC15-28	04-030	µg/L	110	120	<100	<100
TPHC29-36	04-030	µg/L	130	120	<100	<100
Surrogate Recovery	04-030	%	98	84	121	96
Date Extracted	04-030	-	20/11/2013	20/11/2013	20/11/2013	20/11/2013
Date Analysed	04-030	-	22/11/2013	22/11/2013	22/11/2013	22/11/2013
Organochlorine Pesticides						
Aldrin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>alpha</i> -BHC	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>beta</i> -BHC	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>gamma</i> -BHC (Lindane)	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>delta</i> -BHC	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>cis</i> -Chlordane	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>trans</i> -Chlordane	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>p,p'</i> -DDD	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>p,p'</i> -DDE	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>p,p'</i> -DDT	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Dieldrin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>alpha</i> -Endosulfan	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>beta</i> -Endosulfan	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endrin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endrin ketone	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Heptachlor	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Hexachlorobenzene	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Methoxychlor	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Mirex	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Surrogate Recovery	04-072	%	90	74	102	94
Date Extracted	04-072	-	20/11/2013	20/11/2013	20/11/2013	20/11/2013

Issue Date: 3 December 2013

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Batch Number: A13/5734 [R00]
Project Reference: Water Whitestone Quarry

Laboratory Reference:	-	-	1	2	3	4
Client Reference:	-	-	WN	WS	S	E
Date Sampled:	-	-	14/11/2013	14/11/2013	14/11/2013	14/11/2013
Analysis Description	Method	Units				
Date Analysed	04-072	-	23/11/2013	23/11/2013	23/11/2013	23/11/2013
Organophosphate Pesticides						
Azinphos-methyl	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Bromophos-ethyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Carbophenothion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Chlorfenvinphos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Diazinon	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Demeton-S-methyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Demeton-S	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Dimethoate	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Dichlorvos	04-072	µg/L	<2	<2	<2	<2
Ethion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Fenitrothion	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Fenthion	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Fenamiphos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Malathion	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Methidathion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Parathion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Parathion-methyl	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Phosalone	04-072	µg/L	<2	<2	<2	<2
Pirimiphos-methyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Profenofos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Prothiofos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Trifluralin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Surrogate Recovery	04-072	%	115	103	116	110
Date Extracted	04-072	-	20/11/2013	20/11/2013	20/11/2013	20/11/2013
Date Analysed	04-072	-	23/11/2013	23/11/2013	23/11/2013	23/11/2013
Subcontract Analysis - Water						
pH	SUB	pH unit	6.7	6.3	7.4	6.8
Conductivity	SUB	µS/cm	670	470	440	1660



Batch Number: A13/5734 [R00]
Project Reference: Water Whitestone Quarry

Method	Method Description
04-021	TRH C6-9 & BTEX by P&T GCMS, µg/L
04-030	TRH by GC-FID, µg/L
04-072	Pesticides in waters by GCMS, µg/L
SUB	Subcontracted Analyses

Result Comments

[<] Less than

[INS] Insufficient sample for this test

[NA] Test not required

Results reported on an 'as received' basis.

SUB analysis was subcontracted to Sydney Analytical Laboratories (NATA Number 1884);
reference SAL report number SAL24874B.



Batch Number: A13/5734 [R00]
Project Reference: Water Whitestone Quarry

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPHC6-C9	µg/L	<25	A13/5734-1	<25 [NT]	A13/5708-A-1	82%
TPHC10-14	µg/L	<50	A13/5734-1	<50 <50	A13/5708-A-1	NT
TPHC15-28	µg/L	<100	A13/5734-1	110 140 RPD: 24	A13/5708-A-1	NT
TPHC29-36	µg/L	<100	A13/5734-1	130 230 RPD: 56	A13/5708-A-1	NT
Surrogate Recovery	%	101	A13/5734-1	98 99 RPD: 1	A13/5708-A-1	94%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Aldrin	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	101%
<i>alpha</i> -BHC	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	98%
<i>beta</i> -BHC	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	100%
<i>gamma</i> -BHC (Lindane)	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	92%
<i>delta</i> -BHC	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	111%
<i>cis</i> -Chlordane	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	95%
<i>trans</i> -Chlordane	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	97%
<i>p,p'</i> -DDD	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	106%
<i>p,p'</i> -DDE	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	100%
<i>p,p'</i> -DDT	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	89%
Dieldrin	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	101%
<i>alpha</i> -Endosulfan	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	99%
<i>beta</i> -Endosulfan	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	103%
Endosulfan Sulphate	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	101%
Endrin	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	102%
Endrin ketone	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	94%
Endrin aldehyde	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	87%
Heptachlor	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	96%
Heptachlor epoxide	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	76%
Hexachlorobenzene	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	93%
Methoxychlor	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	83%
Mirex	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	94%
Surrogate Recovery	%	118	A13/5734-1	90 89 RPD: 1	A13/5734-2	72%



Batch Number: A13/5734 [R00]
Project Reference: Water Whitestone Quarry

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Azinphos-methyl	µg/L	<0.5	A13/5734-1	<0.5 <0.5	A13/5734-2	109%
Bromophos-ethyl	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	99%
Carbophenothion	µg/L	<0.5	A13/5734-1	<0.5 <0.5	A13/5734-2	95%
Chlorfenvinphos	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	105%
Chlorpyrifos	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	102%
Chlorpyrifos-methyl	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	104%
Diazinon	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	98%
Demeton-S-methyl	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	107%
Demeton-S	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	105%
Dimethoate	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	125%
Dichlorvos	µg/L	<2	A13/5734-1	<2 <2	A13/5734-2	97%
Ethion	µg/L	<0.5	A13/5734-1	<0.5 <0.5	A13/5734-2	108%
Fenitrothion	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	120%
Fenthion	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	106%
Fenamiphos	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	146%
Malathion	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	111%
Methidathion	µg/L	<0.5	A13/5734-1	<0.5 <0.5	A13/5734-2	102%
Parathion	µg/L	<0.5	A13/5734-1	<0.5 <0.5	A13/5734-2	128%
Parathion-methyl	µg/L	<0.5	A13/5734-1	<0.5 <0.5	A13/5734-2	132%
Phosalone	µg/L	<2	A13/5734-1	<2 <2	A13/5734-2	98%
Pirimiphos-methyl	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	102%
Profenofos	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	113%
Prothiofos	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	95%
Trifluralin	µg/L	<0.1	A13/5734-1	<0.1 <0.1	A13/5734-2	113%
Surrogate Recovery	%	119	A13/5734-1	115 113 RPD: 2	A13/5734-2	101%



Batch Number: A13/5734 [R00]
Project Reference: Water Whitestone Quarry

TEST	UNITS	Blank
pH	pH unit	7.2
Conductivity	µS/cm	1.3

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	µg/L	[NT]	[NT]	[NT]	External	[NT]
TPH C10-14	µg/L	[NT]	[NT]	[NT]	External	112%
TPH C15-28	µg/L	[NT]	[NT]	[NT]	External	119%
TPH C29-36	µg/L	[NT]	[NT]	[NT]	External	114%
Surrogate Recovery	%	[NT]	[NT]	[NT]	External	110%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	µg/L	[NT]	[NT]	[NT]	A13/5734-1	[NT]
TPH C10-14	µg/L	[NT]	[NT]	[NT]	A13/5734-1	88%
TPH C15-28	µg/L	[NT]	[NT]	[NT]	A13/5734-1	89%
TPH C29-36	µg/L	[NT]	[NT]	[NT]	A13/5734-1	84%
Surrogate Recovery	%	[NT]	[NT]	[NT]	A13/5734-1	69%

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

'#' = Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD: Results < 10 times LOR: no limits.

Results > 10 times LOR: 0% - 50%.

Acceptable matrix spike & LCS recovery limits: Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

**REPORT OF ANALYSIS****Laboratory Reference:** A13/5135 [R00]**Client:** Midwest Concepts & Solutions Pty Ltd
60 Ocean Place
NILGEN WA 6044**Contact:** Phil Bellamy**Order No:**
Project: Water Whitestone Quarry
Sample Type: water
No. of Samples: 4
Date Received: 22/10/2013
Date Completed: 24/10/2013

Laboratory Contact Details:**Client Services Manager:** Jane Struthers
Technical Enquiries: Andrew Bradbury
Telephone: +61 8 9325 9799
Fax: +61 8 9325 4299
Email: perth@advancedanalytical.com.au
andrew.bradbury@advancedanalytical.com.au

Attached Results Approved By:**Ian Eckhard**
Technical Director**Comments:**

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this reference number. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Issue Date: 31 October 2013**Page 1 of 3****Advanced Analytical Australia Pty Ltd**
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Batch Number: A13/5135 [R00]
Project Reference: Water Whitestone Quarry

Laboratory Reference:	-	-	1	2	3	4
Client Reference:	-	-	WN	WS	S	E
Date Sampled:	-	-	21/10/2013	21/10/2013	21/10/2013	21/10/2013
Analysis Description	Method	Units				
Total Petroleum Hydrocarbons						
TPH C6-C9	04-021	µg/L	<25	<25	<25	<25
Surrogate Recovery	04-030	%	104	101	103	111
Date Extracted	04-030	-	24/10/2013	24/10/2013	24/10/2013	24/10/2013
Date Analysed	04-030	-	24/10/2013	24/10/2013	24/10/2013	24/10/2013

Method	Method Description
04-021	TRH C6-9 & BTEX by P&T GCMS, µg/L
04-030	TRH by GC-FID, µg/L

Result Comments

[<] Less than
 [INS] Insufficient sample for this test
 [NA] Test not required

Issue Date: 31 October 2013

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Batch Number: A13/5135 [R00]
Project Reference: Water Whitestone Quarry

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	µg/L	<25	A13/5135-1	<25 <25	A13/5135-1	104%
Surrogate Recovery	%	104	A13/5135-1	104 107 RPD: 3	A13/5135-1	103%

TEST	Units	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	µg/L	[NT]	[NT]	[NT]	External	90%
Surrogate Recovery	%	[NT]	[NT]	[NT]	External	105%

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

'#' = Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD:

Results < 10 times LOR: no limits.

Results > 10 times LOR: 0% - 50%.

Acceptable matrix spike & LCS recovery limits:

Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.



REPORT OF ANALYSIS

Laboratory Reference: A14/3311 [R00]

Client: Midwest Concepts & Solutions Pty Ltd
60 Ocean Place
NILGEN WA 6044

Contact: Phil Bellamy

Order No:
Project: Whitestone Quarry Water
Sample Type: water
No. of Samples: 6
Date Received: 20/06/2014
Date Completed: 2/07/2014

Laboratory Contact Details:

Client Services Manager: Jane Struthers
Technical Enquiries: Andrew Bradbury
Telephone: +61 8 9325 9799
Fax: +61 8 9325 4299
Email: perth@advancedanalytical.com.au
andrew.bradbury@advancedanalytical.com.au

Attached Results Approved By:

Ian Eckhard
Technical Director

Comments:

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this reference number. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Issue Date: 3 July 2014

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Batch Number: A14/3311 [R00]
Project Reference: Whitestone Quarry Water

Laboratory Reference:	-	-	1	2	3	4
Client Reference:	-	-	S Bore	WN Bore	E Bore	E Surface
Date Sampled:	-	-	19/06/2014	19/06/2014	19/06/2014	19/06/2014
Analysis Description	Method	Units				
Total Petroleum Hydrocarbons						
TPH C6-C9	04-021	µg/L	<25	<25	<25	<25
TPH C10-14	04-030	µg/L	380	<50	<50	<50
TPH C15-28	04-030	µg/L	1,600	110	<100	<100
TPH C29-36	04-030	µg/L	120	150	<100	<100
Surrogate Recovery	04-030	%	94	88	85	88
Date Extracted	04-030	-	25/06/2014	25/06/2014	25/06/2014	25/06/2014
Date Analysed	04-030	-	1/07/2014	1/07/2014	1/07/2014	1/07/2014
Organochlorine Pesticides						
Aldrin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>alpha</i> -BHC	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>beta</i> -BHC	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>gamma</i> -BHC (Lindane)	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>delta</i> -BHC	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>cis</i> -Chlordane	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>trans</i> -Chlordane	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>p,p'</i> -DDD	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>p,p'</i> -DDE	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>p,p'</i> -DDT	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Dieldrin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>alpha</i> -Endosulfan	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>beta</i> -Endosulfan	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endrin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endrin ketone	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Heptachlor	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Hexachlorobenzene	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Methoxychlor	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Mirex	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Surrogate Recovery	04-072	%	91	99	95	99
Date Extracted	04-072	-	25/06/2014	25/06/2014	25/06/2014	25/06/2014

Issue Date: 3 July 2014

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Batch Number: A14/3311 [R00]
Project Reference: Whitestone Quarry Water

Laboratory Reference:	-	-	1	2	3	4
Client Reference:	-	-	S Bore	WN Bore	E Bore	E Surface
Date Sampled:	-	-	19/06/2014	19/06/2014	19/06/2014	19/06/2014
Analysis Description	Method	Units				
Date Analysed	04-072	-	27/06/2014	27/06/2014	27/06/2014	27/06/2014
Organophosphate Pesticides						
Azinphos-methyl	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Bromophos-ethyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Carbophenothion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Chlorfenvinphos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Diazinon	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Demeton-S-methyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Demeton-S	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Dimethoate	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Dichlorvos	04-072	µg/L	<2	<2	<2	<2
Ethion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Fenitrothion	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Fenthion	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Fenamiphos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Malathion	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Methidathion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Parathion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Parathion-methyl	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Phosalone	04-072	µg/L	<2	<2	<2	<2
Pirimiphos-methyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Profenofos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Prothiofos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Trifluralin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Surrogate Recovery	04-072	%	98	100	100	101
Date Extracted	04-072	-	25/06/2014	25/06/2014	25/06/2014	25/06/2014
Date Analysed	04-072	-	27/06/2014	27/06/2014	27/06/2014	27/06/2014
Subcontract Analysis - Water						
pH	SUB	pH unit	[NA]	5.7	6.6	7.3
Conductivity	SUB	µS/cm	[NA]	1210	630	690



Batch Number: A14/3311 [R00]
Project Reference: Whitestone Quarry Water

Laboratory Reference:	-	-	5	6
Client Reference:	-	-	WS Bore	S Surface
Date Sampled:	-	-	19/06/2014	19/06/2014
Analysis Description	Method	Units		
Total Petroleum Hydrocarbons				
TPHC6-C9	04-021	µg/L	<25	<25
TPHC10-14	04-030	µg/L	<50	<50
TPHC15-28	04-030	µg/L	<100	140
TPHC29-36	04-030	µg/L	<100	210
Surrogate Recovery	04-030	%	89	90
Date Extracted	04-030	-	25/06/2014	25/06/2014
Date Analysed	04-030	-	1/07/2014	1/07/2014
Organochlorine Pesticides				
Aldrin	04-072	µg/L	<0.1	<0.1
<i>alpha</i> -BHC	04-072	µg/L	<0.1	<0.1
<i>beta</i> -BHC	04-072	µg/L	<0.1	<0.1
<i>gamma</i> -BHC (Lindane)	04-072	µg/L	<0.1	<0.1
<i>delta</i> -BHC	04-072	µg/L	<0.1	<0.1
<i>cis</i> -Chlordane	04-072	µg/L	<0.1	<0.1
<i>trans</i> -Chlordane	04-072	µg/L	<0.1	<0.1
<i>p,p'</i> -DDD	04-072	µg/L	<0.1	<0.1
<i>p,p'</i> -DDE	04-072	µg/L	<0.1	<0.1
<i>p,p'</i> -DDT	04-072	µg/L	<0.1	<0.1
Dieldrin	04-072	µg/L	<0.1	<0.1
<i>alpha</i> -Endosulfan	04-072	µg/L	<0.1	<0.1
<i>beta</i> -Endosulfan	04-072	µg/L	<0.1	<0.1
Endosulfan Sulphate	04-072	µg/L	<0.1	<0.1
Endrin	04-072	µg/L	<0.1	<0.1
Endrin ketone	04-072	µg/L	<0.1	<0.1
Endrin aldehyde	04-072	µg/L	<0.1	<0.1
Heptachlor	04-072	µg/L	<0.1	<0.1
Heptachlor epoxide	04-072	µg/L	<0.1	<0.1
Hexachlorobenzene	04-072	µg/L	<0.1	<0.1
Methoxychlor	04-072	µg/L	<0.1	<0.1
Mirex	04-072	µg/L	<0.1	<0.1
Surrogate Recovery	04-072	%	92	99
Date Extracted	04-072	-	25/06/2014	25/06/2014

Issue Date: 3 July 2014

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Batch Number: A14/3311 [R00]
Project Reference: Whitestone Quarry Water

Laboratory Reference:	-	-	5	6
Client Reference:	-	-	WS Bore	S Surface
Date Sampled:	-	-	19/06/2014	19/06/2014
Analysis Description	Method	Units		
Date Analysed	04-072	-	27/06/2014	27/06/2014
Organophosphate Pesticides				
Azinphos-methyl	04-072	µg/L	<0.5	<0.5
Bromophos-ethyl	04-072	µg/L	<0.1	<0.1
Carbophenothion	04-072	µg/L	<0.5	<0.5
Chlorfenvinphos	04-072	µg/L	<0.1	<0.1
Chlorpyrifos	04-072	µg/L	<0.1	<0.1
Chlorpyrifos-methyl	04-072	µg/L	<0.1	<0.1
Diazinon	04-072	µg/L	<0.1	<0.1
Demeton-S-methyl	04-072	µg/L	<0.1	<0.1
Demeton-S	04-072	µg/L	<0.1	<0.1
Dimethoate	04-072	µg/L	<0.1	<0.1
Dichlorvos	04-072	µg/L	<2	<2
Ethion	04-072	µg/L	<0.5	<0.5
Fenitrothion	04-072	µg/L	<0.1	<0.1
Fenthion	04-072	µg/L	<0.1	<0.1
Fenamiphos	04-072	µg/L	<0.1	<0.1
Malathion	04-072	µg/L	<0.1	<0.1
Methidathion	04-072	µg/L	<0.5	<0.5
Parathion	04-072	µg/L	<0.5	<0.5
Parathion-methyl	04-072	µg/L	<0.5	<0.5
Phosalone	04-072	µg/L	<2	<2
Pirimiphos-methyl	04-072	µg/L	<0.1	<0.1
Profenofos	04-072	µg/L	<0.1	<0.1
Prothiofos	04-072	µg/L	<0.1	<0.1
Trifluralin	04-072	µg/L	<0.1	<0.1
Surrogate Recovery	04-072	%	96	102
Date Extracted	04-072	-	25/06/2014	25/06/2014
Date Analysed	04-072	-	27/06/2014	27/06/2014
Subcontract Analysis - Water				
pH	SUB	pH unit	6.0	6.3
Conductivity	SUB	µS/cm	520	830

Issue Date: 3 July 2014

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Batch Number: A14/3311 [R00]
Project Reference: Whitestone Quarry Water

Method	Method Description
04-021	TRH C6-9 & BTEX by P&T GCMS, µg/L
04-030	TRH by GC-FID, µg/L
04-072	Pesticides in waters by GCMS, µg/L
SUB	Subcontracted Analyses

Result Comments

[<] Less than

[INS] Insufficient sample for this test

[NA] Test not required

Results reported on an 'as received' basis.

SUB analysis was subcontracted to Sydney Analytical Laboratories (NATA Number 1884);
reference SAL report number SAL25136.

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Batch Number: A14/3311 [R00]
Project Reference: Whitestone Quarry Water

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPH C6-C9	µg/L	<25	A14/3311-3	<25 <25	A14/3311-3	109%
TPH C10-14	µg/L	<50	A14/3311-3	<50 [NT]	A14/3311-3	91%
TPH C15-28	µg/L	<100	A14/3311-3	<100 [NT]	A14/3311-3	96%
TPH C29-36	µg/L	<100	A14/3311-3	<100 [NT]	A14/3311-3	93%
Surrogate Recovery	%	92	A14/3311-3	85 104 RPD: 20	A14/3311-3	87%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Aldrin	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	81%
<i>alpha</i> -BHC	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	76%
<i>beta</i> -BHC	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	72%
<i>gamma</i> -BHC (Lindane)	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	80%
<i>delta</i> -BHC	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	79%
<i>cis</i> -Chlordane	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	93%
<i>trans</i> -Chlordane	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	93%
<i>p,p'</i> -DDD	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	86%
<i>p,p'</i> -DDE	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	93%
<i>p,p'</i> -DDT	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	72%
Dieldrin	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	99%
<i>alpha</i> -Endosulfan	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	87%
<i>beta</i> -Endosulfan	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	94%
Endosulfan Sulphate	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	84%
Endrin	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	99%
Endrin ketone	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	87%
Endrin aldehyde	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	77%
Heptachlor	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	65%
Heptachlor epoxide	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	102%
Hexachlorobenzene	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	75%
Methoxychlor	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	69%
Mirex	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	95%
Surrogate Recovery	%	111	A14/3311-1	91 95 RPD: 4	A14/3311-2	73%

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Batch Number: A14/3311 [R00]
Project Reference: Whitestone Quarry Water

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Azinphos-methyl	µg/L	<0.5	A14/3311-1	<0.5 <0.5	A14/3311-2	76%
Bromophos-ethyl	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	93%
Carbophenothion	µg/L	<0.5	A14/3311-1	<0.5 <0.5	A14/3311-2	83%
Chlorfenvinphos	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	91%
Chlorpyrifos	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	74%
Chlorpyrifos-methyl	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	70%
Diazinon	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	81%
Demeton-S-methyl	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	80%
Demeton-S	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	77%
Dimethoate	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	79%
Dichlorvos	µg/L	<2	A14/3311-1	<2 <2	A14/3311-2	69%
Ethion	µg/L	<0.5	A14/3311-1	<0.5 <0.5	A14/3311-2	82%
Fenitrothion	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	65%
Fenthion	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	66%
Fenamiphos	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	85%
Malathion	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	77%
Methidathion	µg/L	<0.5	A14/3311-1	<0.5 <0.5	A14/3311-2	94%
Parathion	µg/L	<0.5	A14/3311-1	<0.5 <0.5	A14/3311-2	59%
Parathion-methyl	µg/L	<0.5	A14/3311-1	<0.5 <0.5	A14/3311-2	61%
Phosalone	µg/L	<2	A14/3311-1	<2 <2	A14/3311-2	76%
Pirimiphos-methyl	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	70%
Profenofos	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	85%
Prothiofos	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	84%
Trifluralin	µg/L	<0.1	A14/3311-1	<0.1 <0.1	A14/3311-2	86%
Surrogate Recovery	%	110	A14/3311-1	98 103 RPD: 5	A14/3311-2	70%

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Batch Number: A14/3311 [R00]
Project Reference: Whitestone Quarry Water

TEST	UNITS	Blank
pH	pH unit	7.1
Conductivity	µS/cm	1.3

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

'#' = Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD: Results < 10 times LOR: no limits.
Results > 10 times LOR: 0% - 50%.

Acceptable matrix spike & LCS recovery limits: Trace elements 70-130%
Organic analyses 50-150%
SVOC & speciated phenols 10-140%
Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

**REPORT OF ANALYSIS****Laboratory Reference:** A13/5058 [R00]**Client:** Midwest Concepts & Solutions Pty Ltd
60 Ocean Place
NILGEN WA 6044**Contact:** Phil Bellamy**Order No:**
Project: Water Whitestone Quarry
Sample Type: water
No. of Samples: 4
Date Received: 16/10/2013
Date Completed: 25/10/2013

Laboratory Contact Details:**Client Services Manager:** Jane Struthers
Technical Enquiries: Andrew Bradbury
Telephone: +61 8 9325 9799
Fax: +61 8 9325 4299
Email: perth@advancedanalytical.com.au
andrew.bradbury@advancedanalytical.com.au

Attached Results Approved By:**Ian Eckhard**
Technical Director**Comments:**

All samples tested as submitted by client. All attached results have been checked and approved for release. This is the Final Report and supersedes any reports previously issued with this reference number. Accredited for compliance with ISO/IEC 17025. This document shall not be reproduced, except in full.



Issue Date: 25 October 2013**Page 1 of 6****Advanced Analytical Australia Pty Ltd**
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Batch Number: A13/5058 [R00]
Project Reference: Water Whitestone Quarry

Laboratory Reference:	-	-	1	2	3	4
Client Reference:	-	-	WNA WNB	WSA WSB	SA SB	EA EB
Date Sampled:	-	-	16/10/2013	16/10/2013	16/10/2013	16/10/2013
Analysis Description	Method	Units				
Total Petroleum Hydrocarbons						
TPHC10-14	04-030	µg/L	<50	<50	<50	<50
TPHC15-28	04-030	µg/L	190	<100	230	140
TPHC29-36	04-030	µg/L	<100	<100	120	<100
Surrogate Recovery	04-030	%	95	91	96	79
Date Extracted	04-030	-	21/10/2013	21/10/2013	21/10/2013	21/10/2013
Date Analysed	04-030	-	24/10/2013	24/10/2013	24/10/2013	24/10/2013
Organochlorine Pesticides						
Aldrin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>alpha</i> -BHC	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>beta</i> -BHC	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>gamma</i> -BHC (Lindane)	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>delta</i> -BHC	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>cis</i> -Chlordane	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>trans</i> -Chlordane	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>p,p'</i> -DDD	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>p,p'</i> -DDE	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>p,p'</i> -DDT	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Dieldrin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>alpha</i> -Endosulfan	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
<i>beta</i> -Endosulfan	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endrin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endrin ketone	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Heptachlor	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Hexachlorobenzene	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Methoxychlor	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Mirex	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Surrogate Recovery	04-072	%	71	58	84	66
Date Extracted	04-072	-	21/10/2013	21/10/2013	21/10/2013	21/10/2013
Date Analysed	04-072	-	22/10/2013	22/10/2013	22/10/2013	22/10/2013

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Batch Number: A13/5058 [R00]
Project Reference: Water Whitestone Quarry

Laboratory Reference:	-	-	1	2	3	4
Client Reference:	-	-	WNA WNB	WSA WSB	SA SB	EA EB
Date Sampled:	-	-	16/10/2013	16/10/2013	16/10/2013	16/10/2013
Analysis Description	Method	Units				
Organophosphate Pesticides						
Azinphos-methyl	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Bromophos-ethyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Carbophenothion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Chlorfenvinphos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Diazinon	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Demeton-S-methyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Demeton-S	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Dimethoate	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Dichlorvos	04-072	µg/L	<2	<2	<2	<2
Ethion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Fenitrothion	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Fenthion	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Fenamiphos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Malathion	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Methidathion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Parathion	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Parathion-methyl	04-072	µg/L	<0.5	<0.5	<0.5	<0.5
Phosalone	04-072	µg/L	<2	<2	<2	<2
Pirimiphos-methyl	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Profenofos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Prothiofos	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Trifluralin	04-072	µg/L	<0.1	<0.1	<0.1	<0.1
Surrogate Recovery	04-072	%	80	79	95	71
Date Extracted	04-072	-	21/10/2013	21/10/2013	21/10/2013	21/10/2013
Date Analysed	04-072	-	22/10/2013	22/10/2013	22/10/2013	22/10/2013
Subcontract Analysis - Water						
Conductivity	SUB	µS/cm	620	750	630	710
pH	SUB	pH unit	3.9	5.8	6.5	6.3

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Batch Number: A13/5058 [R00]
Project Reference: Water Whitestone Quarry

Method	Method Description
04-030	TRH by GC-FID, µg/L
04-072	Pesticides in waters by GCMS, µg/L
SUB	Subcontracted Analyses

Result Comments

[<] Less than

[INS] Insufficient sample for this test

[NA] Test not required

SUB analysis was subcontracted to Sydney Analytical Laboratories (NATA Number 1884);
reference SAL report number SAL24836.

*Analyte is not covered by NATA scope of accreditation.

Issue Date: 25 October 2013

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Batch Number: A13/5058 [R00]
Project Reference: Water Whitestone Quarry

QUALITY ASSURANCE REPORT

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
TPHC10-14	µg/L	<50	A13/5058-1	<50 <50	A13/5058-2	90%
TPHC15-28	µg/L	<100	A13/5058-1	190 100 RPD: 62	A13/5058-2	92%
TPHC29-36	µg/L	<100	A13/5058-1	<100 <100	A13/5058-2	79%
Surrogate Recovery	%	105	A13/5058-1	95 86 RPD: 10	A13/5058-2	85%

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Aldrin	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	66%
alpha-BHC	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	67%
beta-BHC	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	76%
gamma-BHC (Lindane)	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	73%
delta-BHC	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	75%
cis-Chlordane	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	69%
trans-Chlordane	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	70%
p,p'-DDD	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	70%
p,p'-DDE	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	94%
p,p'-DDT	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	65%
Dieldrin	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	84%
alpha-Endosulfan	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	77%
beta-Endosulfan	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	74%
Endosulfan Sulphate	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	71%
Endrin	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	74%
Endrin ketone	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	69%
Endrin aldehyde	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	63%
Heptachlor	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	61%
Heptachlor epoxide	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	69%
Hexachlorobenzene	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	64%
Methoxychlor	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	68%
Mirex	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	70%
Surrogate Recovery	%	98	A13/5058-1	71 77 RPD: 8	A13/5058-3	59%



Batch Number: A13/5058 [R00]
Project Reference: Water Whitestone Quarry

TEST	UNITS	Blank	Duplicate Sm#	Duplicate Results	Spike Sm#	Spike Results
Azinphos-methyl	µg/L	<0.5	A13/5058-1	<0.5 <0.5	A13/5058-3	83%
Bromophos-ethyl	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	72%
Carbophenothion	µg/L	<0.5	A13/5058-1	<0.5 <0.5	A13/5058-3	83%
Chlorfenvinphos	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	81%
Chlorpyrifos	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	68%
Chlorpyrifos-methyl	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	68%
Diazinon	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	66%
Demeton-S-methyl	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	72%
Demeton-S	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	65%
Dimethoate	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	89%
Dichlorvos	µg/L	<2	A13/5058-1	<2 <2	A13/5058-3	75%
Ethion	µg/L	<0.5	A13/5058-1	<0.5 <0.5	A13/5058-3	75%
Fenitrothion	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	70%
Fenthion	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	66%
Fenamiphos	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	110%
Malathion	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	77%
Methidathion	µg/L	<0.5	A13/5058-1	<0.5 <0.5	A13/5058-3	78%
Parathion	µg/L	<0.5	A13/5058-1	<0.5 <0.5	A13/5058-3	66%
Parathion-methyl	µg/L	<0.5	A13/5058-1	<0.5 <0.5	A13/5058-3	79%
Phosalone	µg/L	<2	A13/5058-1	<2 <2	A13/5058-3	87%
Pirimiphos-methyl	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	68%
Profenofos	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	76%
Prothiofos	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	73%
Trifluralin	µg/L	<0.1	A13/5058-1	<0.1 <0.1	A13/5058-3	76%
Surrogate Recovery	%	100	A13/5058-1	80 86 RPD: 7	A13/5058-3	71%

Comments:

RPD = Relative Percent Deviation

[NT] = Not Tested

[N/A] = Not Applicable

= Spike recovery data could not be calculated due to high levels of contaminants

Acceptable replicate reproducibility limit or RPD: Results < 10 times LOR: no limits.

Results > 10 times LOR: 0% - 50%.

Acceptable matrix spike & LCS recovery limits:

Trace elements 70-130%

Organic analyses 50-150%

SVOC & speciated phenols 10-140%

Surrogates 10-140%

When levels outside these limits are obtained, an investigation into the cause of the deviation is performed before the batch is accepted or rejected, and results are released.

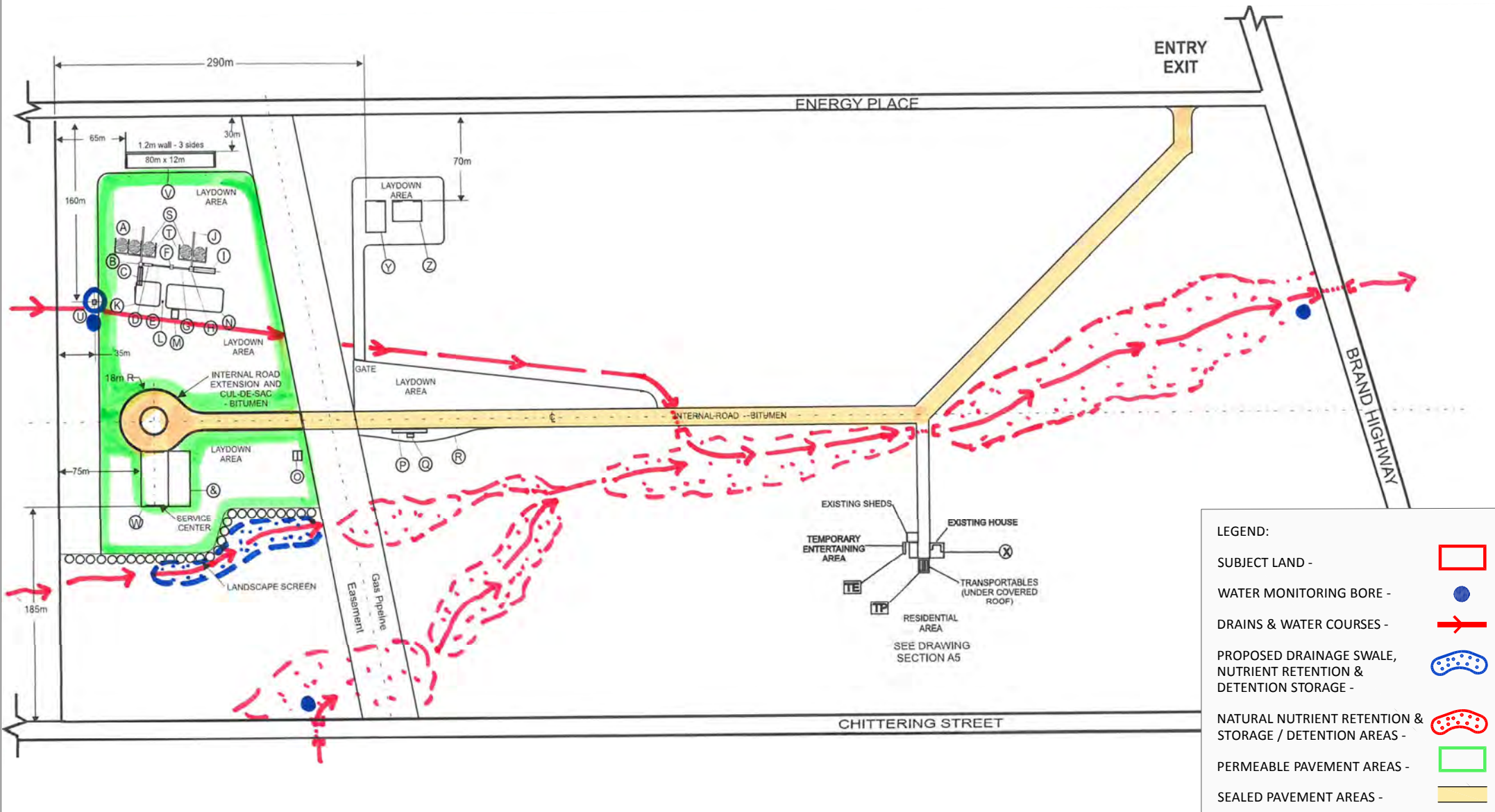
Issue Date: 25 October 2013

Page 6 of 6

Advanced Analytical Australia Pty Ltd
 ABN 20 105 644 979
 11 Julius Avenue
 North Ryde NSW 2113 Australia

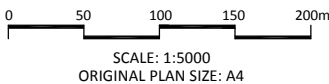
Ph: +61 2 9888 9077
 Fax: +61 2 9888 9577
 contact@advancedanalytical.com.au
 www.advancedanalytical.com.au

Appendix 2 – Drawings & Diagrams



STORMWATER MANAGEMENT PLAN

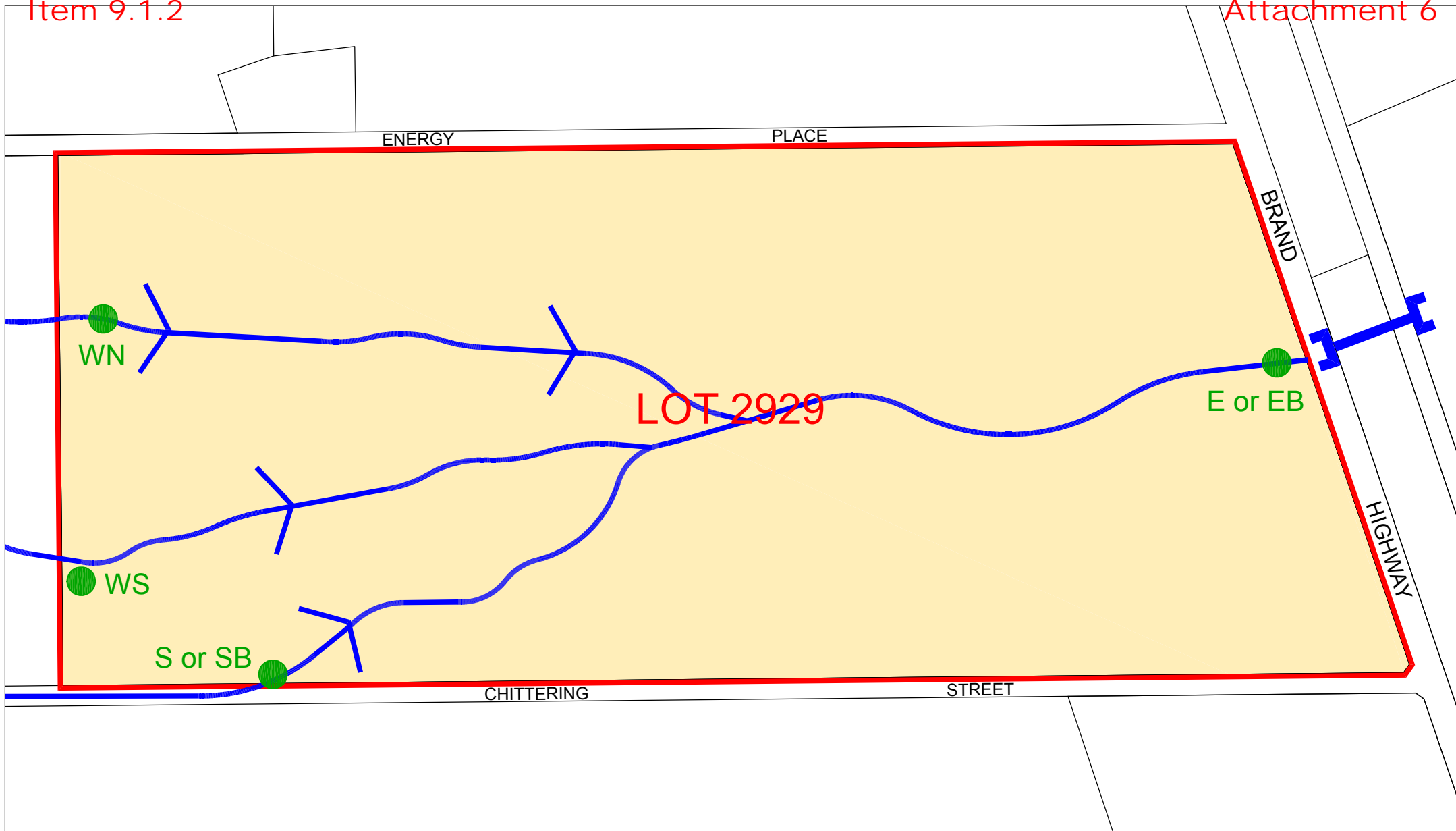
LOT 2929 (No. 299) BRAND HIGHWAY
MUCHEA
SHIRE OF CHITTERING



JOB CODE:
MAX MUC GE
DATE:
22.07.2015



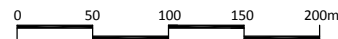
Allerding & Associates
Town Planners, Advocates
and Subdivision Designers



QUALITY MONITORING LOCATIONS

LOT 2929 (No. 299) BRAND HIGHWAY
MUCHEA

SHIRE OF CHITTERING



SCALE: 1:5000
ORIGINAL PLAN SIZE: A4

JOB CODE:
MAX MUC GE

DATE:
22.07.2015



LEGEND:

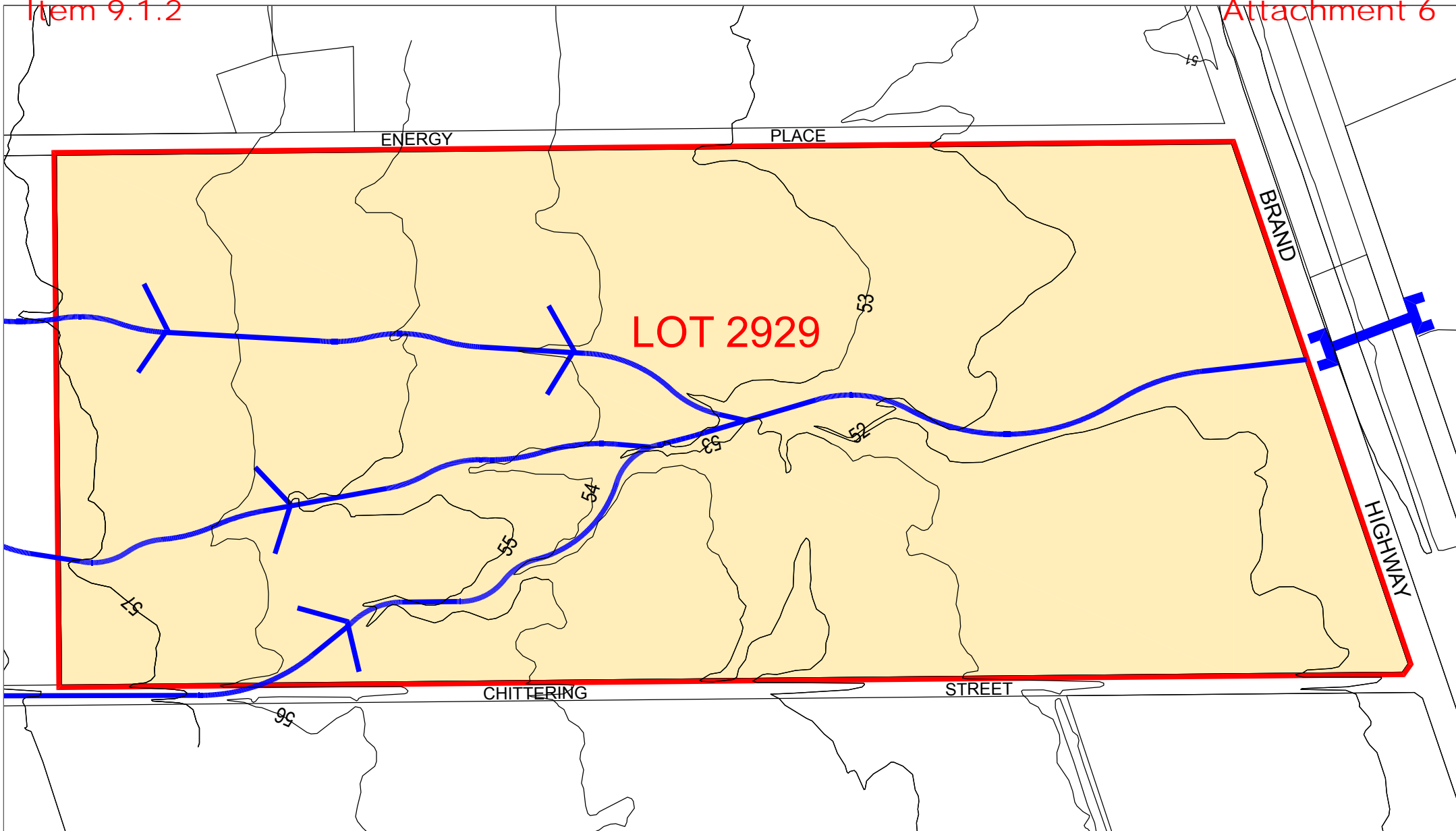
SUBJECT LAND -

WATER SAMPLING LOCATIONS -

WN = SAMPLING POINT REFERENCE -



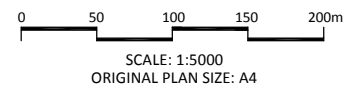
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Town Planners, Advocates
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PROPERTY TOPO PLAN

LOT 2929 (No. 299) BRAND HIGHWAY
MUCHEA

SHIRE OF CHITTERING



JOB CODE:
MAX MUC GE

DATE:
22.07.2015

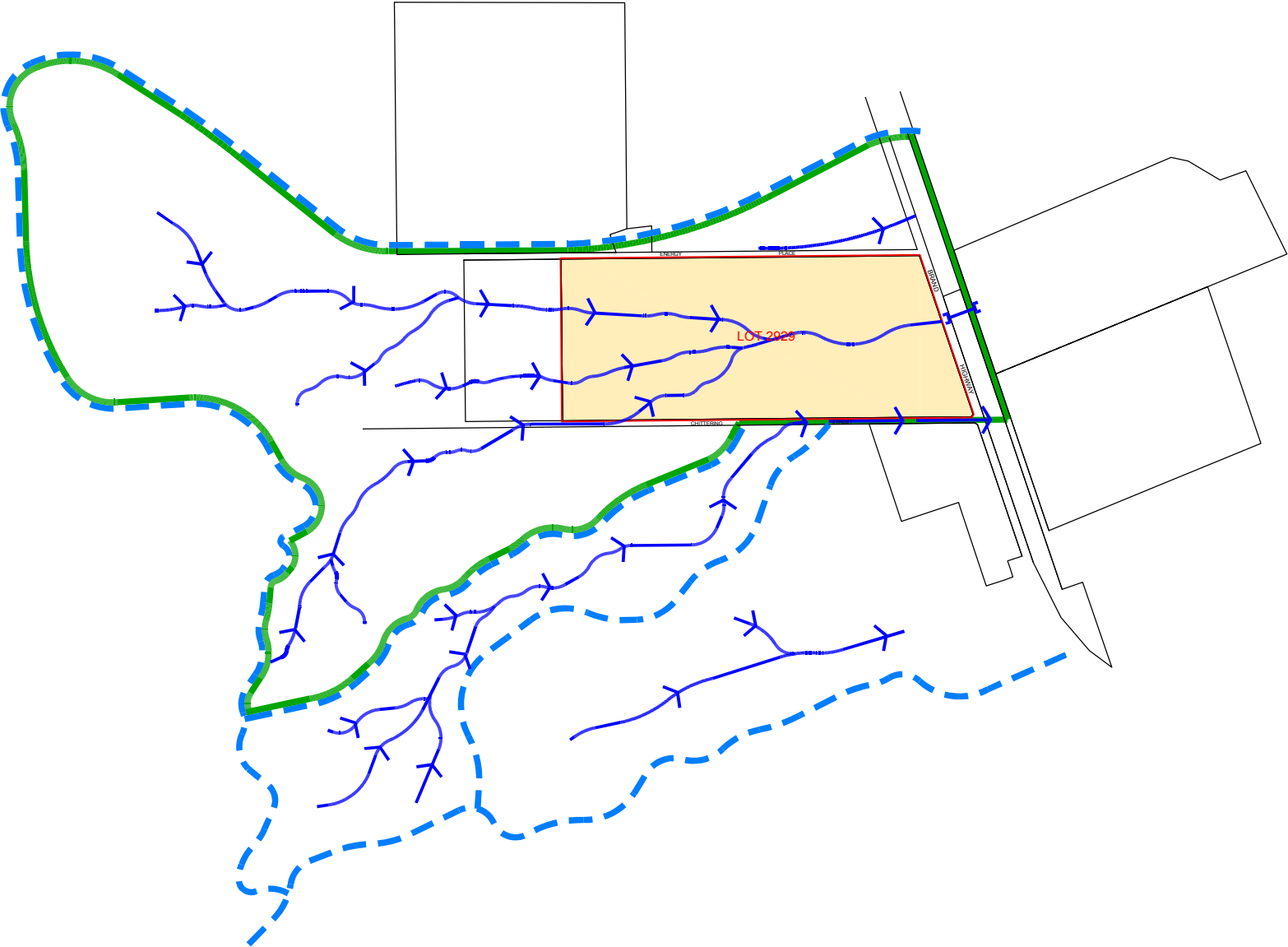


LEGEND:

SUBJECT LAND -



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OVERALL CATCHMENT PLAN

LOT 2929 (No. 299) BRAND HIGHWAY
MUCHEA
SHIRE OF CHITTERING

0200400600800m

SCALE: 1:20 000
ORIGINAL PLAN SIZE: A4

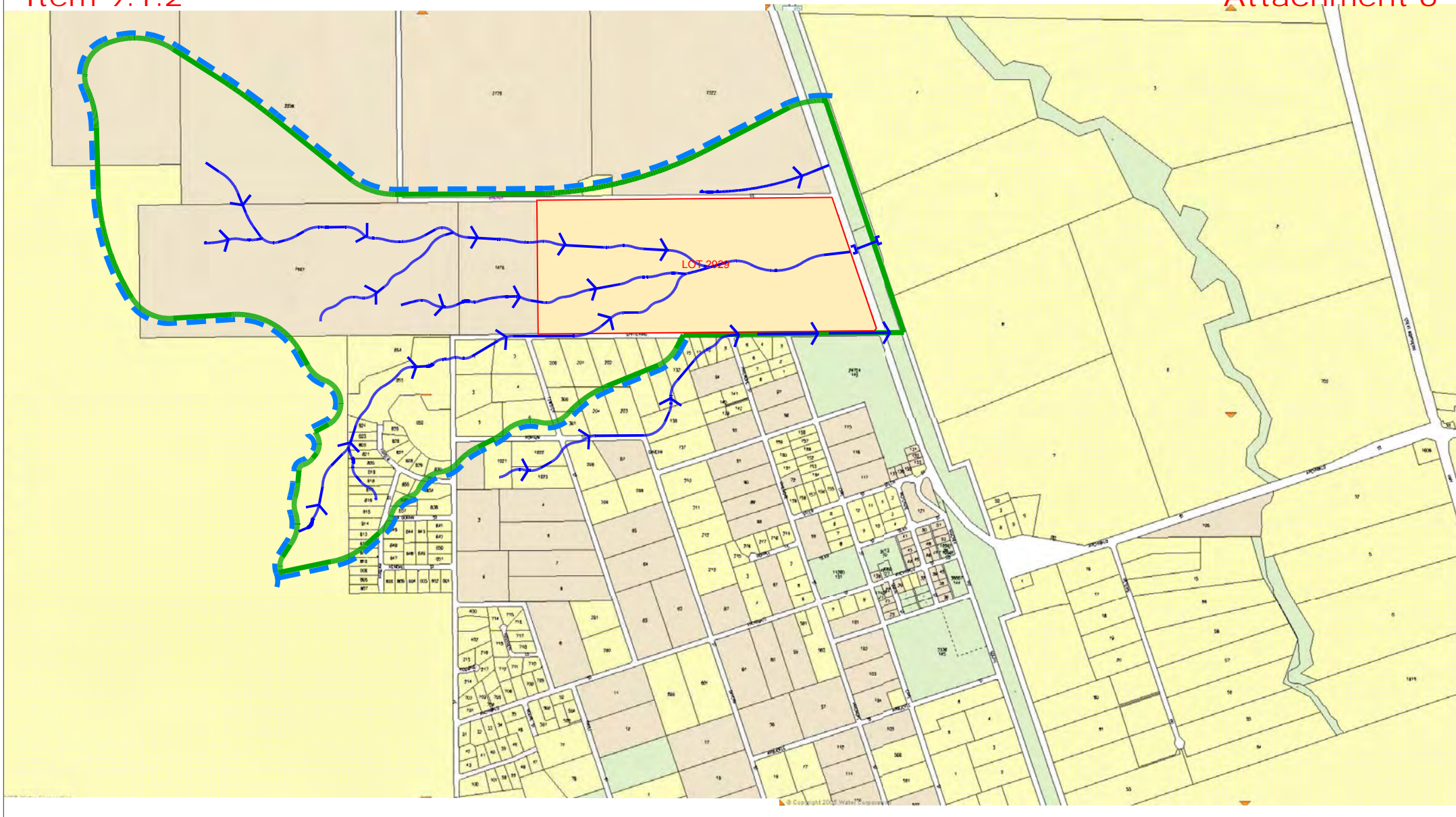
JOB CODE:
MAX MUC GE

DATE:
22.07.2015

- LEGEND:
- SUBJECT LAND -
 - CATCHMENT RIDGE LINE -
 - WATERCOURSE OR WATERSHED -
 - LOT 2929 MAJOR CATCHMENT BOUNDARY -



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LOCAL CATCHMENT PLAN

LOT 2929 (No. 299) BRAND HIGHWAY
MUCHEA

SHIRE OF CHITTERING

0 200 400 600 800m
SCALE: 1:20 000
ORIGINAL PLAN SIZE: A4

JOB CODE:
MAX MUC GE

DATE:
22.07.2015



LEGEND:

SUBJECT LAND -

CATCHMENT RIDGE LINE -

WATERCOURSE OR WATERSHED -

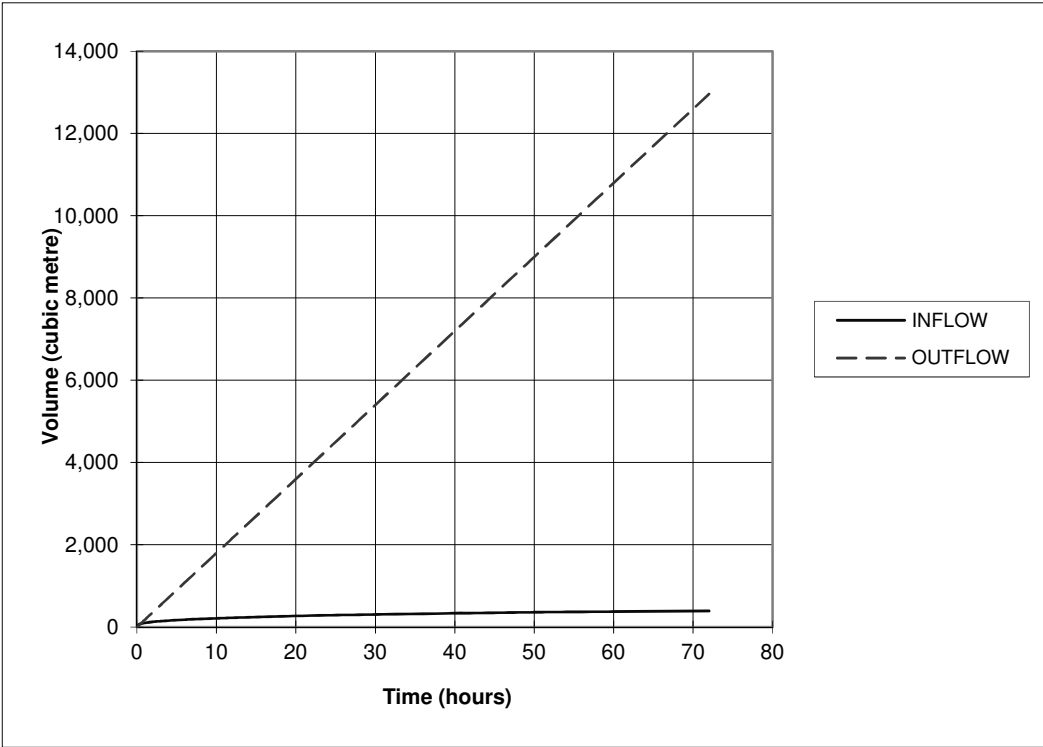
LOT 2929 MAJOR CATCHMENT BOUNDARY -



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Appendix 3 – Calculations

TIME	INFLOW	OUTFLOW		STORAGE
		Ground Infiltration	Allowable Outlet	
	m ³	m ³	m ³	m ³
6 min.	44	18	0	26
9 min.	53	27	0	26
12 min.	60	36	0	24
15 min.	66	45	0	21
20 min.	73	60	0	13
30 min.	84	90	0	-6
45 min.	94	135	0	-41
1 hour	101	180	0	-79
2 hours	127	360	0	-233
3 hours	145	540	0	-395
6 hours	181	1,080	0	-899
10 hours	212	1,800	0	-1,588
12 hours	226	2,160	0	-1,934
24 hours	287	4,320	0	-4,033
48 hours	355	8,640	0	-8,285
60 hours	376	10,800	0	-10,424
72 hours	391	12,960	0	-12,569




SUMP/SWALE VOLUME CALCULATOR


Based on Rational Method - 2001 Australian Rainfall and Runoff

Design Rainfall Intensity


Location

 : UPPERSWAN


Storm Duration

 : 24 hours

Storm Event

 : 100 year

Design Intensity

 : 5.5 mm/hr

Catchment Details

Catchment Area

: 2,160 m²

Run-off Coefficient

: 1.00

Flow Rate

: 3.3 L/s

Outflow Details

Soil Characteristics

: Medium Sand

Infiltration Rate

: 0.0005 m/s → 0.05 m³/s
(Total Soakage)

Additional Outlet

: 0.000 m³/s

Storage Details

Volume Required
at 8 minutes

: 26 m³

Total Surface Area
no freeboard

: 118 m²
- m²

Total Base Area

: 100 m²

Freeboard

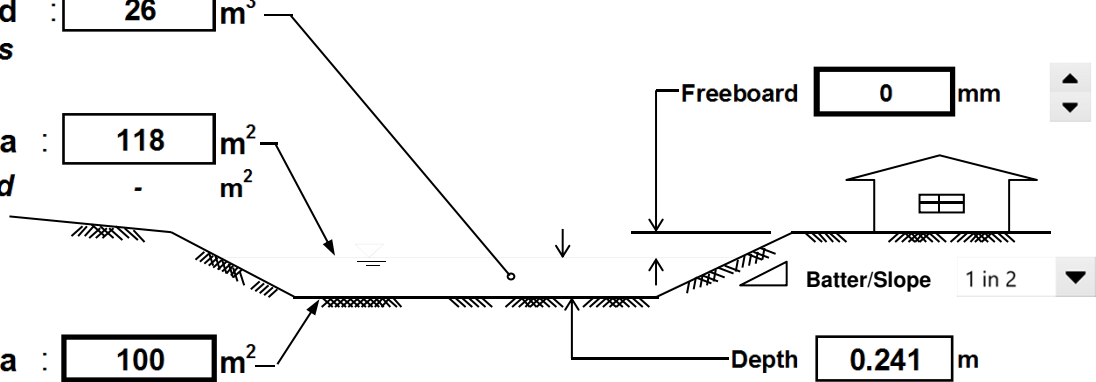
: 0 mm

Batter/Slope

: 1 in 2

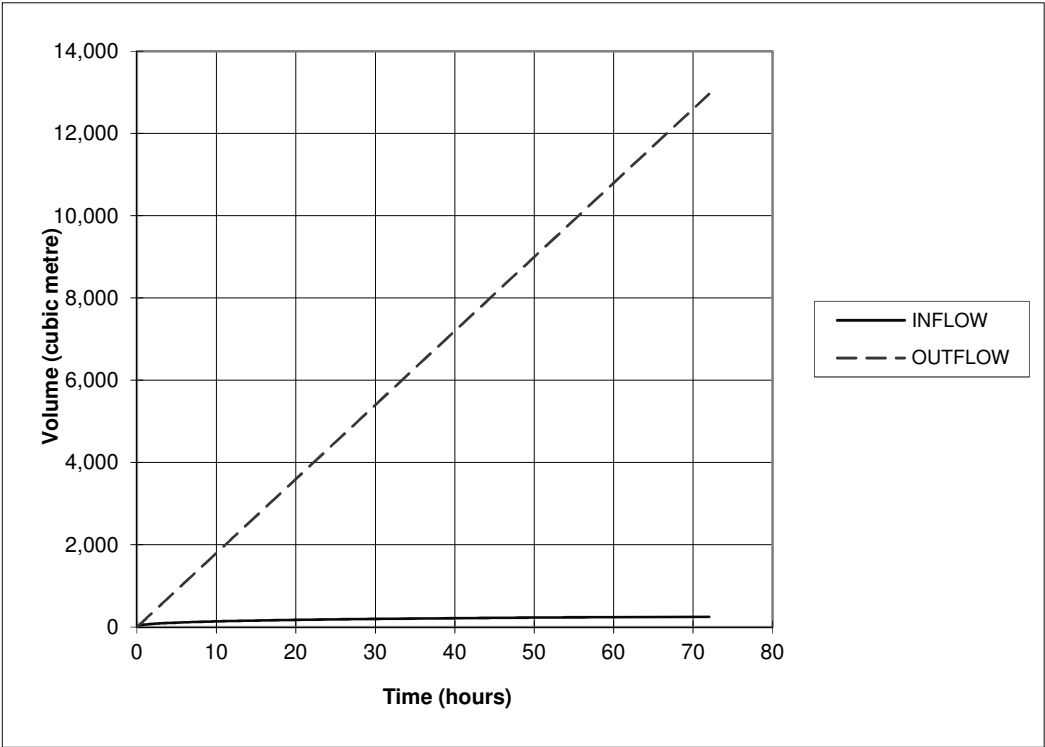
Depth

: 0.241 m



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TIME	INFLOW	OUTFLOW		STORAGE
		Ground Infiltration	Allowable Outlet	
	m ³	m ³	m ³	m ³
6 min.	24	18	0	6
9 min.	29	27	0	2
12 min.	34	36	0	-2
15 min.	37	45	0	-8
20 min.	42	60	0	-18
30 min.	49	90	0	-41
45 min.	56	135	0	-79
1 hour	61	180	0	-119
2 hours	78	360	0	-282
3 hours	91	540	0	-449
6 hours	115	1,080	0	-965
10 hours	139	1,800	0	-1,661
12 hours	148	2,160	0	-2,012
24 hours	186	4,320	0	-4,134
48 hours	229	8,640	0	-8,411
60 hours	241	10,800	0	-10,559
72 hours	250	12,960	0	-12,710




SUMP/SWALE VOLUME CALCULATOR


Based on Rational Method - 2001 Australian Rainfall and Runoff

Design Rainfall Intensity


Location

 : UPPERSWAN


Storm Duration

 : 24 hours

Storm Event

 : 10 year

Design Intensity

 : 3.6 mm/hr

Catchment Details

Catchment Area

2,160 m²

Run-off Coefficient

1.00

Flow Rate

2.2 L/s

Outflow Details

Soil Characteristics

Medium Sand

Infiltration Rate

0.0005 m/s → 0.05 m³/s (Total Soakage)

Additional Outlet

0.000 m³/s

Storage Details

Volume Required at 6 minutes

6 m³

Total Surface Area no freeboard

104 m²
- m²

Total Base Area

100 m²

Freeboard

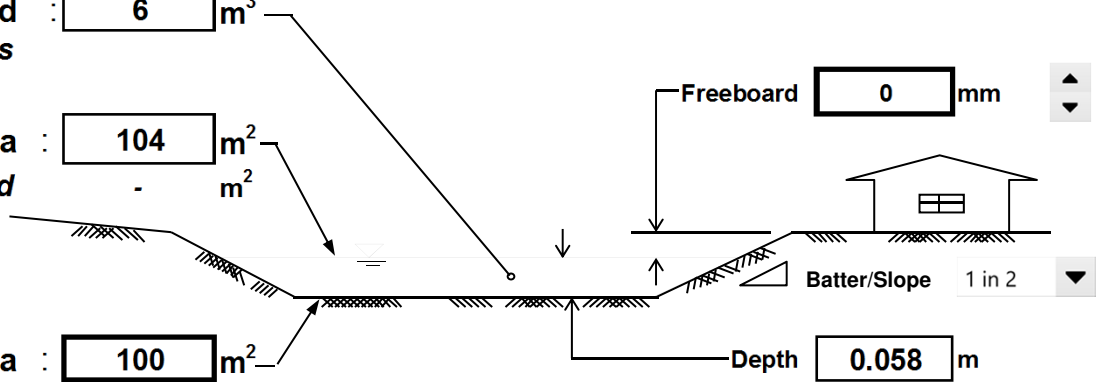
0 mm

Batter/Slope

1 in 2

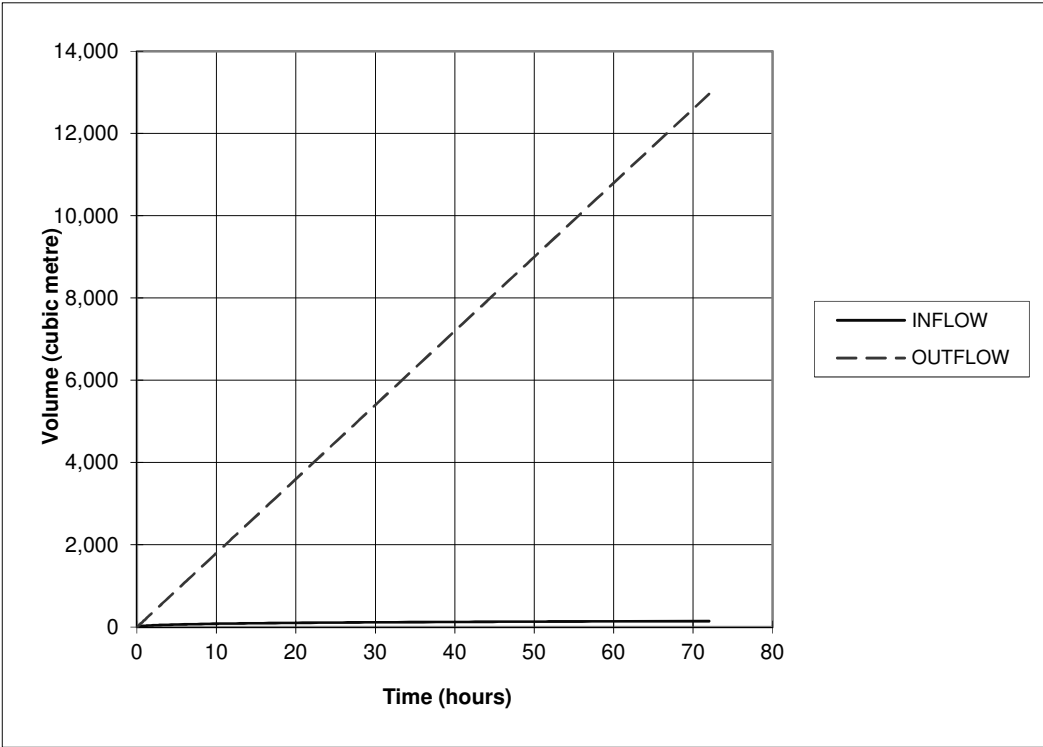
Depth

0.058 m



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TIME	INFLOW	OUTFLOW		STORAGE
		Ground Infiltration	Allowable Outlet	
	m ³	m ³	m ³	m ³
6 min.	11	18	0	-7
9 min.	14	27	0	-13
12 min.	16	36	0	-20
15 min.	18	45	0	-27
20 min.	21	60	0	-39
30 min.	25	90	0	-65
45 min.	29	135	0	-106
1 hour	32	180	0	-148
2 hours	43	360	0	-317
3 hours	50	540	0	-490
6 hours	66	1,080	0	-1,014
10 hours	82	1,800	0	-1,718
12 hours	87	2,160	0	-2,073
24 hours	109	4,320	0	-4,211
48 hours	132	8,640	0	-8,508
60 hours	139	10,800	0	-10,661
72 hours	143	12,960	0	-12,817




SUMP/SWALE VOLUME CALCULATOR


Based on Rational Method - 2001 Australian Rainfall and Runoff

Design Rainfall Intensity


Location

 : UPPERSWAN


Storm Duration

 : 24 hours

Storm Event

 : 1 year

Design Intensity

 : 2.1 mm/hr

Catchment Details

Catchment Area

: 2,160 m²

Run-off Coefficient

: 1.00

Flow Rate

: 1.3 L/s

Outflow Details

Soil Characteristics

: Medium Sand

Infiltration Rate

: 0.0005 m/s → 0.05 m³/s
(Total Soakage)

Additional Outlet

: 0.000 m³/s

Storage Details

Volume Required

: 0 m³

Total Surface Area

: 100 m²
no freeboard - m²

Total Base Area

: 100 m²

Freeboard

: 0 mm

Batter/Slope

: 1 in 2

Depth

: 0.000 m

