



Development Services Attachments Wednesday, 18 November 2015

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Background Information - Transport Depot Approved 19/11/2014

15/9/2014 – Lodged Application (See “A”)

16/9/2014 – Email from Senior Planner Chittering Council requesting more information.
Note 2nd point “likely number of vehicles parked at one time etc” (See “B”)

19/9/2014 – Email Kirkwood to Brendan (Senior Planner) answering queries. Answer given not knowing the ramifications of the mining boom crash was “likely number of vehicles – room for 70-80 assets” (See “C”)

19/11/2014 – Recommendation from council staff and approval from council both said “no more than 80 vehicles and trailers at any time” (See “D”)

Current – The first client went to a larger site in the swan shire and we have now been approached by BIS, a subsidiary of the old Brambles company. They have stated that they have the need to secure a site that accommodates 140 trucks.

We would like the council to lift the “80 vehicles” from the approval conditions. If a number is required, we would like you to consider a number of 200. A semi-trailer is approximately 19m x 3m, ie 60m/2, and on a 10 acre site we could fit more than 650 vehicles.

The approval is for 10 acres/4 hectares, which is 40,000 square metres and given vehicle dimensions we would ask council to consider the following drawing and our formula (See “E”)

Any clients will be informed of council requirements and conditions and agree to the same.

Individual clients will more than likely need to know what “vehicle” means size wise and I have attempted to be very fair in only utilising 50% of said 10 acres in my second (B) scenario in attachment “E”.

We know it can sometimes be hard to fully explain your case by email and would appreciate the chance to again meet face to face to discuss further.

Kind regards



Geoff and Maree Kirkwood

A



Town Planning Scheme No 6

SCHEDULE SEVEN APPLICATION FOR PLANNING APPROVAL

Owner(s) Details:			
Name: Geoff + Maree Kirkwood			
Address: 9071 Gt Northern Hwy Wannamal			
			Postcode: 6505
Contact Numbers:		Fax:	
Home: [REDACTED]	Work: [REDACTED]	Mobile: [REDACTED]	
Email: [REDACTED]			
Contact Person: Geoff Kirkwood + Maree Kirkwood.			
Signature: [REDACTED]		Date: 15.9.2014	
Signature: [REDACTED]		Date: 15/9/14	
The signature of the owner(s) is required on all applications. This application will not proceed without that signature.			
Applicant details:			
Name: Geoff + Maree Kirkwood			
Address: [REDACTED]			
			Postcode: [REDACTED]
Contact Numbers:		Fax:	
Home: [REDACTED]	Work: [REDACTED]	Mobile: [REDACTED]	
Email: [REDACTED]			
Contact Person for Correspondence: Geoff Kirkwood			
Signature: [REDACTED]		Date: 15/9/14	
Property Details:			
Lot No. 3281 / 9071	House/Street No: 9071	Location No:	
Diagram or Plan No:	Certificate of Title Vol. No:	Folio:	
Title encumbrances (e.g. easements, restrictive covenants):			
Street name: 9071 Gt Northern Hwy		Suburb: Wannamal.	
Nearest Street Intersection: Hay Flat Rd		"	
Existing building/land use:			
Description of proposed development and/or use: HARDSTAND STORAGE ONLY. SEE ATTACHED			
Nature of any existing buildings and/or use:			
Approximate cost or proposed development less GST: \$35,000			
Estimated time of completion: 2 weeks from approval date.			

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.

B

Compose

Inbox (19)
Drafts (116)
Sent
Spam (162)
Trash

▼ Folders (1)

cecilia soh
melinda
Notes
paul and trud... (1)
sarah francis
sharon
sue robertson
the kirkwoods

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Proposed hardstand application(2)

Brendan Jeans

To Me
CC Azhar Awang, Mark Johnston

Sep 16 at 2:51 PM

Hi Geoff,

I have begun processing your planning application to get placed in the Advocate newspaper and after further consideration with the Planning department the advertising is to be put on hold until the Shire can get sufficient information of the proposal to refer to landowners, agencies and provide to Council.

Could you please provide information on the following points for the Shire to commence advertising:

- More detailed information regarding the types/lengths of vehicles entering/leaving the site.
- Likely number of vehicles parked at one time etc.
- Traffic movements and times likely as a result of this proposal such as a traffic management plan/traffic impact statement.
- Details of the construction of the hardstand.
- Drainage/stormwater management of hardstand area (hydrology of site).
- Dust management if using gravel construction of access roads and hardstand.
- If above point is relevant, evidence of sufficient water supply for dust suppression.
- If development is to be staged or proposed to be leased?
- Any proposed signage/advertising?

In reading the brief information provided it has been assessed you are proposing a 'storage' use in conjunction with a 'transport depot' use. Unfortunately storage is not a permitted use by the Town Planning Scheme in the Agricultural Resource zone and would require a Scheme Amendment to allow storage. The Transport Depot use allows for the parking of commercial vehicles such as trucks, trailers etc but does not include the drilling equipment and plant equipment you have described to be stored on the property.

The Shire looks forward to the above information to proceed with the application.

Kind regards

Brendan Jeans
Senior Planning Officer

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Shire of

6477 Great Northern Highway PO Box 70 Randwick WA 6102

To: [REDACTED]

Cc: Azhar Awang <emds@chittering.wa.gov.au>, Mark Johnston <planoff@chittering.wa.gov.au>

Subject: Proposed hardstand application

Hi Geoff,

I have begun processing your planning application to get placed in the Advocate newspaper and after further consideration with the Planning department the advertising is to be put on hold until the Shire can get sufficient information of the proposal to refer to landowners, agencies and provide to Council.

Could you please provide information on the following points for the Shire to commence advertising:

- More detailed information regarding the types/lengths of vehicles entering/leaving the site. See photos attached and asset descriptions in table below. Please note all vehicles are road registered, majority for WA roads and a lesser amount for SA roads. Nothing is over length, overweight or over width.

Asset #	DESCRIPTION
2779	LIGHTING PLANT
2888	UDR1000 PLUS 3725 MAN 8X8
3006	MERCEDES 8X8 WATER TRUCK
3262	MAN 8X8 TRUCK (CARRIER FOR COMPRESSOR MEX#9701 & BOOSTER Asset # 2578)
3699	ISUZU LIGHT TRUCK
9621	TOYOTA LANDCRUISER
10268	CARAVAN 7TC427
10825	TRAILER - DOLLY
10833	TRAILER SEMI DROP DECK

- Likely number of vehicles parked at one time etc. It is proposed to have room available to park up to 70 – 80 assets being a mix per the above table. This quantity may reduce during the middle of 2015 as equipment is sent to contract work in the Pilbara or Goldfields.
- Traffic movements and times likely as a result of this proposal such as a traffic management plan/traffic impact statement. The initial “moving in” process will be quite intensive. It is expected to take up to two months to move all equipment in at a rate of 10 vehicles moved in per week. Once the depot is established and equipment is in place, further movements are not frequent. Most likely in the order of 2 – 4 movements per month. During the moving in period or any period of intensive equipment movements a third party traffic management company will be engaged to ensure the interaction on the public road is conducted in a safe manner.



9.1.3 OFFICER RECOMMENDATION

That Council grant Planning Approval for the Transport Depot at Lot 3281 (RN 9071) Great Northern Highway, Wannamal subject to the following conditions:

1. There is to be no more than 80 vehicles and trailers located on the site at any one time.
2. Parking of vehicles and/or trailers shall be within the approved hardstand area.
3. Hardstand shall be constructed in accordance with the approved site plan (refer Attachment 2).
4. This approval shall only be for vehicles to a maximum length of 19m.
5. There shall be no more than a maximum of five (5) vehicle movements per hour.
6. This approval shall be in accordance with the Additional Information (refer Attachment 3).
7. The development hours of operation shall comply with the *Environmental Protection (Noise) Regulations 1997*. Traffic movements outside of the prescribed hours shall be in accordance with the assigned noise level of the said Regulations.
8. The following setbacks for the hardstand and associated drainage shall apply:
 - a. 30m from the side boundary adjoining the Nature Reserve; and
 - b. 20m from remnant vegetation.
9. The Applicant shall upgrade the crossover to the satisfaction of Main Roads WA prior to commencement of transport depot operations.
10. The internal access road shall be a minimum width of 6m.
11. To minimise dust emissions:
 - a. The maximum speed on the internal access road and hardstand area shall be 20km/hr and be sign-posted on site.
 - b. The internal access road shall be watered to prevent dust leaving the property.
12. The hardstand area shall be constructed to a gravel standard to the satisfaction of the Chief Executive Officer prior to commencement of transport depot operations.
13. The hardstand and access road shall be maintained at all times to minimise dust emissions to the satisfaction of the Chief Executive Officer.
14. Remnant vegetation to be retained on site.
15. All stormwater runoff and drainage shall be directed to drainage basins constructed, stabilised and maintained to the satisfaction of the Chief Executive Officer prior to the commencement of transport depot operations.
16. Storage of any products/goods being transported, equipment or materials is not permitted.
17. On site servicing, tyre rotation, refuelling and wash down facilities are not permitted on site.
18. Any alterations that are not in accordance with conditions of this approval shall require the Applicant to seek additional approval from Council.

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. With regard to condition 5, if the Applicant wishes to exceed more than five vehicle movements per hour, prior written approval from the Shire of Chittering and Main Roads WA must be obtained.
3. With regard to condition 9, the Applicant shall forward a copy of any approval and documentation relating to the crossover and access arrangements to the Shire prior to commencing the Transport Depot.
4. With regard to condition 15, the Applicant shall implement drainage to ensure all runoff from the hardstand is captured within the hardstand area.

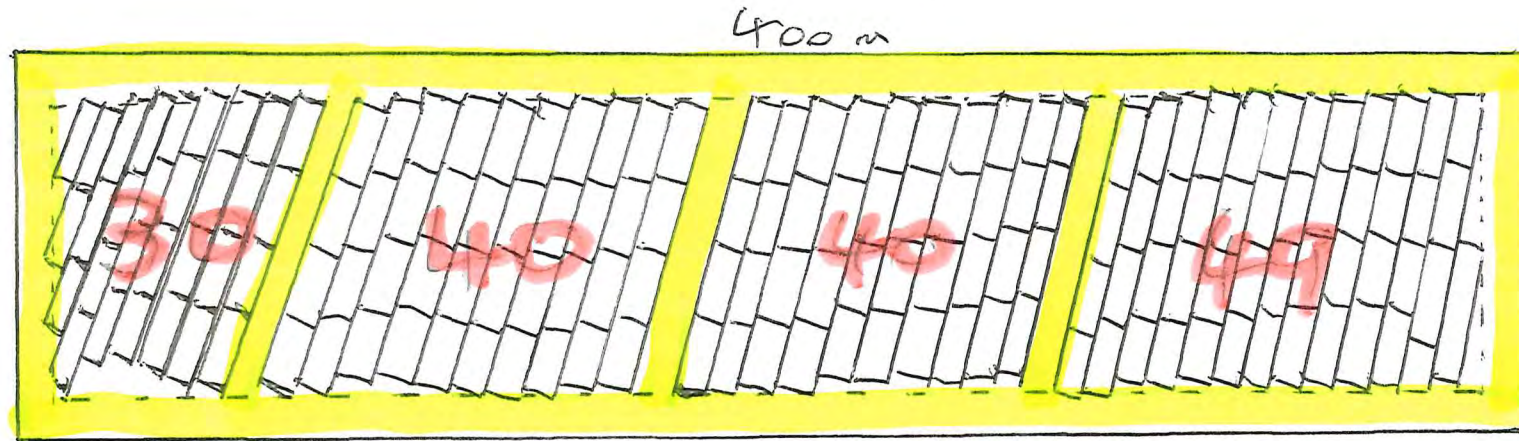
$$10 \text{ Acres} = 4 \text{ Hec} = 40,000 \text{ m}^2$$

"E"

Leave Access Road

$$\frac{(400 \times 10 \times 2) + (80 \times 10 \times 2)}{(80 \times 3 \times 10)} = \frac{10,400}{3000} \text{ m}^2$$

$$\text{AVAILABLE FOR 'PARKING'} = \text{say } 30,000$$



$$= 159$$

8) LEAVING 200 m^2 FOR EACH VEHICLE (ie $20 \times 5 = 100 \text{ m}^2$
 RETURN TRAVEL + SOME AGAIN = 200 m^2)

$$\text{Then } 40,000 \div 200 = 200$$

$$= 200$$

9.1.3 Proposed Transport Depot – Lot 3281 (RN 9071) Great Northern Highway, Wannamal*

Applicant	G Kirkwood
File ref	A6011; P260/14
Prepared by	Brendan Jeans, Senior Planning Officer
Supervised by	Gary Tuffin, Chief Executive Officer
Voting requirements	Simple majority
Documents tabled	Nil
Attachments	1. Locality Plan 2. Aerial Site Plan 3. Additional Information 4. Schedule of Submissions 5. Site Photos

Background

Council is requested to consider the proposed Transport Depot at Lot 3281 (RN 9071) Great Northern Highway, Wannamal.

The subject property is located on the Great Northern Highway just north of Hay Flat Road approximately 28kms north of Bindoon. Udumung Nature Reserve, owned and managed by the Department of Parks and Wildlife (DPaW - previously DEC), adjoins the property to the south and contains Udumung Brook traversing east-west.

The Applicant proposes a gravel hardstand approximately 10ha in area located on the property as per the aerial plan (refer to Attachment 2). The location has been chosen in an area not greatly used for cropping purposes and due to the screening provided by the slope and protected vegetation to the highway, Hay Flat Road and surrounding landowners. The Applicant has indicated a combination of up to 80 vehicles and equipment (refer to Attachment 3) to be parked on the hardstand area, with two to four movements proposed per month. The Applicant has proposed that in the event a greater number of movements are expected that appropriate traffic management would be put in place for access onto the highway to the satisfaction of Main Roads WA requirements. There is to be no storage of materials or fuel associated with the development.

Consultation

The proposal was advertised for 21 days, concluding 22 October 2014, in accordance with Clause 9.4.3 of the Shire's Town Planning Scheme. This resulted in:

1. Referral letters to adjoining and nearby landowners;
2. Referral letters to the following agencies:
 - (i) Ellen Brockman Integrated Catchment Group Inc.;
 - (ii) Department of Water;
 - (iii) Main Roads WA;
 - (iv) Department of Parks and Wildlife; and
3. Advertisement in The Advocate newspaper.

The submissions received have been listed in the Schedule of Submissions (refer to Attachment 4).

Statutory Environment

State: *Planning and Development Act 2005*

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

Lot 3281 is zoned 'Agricultural Resource'. The objectives of this zone are:

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

The property is located within the 'Landscape Protection Area' Special Control Area identified by the Scheme:

6.2 LANDSCAPE PROTECTION AREAS

6.2.1 *The Landscape Protection Areas are delineated on the Scheme Map. Planning Approval is required for any development within the Special Control Area.*

6.2.2 *Purpose*

- (a) *to secure the areas delineated on the Scheme Map from undue subdivision and development that would detract from the landscape value of the rural environment;*
- (b) *to conserve and enhance the character of the significant landscape area; and*
- (c) *to ensure land use and developments are compatible with the landscape values.*

6.2.3 *Landscape Areas*

The Landscape Protection Areas are:

- (a) *the Chittering Valley Landform System: for the protection of the Brockman River Catchment its biodiversity and the drainage pattern and land degradation problems;*
- (b) *the Gingin Scarp: for the protection of the landform against denudation, water quality (nutrient export) and erosion;*
- (c) *the northern uplands: for the agricultural quality of the undulating landforms and rural production.*

6.2.4 *Planning Requirements*

In dealing with an application for Planning Approval, the Local Government will not support:

- (a) *a dwelling or outbuilding on any ridgeline as may be prominently visible from any public road or which may adversely affect the aspects of neighbouring dwellings;*
- (b) *land uses which are not related to the general objectives of the zone;*
- (c) *the storage or keeping of non-agricultural vehicles or materials on the land as may be visible from any public road;*
- (d) *the removal of any natural vegetation from any ridgeline;*
- (e) *the removal or lopping of trees other than for-*
 - i. *fire fighting or fire protection purposes;*
 - ii. *the removal of dead or dying trees;*

- iii. *clearance for power lines, emergency access, emergency works by a public authority, sight lines and traffic safety on roads;*
- iv. *if the vegetation is posing a risk to public safety;*
- v. *the vegetation is part of an area planted for fodder, timber plantation, or any other crop;*
- vi. *in association with the establishment of a Building Envelope.*

The Local Government may require, where appropriate, as a condition of any planning approval, additional planting of vegetation to be undertaken to ensure no net loss of vegetation or to repair any degraded landscape.

6.2.5 Relevant Considerations

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

- (a) *the statement and the nature of the key elements of the landscape and its character;*
- (b) *the conservation and enhancement of the landscape values;*
- (c) *the impact of any buildings and associated works on the landscape due to height, bulk, colour, general appearance and the need to remove vegetation;*
- (d) *the requirement for all roofing of any building to be a of a non-reflective nature;*
- (e) *a change of land use where in the opinion of the Local Government the proposed development may cause a deterioration of the landscape value and/or cause an adverse effect(s) on the environment.*

6.2.6 Referrals 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 proposed development falls within the definition of a 'Transport Depot' in the Scheme:

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' land use is listed as an 'A' use in Schedule 2 – Zoning Table of the Scheme:

'A' means that the use is not permitted unless the Local Government has exercised its discretion by granting Planning Approval after giving special notice in accordance with clause 9.4.

Part 10.2 of the Scheme sets out the matters to be considered by the Local Government; in particular for 'D' and 'A' uses.

Policy Implications

State: *Guidance Statement No 3 – Separation Distances between Industrial and Sensitive Land Uses*

The buffer for a transport depot set by these Guidelines is 200m. The nearest residence is approximately 1km.

Financial Implications

Nil

Strategic Implications

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

Lot 3281 is located in the 'Northern Broad Agricultural Area' identified in the Strategy:

6.1 Northern Broad Agricultural Area

6.1.1 Description/Location

This area covers that part of the Shire north of Mooliabeenee Road and Bindoon Dewars-Pool Road.

Generally, the land is used for agriculture and horticulture as it includes productive soils with a moderate water supply.

With a reticulated water supply for more intensive agriculture, the economic productivity of the area could be greatly increased and more employment opportunities would arise, particularly with value adding.

6.1.2 Aims

- To retain the productive land for broad acre farming but accommodate conversion to intensive horticulture where the landform, soils and water supplies permit*
- To support subdivision and development only where there is demonstrable evidence of suitable soils and water supply(s) to sustain productive agriculture, horticulture and viticulture*
- To retain existing natural vegetation and connecting areas to provide for biodiversity corridors*
- 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 prevent the intrusion of land uses not compatible with primary agricultural activities*
- To restrict subdivision of productive land beyond viable lot sizes for production*
- To prevent structural development in the path of the Perth Darwin Highway*
- To prevent development that may detract from the landscape quality of the area.*

Lot 3281 is zoned 'Agricultural Resource' to which Section 8.8 of the Strategy applies:

8.8 Agricultural Resource Area

8.8.1 Description/Location

The majority of the agricultural land falls into this category with the more productive areas being in the eastern and northern parts of the shire. Land to the west, mainly on the Dandaragan Plateau and Ellen Brook palusplain are less productive where there are the deeper leachable sands. On the lower plains, waterlogging constricts the full capacity of the land for pasture.

The heavier soils are associated with the better class of grazing, cropping and horticulture activities.

Lack of water prevents the better land for more intensive and profitable agriculture. When irrigable water becomes available, the land has a high capacity to convert to intensive agriculture.

8.8.2 Aims

- *To maintain agricultural lands for primary productive purposes*
- *To protect and improve the natural environment, including the landscape quality of the land*
- *To facilitate the conversion of suitable land, to intensive agriculture based upon appropriate soils and irrigable water supplies*
- *To prevent the loss of productive land to non agricultural purposes*
- *To allow agro-tourism and eco-tourism to develop in the rural areas*
- *To allow for the subdivision of non-productive land or areas of vegetation worthy of preservation in sustainable lot sizes under conservation covenants in accordance with WAPC Policy*
- *To protect and revegetate streamlines to provide for biodiversity corridors.*

Site Inspection

Site inspection undertaken: Yes

The access to Great Northern Highway, internal access road and hardstand location were inspected with photos taken (refer to Attachment 4).

Triple Bottom Line Assessment

Economic implications

There are no known significant economic implications associated with this proposal.

Social implications

There are no known significant social implications associated with this proposal.

Environmental implications

The subject property adjoins a Nature Reserve to the south which is wholly vegetated and contains the Udumung Brook. The contours and hydrology mapping of the area indicate that runoff from the hardstand site would flow north to south to the Nature Reserve and Udumung Brook.

Comment

Development of site

The proposal requires the construction of a gravel hardstand with drainage, improvement of the access road with re-surfacing and trimming of overhanging branches and upgrade of the crossover. No trees in the hardstand area are to be removed and existing large remnant vegetated areas on the property are fenced. The Applicant (owner) has advised the Shire that the vegetated areas on the property (approximately 40 acres) are covenanted to DPaW, with the support of the owner for the protection and breeding of the Carnaby's Cockatoos. The hardstand location is approximately 350m from nesting/breeding/feeding trees.

Consultation

During the submission period three agency submissions were received and two public submissions. The Shire did receive a late response from DPaW, which is not included in the Schedule of Submissions, however the points raised reflect comments made by other agencies. In general the submissions received, whilst not objecting to the proposal, raised relevant concerns needing to be addressed such as the safety of the proposed access, the impact of runoff to the Udumung Brook and spreading of noxious weeds. It is believed these concerns have been addressed in the Schedule of Submissions and comments section of this report.

Town Planning Scheme and Strategy

The application has been dealt with in accordance with the requirements of the Scheme for an 'A' use. The proposal was advertised as per Clause 4.4.3 of the Scheme to provide the opportunity for relevant agencies and residents to make comments on the proposal. Following advertising the Shire is now presenting the proposal to Council for consideration.

Agricultural Resource Zone

The proposal does not generally meet the objectives of the zone however the proposed land use is listed as an 'A' use in the Scheme, and can be considered for approval by Council. It is considered the proposal will not adversely impact the landscape values of the property or locality due to the low activity of movements and its location in a cleared area screened from view, which further protects the visual amenity of the locality.

Landscape Protection Area SCA

It is considered the proposed Transport Depot can meet the requirements set out in the SCA of the Scheme as the hardstand is located in a cleared area, does not intersect identified flow lines or alter natural drainage flow and is screened from view. Therefore it will not adversely impact the amenity of the area or the environmental values of the locality which is generally consistent with the Special Control Area requirements and considerations under Clause 6.2.5.

Access

The Applicant proposes access to Great Northern Highway using the existing crossover at the northern most part of the property with approximately two to four movements per month. Main Roads WA raised initial concerns with the low number of proposed movements compared to the large hardstand area and high number of proposed vehicles and equipment to be parked on the property. Further discussions between the Applicant, Main Roads WA and the Shire have resolved these concerns. Main Roads WA have made a revised submission following these discussions (refer to Attachment 4). Main Roads WA now support the proposal subject to conditions being placed on the Planning Approval, such as limiting the number of movements within their "low impact" range, restricting vehicles to no greater than 19m in length (As of Right vehicles) and requiring upgrades to the existing crossover. Main Roads WA have also later advised the Shire that their requirement for a Traffic Management Plan is not required for the transport depot approval unless the number of movements exceeds five per hour. The Officer's Recommendation reflects the requirements of Main Roads WA to support the proposal.

The safety of access to Great Northern Highway has been viewed by Shire officers on the site inspection and assessed by Main Roads WA. The depression in the highway from both south and north were sighted however it was viewed that from the crossover there was clear view of oncoming traffic, in particular road trains remained in sight coming from both directions at all times. Main Roads WA provided comments on the access arrangements in their submission regarding the proposal advising that a maximum of five movements per hour is acceptable. The Applicant would be required to upgrade the crossover to the requirements of Main Roads WA. The Applicant has advised that the crossover will be widened and gate entry will be extended into the property to allow for a 19m vehicle to be parked (stationary) prior to exiting onto the highway.

Drainage

As mentioned earlier in the report, a Nature Reserve abuts the southern boundary of the property. Udumung Brook flows east to west in the Nature Reserve and eventually meets with the Brockman River. The submission period raised concerns of the hardstand area in close proximity to the Reserve being vegetated, and that surface water runoff would flow into the Reserve and Udumung Brook causing erosion and damage to the Reserve and possibly contamination to Udumung Brook. As there is no refuelling or maintenance proposed and the hardstand is not being proposed to intersect flow lines, it is believed this can be addressed through managing runoff from the hardstand area through swales and a retention basin. Appropriate stormwater management would prevent erosion outside of the hardstand area and capture peak flows exacerbated by the compacted gravel hardstand. The Applicant has been made aware that the Shire would require appropriate drainage works at the time of construction of the hardstand if approved by Council.

Final comments

It is the Officer's Recommendation that Council support the proposed transport depot. It is considered that the matters set out in the Town Planning Scheme and Local Planning Strategy aiming to protect agricultural productive land and maintain the rural amenity by supporting agricultural related activities, are not jeopardised by the support of this proposal for the reasons outlined above. The application has been dealt with in accordance with the requirements of the Scheme. The concerns from the submission period have been reviewed and addressed accordingly in the Officer's Recommendation.

It is considered the proposal for Lot 3281 can be supported with regard to the Town Planning Scheme, Local Planning Strategy and submissions for the following reasons:

1. The hardstand is located in an area well screened from neighbouring properties, Great Northern Highway, Hay Flat Road and exceeds the generic buffer of 200m for a transport depot to sensitive land uses (residences).
2. The proposal does not require clearing of remnant vegetation or removal of productive land.
3. The flowlines to Udumung Brook do not extend into the hardstand area, which minimises the impact on surface water.
4. The transport depot can utilise the existing access direct to Great Northern Highway rather than through a local road being Hay Flat Road.
5. Main Roads WA allow for up to five movements per hour within the "low impact" range. The proposal is for two to four movements per month, which is well below this figure.
6. No other storage, vehicle maintenance or refuelling is proposed to occur on site, which reduces intensity of activity on site and associated impacts such as noise.
7. No objections were received in the public advertising period.

9.1.3 OFFICER RECOMMENDATION

Moved Cr Rossouw/ Seconded Cr Douglas

That Council grant Planning Approval for the Transport Depot at Lot 3281 (RN 9071) Great Northern Highway, Wannamal subject to the following conditions:

1. There is to be no more than 80 vehicles and trailers located on the site at any one time.
2. Parking of vehicles and/or trailers shall be within the approved hardstand area.
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4. This approval shall only be for vehicles to a maximum length of 19m.
5. There shall be no more than a maximum of five (5) vehicle movements per hour.
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 - a. 30m from the side boundary adjoining the Nature Reserve; and
 - b. 20m from remnant vegetation.
9. The Applicant shall upgrade the crossover to the satisfaction of Main Roads WA prior to commencement of transport depot operations.
10. The internal access road shall be a minimum width of 6m.
11. To minimise dust emissions:
 - a. The maximum speed on the internal access road and hardstand area shall be 20km/hr and be sign-posted on site.
 - b. The internal access road shall be watered to prevent dust leaving the property.
12. The hardstand area shall be constructed to a gravel standard to the satisfaction of the Chief Executive Officer prior to commencement of transport depot operations.
13. The hardstand and access road shall be maintained at all times to minimise dust emissions to the satisfaction of the Chief Executive Officer.
14. Remnant vegetation to be retained on site.
15. All stormwater runoff and drainage shall be directed to drainage basins constructed, stabilised and maintained to the satisfaction of the Chief Executive Officer prior to the commencement of transport depot operations.
16. Storage of any products/goods being transported, equipment or materials is not permitted.
17. On site servicing, tyre rotation, refuelling and wash down facilities are not permitted on site.
18. Any alterations that are not in accordance with conditions of this approval shall require the Applicant to seek additional approval from Council.

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. With regard to condition 5, if the Applicant wishes to exceed more than five vehicle movements per hour, prior written approval from the Shire of Chittering and Main Roads WA must be obtained.
3. With regard to condition 9, the Applicant shall forward a copy of any approval and documentation relating to the crossover and access arrangements to the Shire prior to commencing the Transport Depot.
4. With regard to condition 15, the Applicant shall implement drainage to ensure all runoff from the hardstand is captured within the hardstand area.

AMENDMENT

Moved Cr Norton / Seconded Cr Douglas

That condition 3 read "Hardstand shall be constructed in accordance with the approved site plan and shall not exceed 4 hectares in total area".

THE AMENDMENT WAS PUT AND DECLARED CARRIED 7/0
AND FORMED PART OF THE SUBSTANTIVE MOTION

AMENDMENT

Moved Cr Norton / Seconded Cr Mackie

That condition 15 read "All stormwater runoff and drainage shall be directed to drainage basins constructed to include hydrocarbon traps, stabilised and maintained to the satisfaction of the Chief Executive Officer prior to the commencement of transport depot operations".

THE AMENDMENT WAS PUT AND DECLARED CARRIED 7/0
AND FORMED PART OF THE SUBSTANTIVE MOTION

AMENDMENT

Moved Cr Norton / Seconded Cr Gibson

That an additional advice note be included, to inform the proponent that the Shire will be requesting Landcare to monitor the condition of the Udumung Creek downstream of the depot.

THE AMENDMENT WAS PUT AND DECLARED CARRIED 6/1
AND FORMED PART OF THE SUBSTANTIVE MOTION

9.1.3 SUBSTANTIVE MOTION / COUNCIL RESOLUTION – 041114

Moved Cr Rossouw/ Seconded Cr Douglas

That Council grant Planning Approval for the Transport Depot at Lot 3281 (RN 9071) Great Northern Highway, Wannamal subject to the following conditions:

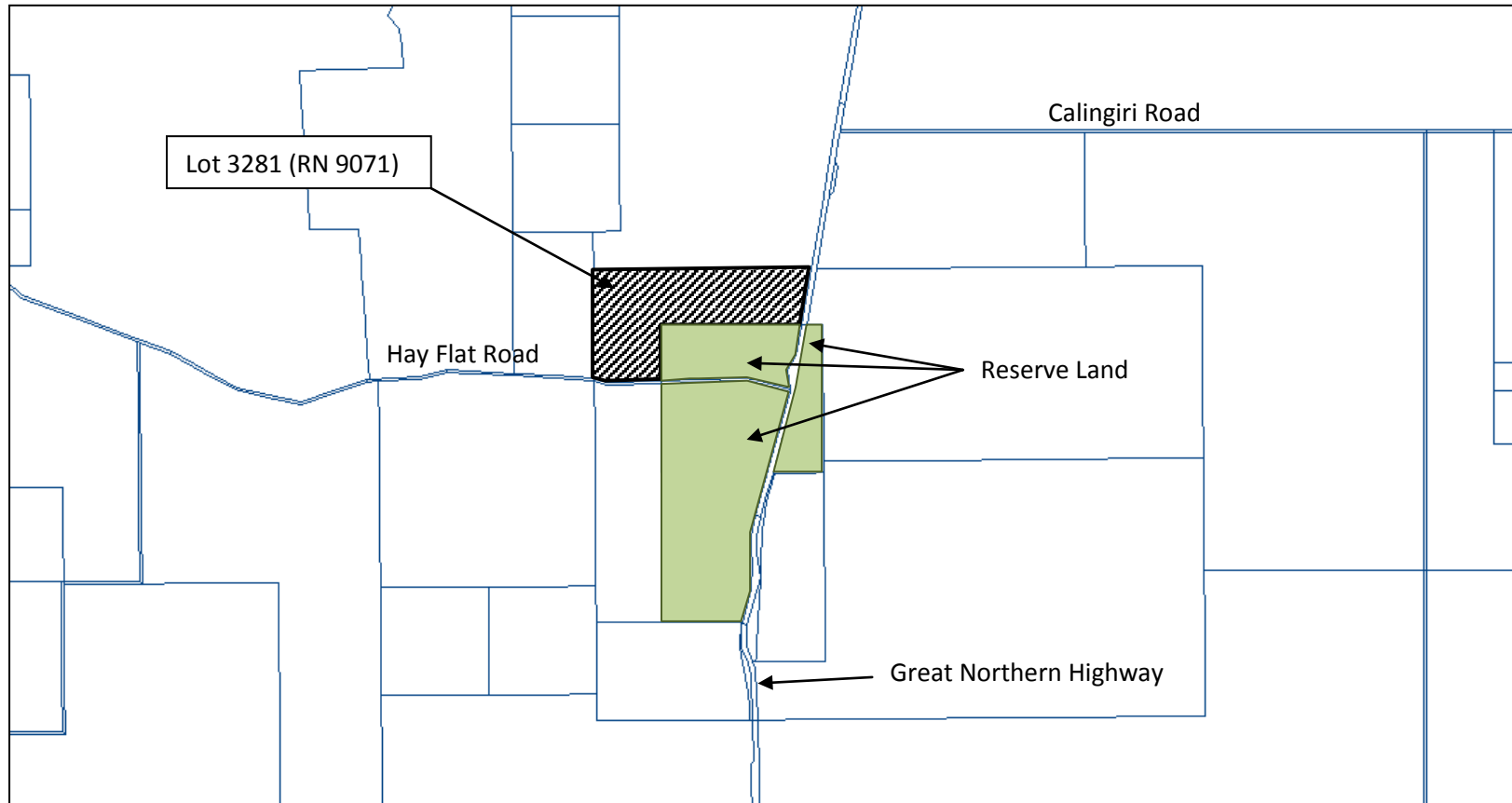
1. There is to be no more than 80 vehicles and trailers located on the site at any one time.
2. Parking of vehicles and/or trailers shall be within the approved hardstand area.
3. Hardstand shall be constructed in accordance with the approved site plan and shall not exceed 4 hectares in total area.
4. This approval shall only be for vehicles to a maximum length of 19m.
5. There shall be no more than a maximum of five (5) vehicle movements per hour.
6. This approval shall be in accordance with the Additional Information (refer Attachment 3).
7. The development hours of operation shall comply with the *Environmental Protection (Noise) Regulations 1997*. Traffic movements outside of the prescribed hours shall be in accordance with the assigned noise level of the said Regulations.
8. The following setbacks for the hardstand and associated drainage shall apply:
 - a. 30m from the side boundary adjoining the Nature Reserve; and
 - b. 20m from remnant vegetation.
9. The Applicant shall upgrade the crossover to the satisfaction of Main Roads WA prior to commencement of transport depot operations.
10. The internal access road shall be a minimum width of 6m.
11. To minimise dust emissions:
 - a. The maximum speed on the internal access road and hardstand area shall be 20km/hr and be sign-posted on site.
 - b. The internal access road shall be watered to prevent dust leaving the property.
12. The hardstand area shall be constructed to a gravel standard to the satisfaction of the Chief Executive Officer prior to commencement of transport depot operations.
13. The hardstand and access road shall be maintained at all times to minimise dust emissions to the satisfaction of the Chief Executive Officer.
14. Remnant vegetation to be retained on site.

15. All stormwater runoff and drainage shall be directed to drainage basins constructed to include hydrocarbon traps, stabilised and maintained to the satisfaction of the Chief Executive Officer prior to the commencement of transport depot operations.
16. Storage of any products/goods being transported, equipment or materials is not permitted.
17. On site servicing, tyre rotation, refuelling and wash down facilities are not permitted on site.
18. Any alterations that are not in accordance with conditions of this approval shall require the Applicant to seek additional approval from Council.

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. With regard to condition 5, if the Applicant wishes to exceed more than five vehicle movements per hour, prior written approval from the Shire of Chittering and Main Roads WA must be obtained.
3. With regard to condition 9, the Applicant shall forward a copy of any approval and documentation relating to the crossover and access arrangements to the Shire prior to commencing the Transport Depot.
4. With regard to condition 15, the Applicant shall implement drainage to ensure all runoff from the hardstand is captured within the hardstand area.
5. The Applicant is to be aware that the Shire will be requesting Landcare to monitor the condition of the Udumung Creek downstream of the depot.

THE SUBSTANTIVE MOTION WAS PUT AND DECLARED CARRIED 7/0





- The types/lengths of vehicles entering/leaving the site. See photos attached and asset descriptions in table below. Please note all vehicles are road registered, majority for WA roads and a lesser amount for SA roads. Nothing is over length, overweight or over width.

Asset #	DESCRIPTION
2779	LIGHTING PLANT
2888	UDR1000 PLUS 3725 MAN 8X8
3006	MERCEDES 8X8 WATER TRUCK
3262	MAN 8X8 TRUCK (CARRIER FOR COMPRESSOR MEX#9701 & BOOSTER Asset # 2578)
3699	ISUZU LIGHT TRUCK
9621	TOYOTA LANDCRUISER
10268	CARAVAN 7TC427
10825	TRAILER - DOLLY
10833	TRAILER SEMI DROP DECK

- Likely number of vehicles parked at one time etc. It is proposed to have room available to park up to 70 – 80 assets being a mix per the above table. This quantity may reduce during the middle of 2015 as equipment is sent to contract work in the Pilbara or Goldfields.
- Traffic movements and times likely as a result of this proposal such as a traffic management plan/traffic impact statement. The initial “moving in” process will be quite intensive. It is expected to take up to two months to move all equipment in at a rate of 10 vehicles moved in per week. Once the depot is established and equipment is in place, further movements are not frequent. Most likely in the order of 2 – 4 movements per month. During the moving in period or any period of intensive equipment movements a third party traffic management company will be engaged to ensure the interaction on the public road is conducted in a safe manner.
- Details of the construction of the hardstand. The hard stand preparation is expected to entail scrapping of top soil the side and storing for reuse at the time when the hard stand is made good for farm land once again. Once top soil is removed the ground will be assessed to determine whether road base is required. No change to gradient is required as the selected location allows for flat enough area for hard stand while allowing for natural rain water run-off.
- Drainage/stormwater management of hardstand area (hydrology of site). The location currently runs off to the south. No drainage is expected to be necessary.
- Dust management if using gravel construction of access roads and hardstand. Water is readily available from the main dam. Dust will be monitored and a water cart and / or sprayers will be available to wet roads when moving equipment.
- If above point is relevant, evidence of sufficient water supply for dust suppression. Refer to A3 aerial map. Main dam on eastern boundary. Water level to be maintained and brought in if ever necessary (dam has not been dry before)
- If development is to be staged or proposed to be leased? No further development. Single hardstand for lease to a third party.
- Any proposed signage/advertising? Nil



Item 9.1.3



Item 9.1.3 - Attachment 2





Item 9.1.3**Item 9.1.3 - Attachment 2****Attachment 4**

Proposed Transport Depot – Lot 3281 (RN 9071) Great Northern Highway, Wannamal

Government / Service Provider / Interest Group Submissions			
Agency	Comment	Proponent Response	Shire Officer Response
Main Roads	MRWA is prepared to support the proposed transport depot subject to the following conditions being included on the planning approval:		Support noted.
	1. The proponent shall submit to Main Roads WA for approval, a Traffic Management Plan relating to the initial moving in of vehicles.	Main Roads advised this was not required unless movements increase beyond 5 per hour.	Noted. Main Roads have verbally advised a TMP is not required unless changes to the operation occur.
	2. The proponent shall upgrade the crossover to Great Northern Highway to suit the type of vehicle proposed, and is required to obtain MRWA approval for the upgrade prior to construction.	Noted.	Noted. Upgrade of crossover recommended as a condition prior to commencement of Transport Depot.
	3. Vehicle movements shall be limited to a maximum of 5 vehicle movements per hour.	Noted. Main Roads advised this limit was to cover any transport depot operations for the site. We propose no greater than 10 movements per week.	Noted. Maximum movements recommended as a condition.
	4. The vehicle configurations are to be less than 19m in length.	No configurations will be greater than 19m	Noted As of Right vehicles only.
Department of Water	The DoW is unable to assess the proposal as more information is required on the location of the hardstand area and stormwater management for the site. The referral states that drainage is not expected to be necessary; however DoW notes that waterways exist on the site and as such stormwater management details need to be provided.	Noted. Agree to undertaking drainage works.	Noted. The hardstand and access road is not proposed to intersect identified flowlines or waterways however it is noted the slope of the site and proximity of flowlines to Udumung Brook requires appropriate stormwater management. It is recommended a condition requiring drainage to maintain runoff within hardstand area be imposed.
Ellen Brockman Integrated Catchment Group Inc.	1. Drainage/stormwater management - The fact that drainage runs to the south is of real concern and no management is mooted in the application. A drainage and stormwater management plan is needed. One, because of the position of the		Stormwater/runoff concerns are noted and addressed as per comment above. No fuel/chemical storage proposed minimising contamination into soil and waterways. No refuelling or maintenance is proposed and is

Proposed Transport Depot – Lot 3281 (RN 9071) Great Northern Highway, Wannamal

Government / Service Provider / Interest Group Submissions			
Agency	Comment	Proponent Response	Shire Officer Response
	<p>hardstand is between two sensitive areas, Udumung Reserve and the creek to the south and covenanted land to the north. The bushland was placed under covenant by Main Roads WA as an offset for clearing undertaken when Great Northern Highway was widened. It was to replace feeding and breeding habitat for the Carnaby's Cockatoo, a nationally protected species under the EPBC Act. Two, the Udumung Creek flows through a number of properties before flowing directly into the Brockman River. Stormwater from the hardstand would need to pass through a detention basin or swale and any hydrocarbons from fuelling and fuel storage would need to be carried out on a bunded hardstand to ensure no leakage into Udumung Creek. Three, there is a real risk of weed seed and pathogens such as Dieback Phytophthora moving into the reserve and waterway that could have consequences for property owners and vegetation downstream. Especially if the vehicles are working in the Pilbara with every chance of bringing in more exotic weed species not present in Wannamal.</p>		<p>reflected in the Officer's Recommendation. All vehicles and equipment are to be washed down off site prior to entering property.</p>
	<p>2. Amenity: This part of the reserve is also a heritage site containing one of the rock-lined wells, Shannon's Well, that was part of the track Bishop Salvado travelled between Perth and New Norcia. Further community work with Department of Parks and Wildlife and the Wannamal Community Centre will be done in this</p>		<p>Noted. It is considered the proposed location of the hardstand provides the most effective screening from public roads and neighbouring properties. View from the adjoining Nature Reserve is not considered to be significant as the Reserve is for conservation purposes.</p>

Proposed Transport Depot – Lot 3281 (RN 9071) Great Northern Highway, Wannamal

Government / Service Provider / Interest Group Submissions			
Agency	Comment	Proponent Response	Shire Officer Response
	area next year to protect and highlight the heritage values for visitors. The transport depot would have an impact on the amenity of the area.		
	3. Entrance: The egress of vehicles onto Great Northern Highway will be dangerous because of the dip in the road along that section of highway. The poor line-of-sight obscures even the view of large trucks travelling along the highway.	A caution sign will be erected on the property boundary notifying the need to proceed with caution/poor visibility. A site induction will be created and conducted on all personnel that are to participate in vehicle movements. This will address items such as access/egress of property, vehicle speed, dust management, fire awareness, zero hot work permitted, zero fuel storage/refuelling permitted, zero hydrocarbon storage permitted, management of spill/leaks, water management, PPE, vehicle permits, noise control, wildlife awareness, community engagement etc.	Noted. Main Roads WA support the proposed access subject to conditions. The Shire also viewed the crossover locations with good evidence of traffic movements in both directions.
	Very little information is supplied about refuelling and servicing of the vehicles, fuel and hydrocarbon storage, storage of tyres and wash down of vehicles.	There is to be no storage of fuels, oils, lubricants or tyres. No wash down of vehicles is to take place on the property. All equipment will be cleaned prior to coming to site.	Noted. As per Applicant's response.

Item 9.1.3

Proposed Transport Depot – Lot 3281 (RN 9071) Great Northern Highway, Wannamal

Item 9.1.3 - Attachment 2**Attachment 4**

Public Submissions			
Submitter	Comment	Proponent Response	Shire Officer Response
1	As a nearby landholder, I do not expect that I would be greatly affected by the proposed change of land use, but I do have some concerns.	Noted.	Noted.
	Council needs to determine whether long term storage of mining vehicles falls under the guidelines and usage for a “Transport Depot”.		The details provided with the application are considered to fall within a ‘Transport Depot’ land use.
	This may set a precedent for the future development of other non agricultural land uses in the area, and create some long term vehicle storage opportunities for existing transport depots in our shire.		This is noted and is a consideration set out in the Town Planning Scheme which has been covered in the agenda report.
	The proximity of the property in relation to the Udumung DPAW reserve may cause some issues, including drainage run off issues and being in a Carnaby’s cockatoo habitat.	Drainage works for the hardstand will be done to capture runoff. Approximately 40 acres of my property has covenant to protect Carnaby’s.	
	The risk of noxious weeds and dieback transmission is much greater, due to the nature of the vehicles and the locations they are used.	Our equipment would be transferred across locations and is weed and seed washed and compliant each time. Prior to any equipment leaving a location with the intent to be brought to Lot 3281, it will be washed and checked.	This is noted. Off-site wash down and separation from vegetated areas is proposed.
	With the considerable amount of natural bush (on and surrounding the property), the possibility of bushfire spreading into the stored vehicles area or, a fire starting in the stored vehicles area and spreading into the surrounding bush, needs to be considered.	Firebreaks around the property and around the specific vehicle parking area will be maintained. No hot work or mechanical repairs are to take place. All our vehicles are inspected before every use and vehicle pre start inspections include checks such as rags in the engine bay (a common contributor to vehicle fires).	Noted.
	The type of equipment being stored could be a real target for theft and vandalism if not securely fenced or monitored.	We have a process of removing all valuable items from vehicles and storing them in our workshop in Wangara. No keys will be left in the vehicles but	Noted. Theft is not a consideration of the planning approval however it is believed the screened location and implementation of a

Item 9.1.3

Proposed Transport Depot – Lot 3281 (RN 9071) Great Northern Highway, Wannamal

Item 9.1.3 - Attachment 2**Attachment 4**

Public Submissions			
Submitter	Comment	Proponent Response	Shire Officer Response
		vehicles are left unlocked. We have dealt with security of our equipment in remote locations throughout Australia for many years and this is the most effective approach.	locked entry would solve this issue.
2	I note that the drainage of said depot will be into Udamung Creek. This is a major water way for Wannamal area.	Drainage works will be undertaken as required by the Shire to prevent flow to Udumung Creek.	The natural slope of the land indicates drainage into Udumung Brook.
	Also there is a major traffic concern where Gt Northern Highway crosses Udumung Creek. This deep depression hides oncoming traffic when anyone is trying to come out from Hay Flat Rd.	Noted. Main Roads have assessed proposed access/egress location.	Noted. Main Roads WA support the proposed access subject to conditions. The Shire also viewed the crossover locations with good evidence of traffic movements in both directions.
	This depression is deep enough to hide a big truck and is very dangerous.	Noted a depression exists however site induction process would cover this.	As above.

*Note: Submission comments have not been edited. Comments are as per original submission received by the Shire.

Site Photos



View south of Great Northern Highway from driveway



View north of Great Northern Highway from driveway

Site Photos



View to the east from
firebreak on southern
side boundary adjacent
to hardstand area



View north east from
firebreak on southern
side boundary of
hardstand area

Site Photos



View north east from
firebreak on southern
side boundary (further
west) of hardstand



View north from
firebreak on southern
side boundary of
hardstand area

Approved site plan with explanatory notes

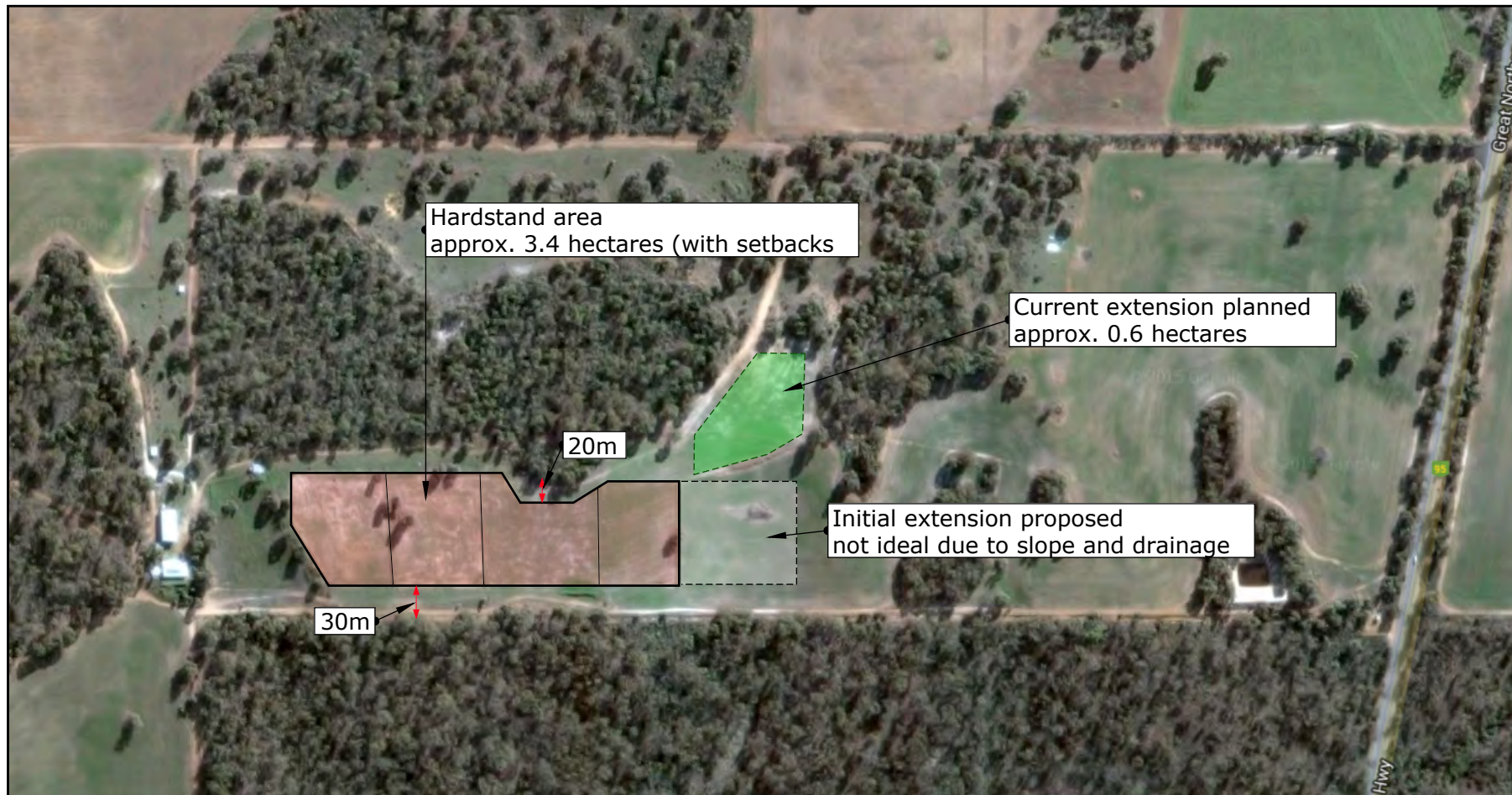




Photo 1: Taken facing south east showing sloped area not to be extended to.



Photo 2: Taken facing south showing eastern edge of approved hardstand under construction.



Photo 3: Taken facing south west showing approved hardstand under construction.

Agreement for Road Upgrade and Maintenance for Sand and Gravel Extraction: Yalyal Road and Reserve Road, Muchea

Shire of Chittering

Highclere Pty Ltd



McLEODS

Barristers & Solicitors

Stirling Law Chambers | 220-222 Stirling Highway | CLAREMONT WA 6010

Tel: (08) 9383 3133 | Fax: (08) 9383 4935

Email: mcleods@mcleods.com.au

Ref: NG:CHITT:36019

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Details

Parties

Shire of Chittering

of PO Box 70, Bindoon, Western Australia
(Shire)

Highclere Pty Ltd (ACN 009 170 834)

of PO Box 298, Joondalup, Western Australia
(Highclere)

Background

- A Highclere owns the Property in freehold.
- B Highclere applied to the Shire for planning approval for an extractive industry use on the Property and an Extractive Industry and Excavation Licence to extract sand and gravel from the Property.
- C By Council resolution of 27 June 2012, the Shire resolved to grant the planning approval subject to a number of conditions including the following:
- “m Prior to the issue of an excavation licence the Applicant shall enter into an agreement with the Council for payment of fees for road construction and road maintenance of Yalyal Road and Reserve Road;
- n Prior to the issue of an excavation licence the Applicant shall submit a Traffic Management Plan for the upgrade, use and maintenance of Yalyal Road and Reserve Road;”
- (Road Requirements)
- D Highclere and the Shire enter into this Deed to satisfy the Shire’s requirements in relation to the Road Requirements.

Agreed terms

1. Definitions

Unless otherwise required by the context or subject matter the following words have these meanings in this Deed:

Bond means the amount of \$10,000;

Business Day means a day that is not a Saturday, Sunday, bank holiday or public holiday in Western Australia, Australia;

Completion Date means the day on which the Shire inspects the works undertaken for the Reserve Road Upgrade and the Yalyal Road Upgrade and accepts that the works are completed to the Shire's its satisfaction;

CPI means the Consumer Price Index (All Groups) Perth number published from time to time by the Australian Bureau of Statistics;

Deed means this deed as supplemented, amended or varied from time to time;

Extraction Licence means a licence to extract sand and/or gravel from the Property issued by the Shire pursuant to the Shire's Local Law relating to Extractive Industries;

Highclere Obligations means the obligations specified in **clauses 2, 3 and 4** and everything reasonably necessary for the proper performance of those obligations;

Maintenance Standards means the maintenance standards for unsealed roads that are specified in **Annexure 3**;

Property means Lot 51 on Deposited Plan 39849 being the whole of the land contained in Certificate of Title Volume 2229 Folio 40;

Reserve Road means the section of public road known as Reserve Road from the end of the bitumen section to the entrance gate of the Property as identified in green on the Plan **attached** as Annexure 2;

Reserve Road Upgrade means;

- (a) the regrading and waterbinding of Reserve Road; and
- (b) the widening of Reserve Road where indicated on the Plan annexed as Annexure 1 so that there is a minimum of a 200 metre sightline for vehicles,

to the satisfaction of the Shire in its absolute discretion;

Term means the period during which Highclere, or any other party, holds an Extractive Industry and Excavation Licence to remove sand and/or gravel from the Property;

Tonnage Volume means the amount of materials extracted from the Property, in tonnes, as determined by **clause 4.2(1)(a) or 4.2(1)(c)**;

Yalyal Road means the section of public road known as Yalyal Road from the intersection with Reserve Road to the western boundary of the Property, as identified in green on the Plan **attached** as **Annexure 2**;

Yalyal Road Upgrade means:

- (a) the regrading and waterbinding of Yalyal Road; and
- (b) the widening of Yalyal Road so that it is a carriageway of 8 metres.

2. Upgrade to Affected Roads

2.1 Highclere to complete Reserve Road Upgrade

Prior to the issue of an Extraction Licence Highclere covenants and agrees with the Shire to:

- (a) submit to the Shire a Traffic Management Plan for the Reserve Road Upgrade and the ongoing maintenance of Reserve Road pursuant to **clause 3**; and
- (b) carry out and complete at its own expense the Reserve Road Upgrade works in accordance with the Shire's specifications and any plans approved by the Shire.

2.2 Highclere to complete Yalyal Road Upgrade

Prior to the issue of an Extraction Licence permitting transport on Yalyal Road, Highclere covenants and agrees with the Shire to:

- (a) submit to the Shire a Traffic Management Plan for the Yalyal Road Upgrade and the ongoing maintenance of Yalyal Road pursuant to **clause 3**; and
- (b) carry out and complete at its own expense the Yalyal Road Upgrade works in accordance with the Shire's specifications and any plans approved by the Shire.

2.3 Completion Date

- (1) On the Completion Date the Shire will inspect Reserve Road and Yalyal Road and will prepare a report on the condition of these roads. This will be the Road Condition Report.
- (2) The Shire agrees to issue the Extraction Licence after the Completion Date.

3. Maintenance Obligations

3.1 Maintain Reserve Road and Yalyal Road

Highclere must, at its cost, maintain the Reserve Road and Yalyal Road in accordance with the Maintenance Standards for the Term and for any period after the Term that is necessary to comply with any directions under **clause 3.2**.

3.2 Compliance Monitoring

- (1) The Shire will monitor Highclere's compliance with the Maintenance Standards via an inspection every 2 months, unless the Shire reasonably considers it necessary to require any additional inspection, to ensure the Road is maintained in accordance with the Maintenance Standards.
- (2) Highclere must comply with any reasonable direction from the Shire with respect to any work required to meet the Maintenance Standards.
- (3) If the Shire engages a third party to monitor Highclere's compliance with the maintenance standards then Highclere must pay all reasonable costs associated with monitoring of compliance with the Maintenance Standards.

3.3 Highclere Contractor

Subject to **clause 10**, Highclere may, at its discretion, engage any competent contractor to perform any work to maintain Reserve Road and Yalyal Road.

3.4 Handover Inspection

At the expiration of the Term the Shire will inspect Reserve Road and Yalyal Road and, provided that they are in the same condition as in the Road Condition Report (fair wear and tear excepted), will accept the handover from Highclere as at that date.

4. Sealed Road

4.1 Upgrade to Sealed Road

If a third party or the Shire upgrades Reserve Road so that it is a sealed road then:

- (a) upon commencement of the construction, Highclere's obligations under **clause 3.1** will cease in relation to Reserve Road only;
- (b) the Shire will return 50% of the Bond to Highclere, less any amounts drawn from the Bond pursuant to **clause 7.1**;
- (c) Highclere must immediately undertake a feature survey of the Property and provide it to the Shire; and
- (d) for the Term, Highclere will pay an amount to the Shire as a road maintenance contribution which will be paid in accordance with **clause 4.2 (Road Maintenance Contribution)**.

4.2 Road Maintenance Contribution Calculation

- (1) Highclere must:
 - (a) disclose to the Shire within one month of the end of each financial year, a report of the Tonnage Volume for the preceding financial year; and
 - (b) must support the report in **clause 4.2(1)(a)** with an annual volume survey of the Property confirming the volume of materials, in tonnes, extracted from the Property.
 - (c) in the event that the annual volume survey of the Property shows a higher tonnage of materials extracted from the Property then the report in **clause 4.2(1)(a)** then the tonnage in the annual volume survey is taken to be the Tonnage Volume.
- (2) The amount payable for the Road Maintenance Contribution is calculated by multiplying the Tonnage Volume by the fee stipulated for road maintenance contribution in the Shire's Fees and Charges (as approved by Council from time to time).
- (3) The Shire must, as soon as possible following receipt of the Tonnage Volume, issue Highclere with a tax invoice for the Road Maintenance Contribution.
- (4) If no fee is stipulated for the road maintenance contribution in the Shire's Fees and Charges then the fee for the purposes of **clause 4.2(2)** is \$0.25, subject to review pursuant to **clause 4.2(5)**.
- (5) The fee specified in **clause 4.2(4)** will be reviewed on each anniversary of this Agreement and the fee payable for road maintenance contribution will be increased by the percentage of any increase in CPI having regard to the quarterly CPI published immediately prior to the anniversary of this

Agreement and the quarterly CPI published immediately prior to the previous anniversary of this Agreement. If there is a decrease in CPI having regard to the relevant CPI publications the fee payable for the road maintenance contribution from the relevant anniversary will be the same as the fee payable for road maintenance contribution during the immediately preceding period. Should the CPI be discontinued or suspended at any time or its method of computation substantially altered, the Parties shall endeavour to agree upon the substitution of the CPI with an equivalent index.

5. Indemnity

5.1 Highclere indemnifies Shire

Highclere hereby indemnifies the Shire against any cost, damage, expense, loss or other liability which the Shire suffers or incurs, and any claim against the Shire in respect of –

- (a) loss of, or damage to, or loss of use of, any real or personal property; or
- (b) personal injury to or death of any person,
arising from, or in relation to –
- (c) the Reserve Road Upgrade, Yalyal Road Upgrade or any of the Highclere Obligations; or
- (d) a breach of this Deed by Highclere.

5.2 Apportionment of liability

Notwithstanding **clause 5.1** any liability incurred by Highclere under **clause 5.1**, reduces proportionately to the extent that the loss, damage, loss of use, injury, death or related claim was caused by –

- (a) a negligent act or omission of the Shire or any employee, consultant or agent of the Shire;
or
- (b) a breach of this Deed by the Shire.

5.3 Part 1F Civil Liability Act 2002

Highclere and the Shire agree that Part 1F of the *Civil Liability Act* does not apply to any dispute, claim, action or other matter brought by any party with respect to anything arising from this Deed.

5.4 Indirect Loss

Notwithstanding any other provision of this Deed, the Parties shall not be liable to each other for loss of use, loss of contract or for any indirect or consequential loss or damage which may be suffered under or in connection with this Deed.

6. Disposal Restrictions

Highclere covenants and agrees with the Shire not to assign, transfer or otherwise dispose of the Extraction Licence issued in relation to the Property or any other approval to extract or mine in respect of the Property or any part thereof without the prior written consent of the Shire, which consent the Shire will not withhold if:

- (a) Highclere is not in default of any of its obligations under this Deed; and

- (b) the person to whom any such right or interest is to be granted, enters into a deed of covenant with the Shire, whereby such person covenants to observe and perform the covenants on the part of Highclere herein contained to ensure that any successor observes such obligations.

7. Bond

7.1 Payment for Works

Highclere acknowledges and agrees that:

- (a) it is responsible for the full cost of fulfilling the Highclere Obligations; and
- (b) the Shire may without notice at any time draw upon the Bond to cover the costs incurred by the Shire in carrying out the Highclere Obligations.

7.2 Payment of Bond

Highclere COVENANTS AND AGREES with the Shire with 7 days of execution of this Agreement, Highclere will pay the Bond to the Shire in accordance with any policy and procedure of the Shire and in accordance with any directions of the Shire.

7.3 Genuine Pre-estimate of Bond

The Shire covenants and agrees that the Bond amount is a genuine pre-estimate of the cost the Shire will incur in undertaking the Highclere Obligations pursuant to this Agreement.

7.4 Shire's covenants

The Shire covenants and agrees with Highclere that the Bond will be used by the Shire for the purpose of recovering costs incurred by or in association with the Shire carrying out the Highclere Obligations.

8. Insurance

8.1 Public liability

Highclere must maintain, and must ensure that any contractor or subcontractor engaged to perform any part of the Highclere Obligations maintains, a valid and enforceable public liability insurance policy with an Australian Prudential Regulation Authority (APRA) authorised insurer which:

- (a) notes the Shire as an interested party; and
- (b) provides coverage of at least \$20,000,000 for each occurrence or series of occurrences arising out of one event.

8.2 Workers compensation

Highclere must maintain and ensure that any contractor or subcontractor engaged to perform any part of the Highclere Obligations, maintains, a valid and enforceable worker's compensation insurance policy which complies with the provisions of the *Worker's Compensation and Injury Management Act 1981* in respect of all employees performing any part of the Highclere Obligations.

8.3 General

- (1) Highclere must maintain, and where relevant ensure the maintenance of the insurance policies referred to in this **clause 8** throughout the Term.
- (2) The Shire may, at any time during the Term, request to be shown evidence that an insurance policy referred to in this **clause 8** is currently in effect and within 48 hours of that request Highclere must produce for inspection by the Shire a certificate of currency of the policy.
- (3) Highclere must, as soon as practicable, inform the Shire by Notice of any occurrence that may give rise to a claim under an insurance policy required by this clause and shall keep the Shire informed of subsequent developments concerning any claims made. Highclere must ensure that any contractors or subcontractors engaged in performing any part of Highclere Obligations have a similar obligation to advise Highclere of any occurrence and developments necessary to enable Highclere to perform its obligations under this clause.

9. Directions

The Shire may give Highclere any reasonable direction with respect to the proper performance of the Highclere Obligations and Highclere must comply with any such direction.

10. Responsibility of Highclere

If Highclere performs any of the Highclere Obligations through the use of any contractor or subcontractor, Highclere will remain directly responsible for the performance of the Highclere Obligations and the Shire will only deal with Highclere with respect to that performance.

11. Access to public

Highclere acknowledges that Reserve Road and Yalyal Road are public roads and must remain open to, and trafficable by, the public at all times.

12. Costs

12.1 Costs of Deed

Highclere must pay the Shire's reasonable legal costs of and incidental to the preparation, negotiation, execution and stamping of this Deed and all duty payable hereon.

13. Default

13.1 Failure to perform obligation by Highclere

- (1) If Highclere is in default under this Deed, the Shire may give Highclere Notice specifying the details of the default and –
 - (a) requiring the default to be remedied within 21 days of the Notice in a manner specified in the Notice; or
 - (b) if remedy within 21 days is not practicable, requiring other specified action to be taken within a reasonable specified timeframe.
- (2) If the Shire gives Notice under **clause 13.1(1)** and Highclere does not remedy the default, or take the other action specified within the reasonable specified timeframe, the Shire may carry out, or engage another party to carry out, the necessary work.

- (3) If the Shire carries out, or engages another party to carry out, work in accordance with **clause 13.1(2)**, or work to recover any amount owing under **clause 4.2**, all reasonable costs and expenses incurred by the Shire in doing so will be a liquidated debt owed by Highclere to the Shire and must be paid within 14 days of a demand from the Shire for payment.

13.2 Insolvency

If:

- (a) Highclere goes into liquidation whether compulsory or voluntary (not being a voluntary liquidation for the purpose of amalgamation or reconstruction), or a receiver or manager is appointed;
- (b) Highclere calls a meeting of Highclere's creditors or makes any composition or arrangement with or assignment for the benefit of its creditors, or suffers any execution under any legal process issued or levied on or against any of its goods or chattels; or
- (c) any execution or process is made against Highclere which is deemed to be an act of bankruptcy,

then, in any of these cases (but subject to the *Bankruptcy Act 1966* (Cth) and the *Corporations Act 2001* (Cth)) the Shire may, by notice in writing given to Highclere, without prejudice to any other powers, rights, authorities or remedies against Highclere under this Deed or otherwise, terminate the Deed, but without releasing Highclere from liability for any previous breach or failure to observe or perform any term or condition of this Deed.

14. Severability

If any provision of this Deed is void or unenforceable, that provision is void and unenforceable only to the extent of that voidness or unenforceability, without invalidating the remaining provisions which will remain in full force and effect.

15. Amendments

This Deed can be modified, amended or varied only by a document in writing signed by or on behalf of each of the parties.

16. Waiver

A waiver of a breach of any term or condition of this Deed is not to operate as a waiver of any breach of the same or any other term or condition of this Deed.

17. Laws of Western Australia apply

This Deed is to be construed and interpreted in accordance with the laws of the State of Western Australia and the parties agree to submit to the jurisdiction of the courts of that State and of courts competent to hear appeals from those courts.

18. Further assurance

Each party must do everything reasonably necessary to give effect to this Deed and the transactions provided for by it and use all reasonable endeavours to cause relevant third parties to do likewise.

19. Interpretation

In this Deed, unless the context otherwise requires:

- (a) headings, underlines and numbering do not affect the interpretation or construction of this Deed;
- (b) words importing the singular include the plural and vice versa;
- (c) words importing a gender include any gender;
- (d) an expression importing a natural person includes any company, partnership, joint venture, association, corporation or other body corporate;
- (e) references to parts, clauses, parties, annexures, exhibits and schedules are references to parts and clauses of, and parties, annexures, exhibits and schedules to, this Deed;
- (f) a reference to any statute, regulation, proclamation, ordinance or local law includes all statutes, regulations, proclamations, ordinances or local law varying, consolidating or replacing them, and a reference to a statute includes all regulations, proclamations, ordinances and local laws issued under that statute;
- (g) no rule of construction shall apply to the disadvantage of a party on the basis that that party was responsible for the preparation of this Deed or any part of it; and
- (h) a reference to any thing (including any real property) or any amount is a reference to the whole and each part of it;
- (i) reference to the parties includes their personal representatives, successors and lawful assigns;
- (j) where a reference to a party includes more than one person the rights and obligations of those persons shall be joint and several; and
- (k) the Schedule and Annexures (if any) form part of this deed.

Signing page

Executed on the

day of

2015

The Common Seal of the Shire of
Chittering was affixed in the presence
of -

Signature of Chief Executive Officer

Signature of Shire President

Name of Chief Executive Officer (print)

Name of Shire President (print)

Executed by Highclere Pty Ltd
ACN 009 170 834 accordance with
section 127 of the Corporations Act
2001:

J. EDWARDS

Director / Company Secretary

Director

G. H. EDWARDS

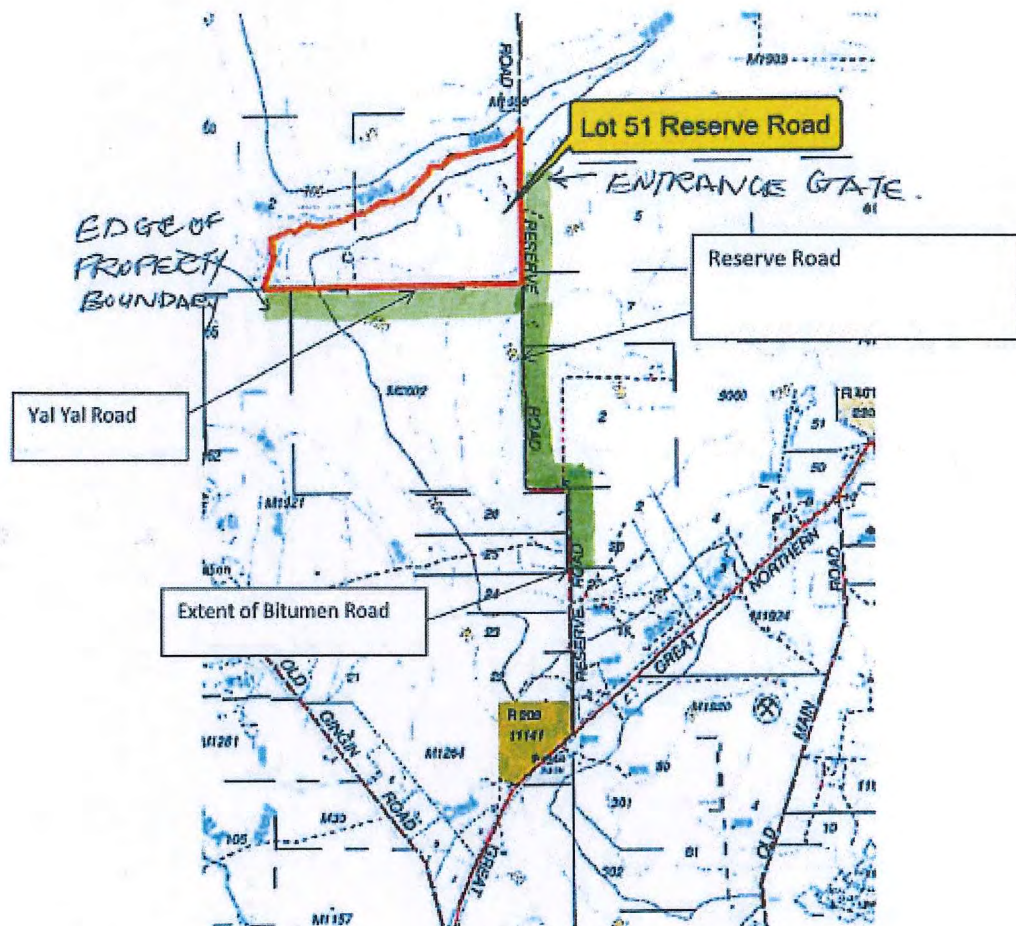
Name of Director / Company Secretary

Name of Director

Annexure 1 – Reserve Road Widening



Annexure 2 – Reserve Road and Yalyal Road



Annexure 3 – Maintenance Standards for Unsealed Roads

1. Maintenance Standards for Unsealed Roads

The agreement to maintain the unsealed Road is premised on two objectives:

1. Protect and maintain the road asset; and
2. Ensure that the Road is maintained in a safe condition for all road-users.

The specification for maintenance of the Road is performance-based, and falls into two categories:

- routine patrol; and
- response to defects.

In terms of Routine Patrol, Highclere or its works contractor must implement documented inspection processes to ensure that the Road is maintained safe at all times, specifically, but not limited to:

Routine Patrol	Max. Response Time
Remove road kill	12 daylight hours
Clear blocked culverts	12 daylight hours
Replace damaged signs & guideposts	1 week subject to best endeavours to secure availability
Cordon off hazards, Place / replace hazard signs	4 hours 4 hours
Remove litter including abandoned vehicles	1 week subject to the said abandoned vehicle or litter being caused by MVPL's operations

In terms of Response to Defects, Highclere or its works contractor must implement documented inspection processes to ensure that the Road is maintained safe at all times, specifically, but not limited to;

Defect	Intervention Level	Max. Response Time
<u>Dust Control</u> The Shire and Highclere are agreed that the unsealed sections of road shall be maintained dust free at all times.	When visibility falls below a clear line of sight from 200m behind a permit vehicle to 200m in front of a permit vehicle, measured using a wind free day as a baseline with suitable distance and direction adjustments for wind strength and direction on other days	2 hours
Potholes	Potholes > 50mm deep, or > 0.1 sq metres in area	1 week

Item 9.1.4 - Attachment 1

Any pavement failure or corrugations	If hazardous to traffic otherwise	12 daylight hours 1 month
Shoulder erosion	Width of shoulder reduced to < 1.0m as a result of MVPL's operations and not by weather events	1 month
Off-road drainage	Ponding extends into pavement layer as a result of MVPL's operations and not by weather events	1 week
Silted Culverts	Depth of silt > 20% of culvert	1 month

All maintenance activities must comply with approved Traffic Management Plan, per MRWA Code of Practice, 2010.

Locality Plan

Lot 51 Reserve Road, Muchea



9.1.3 Proposed Extractive Industry and Excavation Licence for Sand and Gravel – Lot 51 (RN 451) Reserve Road, Muchea*

Applicant	Whelans Pty Ltd on behalf of G & J Edwards
File ref	A10698 P088/11
Prepared by	Brendan Jeans, Senior Planner
Supervised by	Azhar Awang, Executive Manager Development Services
Voting requirements	Normal
Documents tabled	Nil
Attachments	1. Locality Plan (1 page) 2. Excavation Management Plan 3. Schedule of Submissions

SUBSTANTIVE MOTION / COUNCIL RESOLUTION – 080612

Moved Cr Gisbon/ Seconded Cr Norton

That Council:

1. **Grant** planning approval for the extractive industry for sand and gravel at Lot 51 (RN 451) Reserve Road, Muchea subject to the following conditions:
 - a. This planning consent shall be for a period of six (6) years from the date of issue until the 30 June in the year specified as the year of expiration. The proponent may apply for an extension of the approval for a further period of up to six (6) years. This application is to be made no later than three (3) months prior to the expiry of the current consent;
 - b. This planning consent shall only apply to Stage 1 as shown on the Excavation Plan prepared by Bio Diverse Solutions dated 26/4/12 submitted with the application;
 - c. The excavation licence shall be for a period of three (3) years from the date of issue until the 30 June in the year specified as the year of expiration. The proponent may apply for an extension of the licence for a further period of up to two (2) years. Each of these applications is to be made no later than three (3) months prior to the expiry of the current licence;
 - d. The excavation licence shall only remain valid while there is the appropriate planning approval in place to support the extraction of materials;
 - e. Prior to the issue of an excavation licence a guarantee/bond or other acceptable form of security shall be lodged with or paid to the Shire of Chittering in accordance with the amount stipulated in Schedule 3 of the By-law Relating to Extractive Industries;
 - f. Prior to the issue of an excavation licence the Applicant shall obtain a letter from the Tenement Holder stating no objection to the application and forward a copy of the response to Council;
 - g. Prior to the issue of an excavation licence the applicant shall establish a suitable buffer of the excavation from the remnant vegetation to the satisfaction of the Chief Executive Officer;

- h. Prior to the issue of an excavation licence the Applicant is to establish a buffer area of 500m from all nearby residences, proposed pits, stockpile and loading areas on the site plan;**
- i. Prior to the issue of an excavation licence a Fire Management Plan is to be prepared to the satisfaction of the Chief Executive Officer, in accordance with Local Planning Policy No 21;**
- j. Prior to the issue of an excavation licence a Refuelling Management Plan is to be prepared to the satisfaction of the Chief Executive Officer, incorporating:**
 - i. All on-site fuel storage and refuelling to take place within a lined and bunded area;**
 - ii. Any fuel leakages or spills to be cleaned up within 24 hours;**
 - iii. As part of the close-out plan, contaminated soil to be disposed of to the satisfaction of the Chief Executive Officer;**
- k. Prior to the issue of an excavation licence the Applicant shall submit to the Chief Executive Officer evidence of currency of public liability insurance for the excavation works. The issue of the approval shall not, in any way, render the Shire of Chittering liable for damage or injury of any kind to any member of the public; such liability shall be the sole responsibility of the Applicant. The Applicant shall ensure that he/she and/or the excavating contractor and/or transportation contractor hold sufficient public liability insurance cover for any claim against them;**
- l. Prior to the issue of an excavation licence:**
 - i. An assessment shall be conducted to determine whether acid sulphate soils or dieback are present on the land and, if present, their extent and severity;**
 - ii. that the samples be taken from the site by independent qualified persons;**
 - iii. If the site is found to contain acid sulphate soils or dieback, an Acid Sulphate Soils Management Plan (ASSMP) or Dieback Management Plan shall be submitted and approved by the Chief Executive Officer in consultation with the Department of Environment and Conservation; and**
 - iv. Operations shall be carried out in accordance with the provisions of the approved Management Plan;**
- m. Prior to the issue of an excavation licence the Applicant shall enter into an agreement with the Council for payment of fees for road construction and road maintenance of Yalyal Road and Reserve Road;**
- n. Prior to the issue of an excavation licence the Applicant shall submit a Traffic Management Plan for the upgrade, use and maintenance of Yalyal Road and Reserve Road;**
- o. Prior to the issue of an excavation licence the applicant is to undertake an assessment study of the flora and fauna, to the satisfaction of the Department of Environment and Conservation, and all areas containing rare or endangered species of flora and fauna shall be protected and no excavation shall be permitted in these areas;**
- p. Prior to the issue of an excavation licence the Applicant is to provide the water catchment management plan ;**

- q. Prior to the issue of an excavation licence the Applicant is to obtain the works approval from the Department of Environment and Conservation ;**
- r. Prior to the issue of an excavation licence a Rehabilitation or Land Management Plan shall be submitted and approved by the Chief Executive Officer incorporating:**
 - i. Statement of end use;**
 - ii. Final contouring plan, rehabilitation and land management;**
 - iii. Demarcation of surface water catchments; excavation pit hydrology and water balance;**
 - iv. Revegetation and landscaping; and**
 - v. Ongoing monitoring requirements.**
- s. Prior to the issue of an excavation licence a Soil and Water Monitoring Program, including methodology, periodic sampling and analysis by an independent laboratory, shall be submitted and approved by the Chief Executive Officer in consultation with the Department of Environment and Conservation and Department of Water, incorporating:**
 - i. Monitoring of removed material, irrespective of whether the excavation area is within a location identified as 'high risk' of containing acid sulphate soil material or there is an approved ASSMP; and**
 - ii. Monitoring of water quality retained within on-site excavations;**
 - iii. Identify the highest known groundwater level in proposed excavation Stage A;**
 - iv. A Catchment Management Plan for Stage 1;**
- t. Prior to the issue of an excavation licence the applicant is to submit a detailed Dust Management Plan to the satisfaction of the Chief Executive Officer;**
- u. Top soil from the excavated areas shall be stockpiled and used where applicable in the rehabilitation process;**
- v. All stormwater shall be retained on site and no discharge of pit-water shall occur without prior approval from Chief Executive Officer;**
- w. Appropriate dust suppression measures shall be taken at all times where any operation on the site is likely to generate a dust nuisance to nearby residents, to the satisfaction of the Chief Executive Officer;**
- x. Internal access road shall be constructed to a standard that minimises dust emission from machinery and traffic, to the satisfaction of the Chief Executive Officer;**
- y. Access shall be via Yalyal Road and Reserve Road only;**
- z. The operations shall comply with the requirements of the Environmental Protection (Noise) Regulations 1997 in respect to noise but, notwithstanding, the operations to have due regard to the health and amenity of any person in the vicinity;**

- aa. The development shall comply with the provisions of Council's Town Planning Scheme No 6, By-law Relating to Extractive Industries, Health Act 1911, Building Code of Australia and any other relevant Acts, Regulations, Local Laws and Council Policies, except where varied by this approval;
- bb. All vehicle loads leaving the site shall be fully covered and secured prior to leaving the site to prevent the spread of material;
- cc. A maximum of four (4) single truck movements are permitted on a daily basis;
- dd. The hours of operation shall be limited to:
Monday to Friday 0700hrs to 1800hrs
Saturday 0730 to 1700hrs
Sunday and Public Holidays not permitted
Any variation to these times requires written approval from Council;
- ee. Excavation for the extractive industry shall not occur in the following areas:
 - i. Within 100 metres of a boundary of any land not owned by the proponent or Planning Consent holder;
 - ii. Within 20 metres of any land affected by a registered grant of easement;
 - iii. Within 40 metres of any designated water course;
 - iv. Within 500 metres of any house;
 - v. Below the level of winter groundwater table; and
 - vi. Within 40 metres of any road or road reserve.
 - vii. Below 6m from the natural ground level.
- ff. Upon decommissioning of each pit, rehabilitation shall take place in accordance with the approved plan using the stockpiled topsoil and replanting of appropriate local native species as recommended by the Chief Executive Officer;
- gg. The maximum area of pit being worked at any one time shall be one (1) hectare;
- hh. Rehabilitation of each pit shall include surface water control measures on all pit faces to prevent gully erosion, and final batters to be graded to provide safe entry and exit slopes should access to any standing water within the pit e required or accidentally occur;
- ii. Materials imported for rehabilitation or other purposes shall be certified free of dieback or other plant diseases;
- jj. Any amendments or variations to the rehabilitation or land management plan associated with the excavation shall be approved in writing by the Chief Executive Officer;
- kk. All static and other equipment will be located on the floor of the quarry to provide visual and acoustic screening;
- ll. No trucks are to be parked on any public road after hours;
- mm. An annual report shall be submitted to the Chief Executive Officer prior to 30 June each year that includes:

- i. The progress of excavation;
- ii. Depth to groundwater from each pit floor;
- iii. The amount of materials extracted;
- iv. Monitoring program results and findings;
- v. Progress of rehabilitation;
- vi. Contingency actions and outcomes; and
- vii. Community complaints and responses.

Failure to submit the annual report prior to the close of business 30 June each year will result in the immediate suspension of the excavation licence.

- nn. If the development, the subject of this approval, is not substantially commenced within a period of twelve months from the date of the approval, the approval shall lapse and be of no further effect;
 - oo. Development and operation shall occur in accordance with the Excavation Management Plan submitted with the application for planning approval, unless specified otherwise in this approval;
 - pp. Breach of any conditions may result in cancellation of this approval;
 - qq. The approval of Main Roads WA may be required in regard to the egress and ingress to the Great Northern Highway;
 - rr. Materials extracted from the site must not exceed 100,000 tonnes per annum. A record of each year's output must be kept on the site and must be provided to Council at any time upon request;
 - ss. Stockpiles will be located on the floor of the pit to reduce visual impact;
 - tt. There will be no processing of materials on site. Materials shall be stockpiled or directly transported for use;
 - uu. No water is to be removed from Yalyal brook.
2. Delegate authority to the Chief Executive Officer to issue an excavation licence for sand and gravel at Lot 51 Reserve Road, Muchea in accordance with the planning consent specified in 1. Above, on satisfaction of conditions e, f, g, h, i, j, k, l, m, n, o, p, q, r, s and t.

Advice Note:

- 1. Should an Applicant be aggrieved by a decision of Council, the State Administrative Tribunal can be requested to review the decision. Such a request should be lodged within twenty-eight (28) days of Council's decision.
- 2. The Department of Environment and Conservation may require a permit for the clearing of native vegetation.

THE SUBSTANTIVE MOTION WAS PUT AND DECLARED CARRIED 4/2
7.57PM

AMENDMENT

Moved Cr Mackie/ seconded Gibson

1. That the word '*crushing*' be deleted from recommendation h.
2. That an additional point be included under recommendation l. and after point i. as follows:
 - ii. *that the samples be taken from the site by independent qualified persons;*
3. That recommendation mm. be reworded as follows:

“mm. Failure to submit the annual report prior to the close of business 30 June each year will result in the immediate suspension of the excavation licence.”

**THE AMENDMENT WAS PUT AND DECLARED CARRIED 6/0
AND FORMED PART OF THE SUBSTANTIVE MOTION**

7.40PM

Background

Council's consideration is required for the proposed extractive industry and excavation licence for sand and gravel at Lot 51 (RN 451) Reserve Road, Muchea.

Following the consultation period, the applicant sought for the application to be deferred from determination by Council. At the June 15, 2011 Ordinary Council Meeting Council resolved:

“That the motion lay on the table.”

The Officer's Recommendation to Council for the June 15, 2011 Ordinary Council Meeting was as follows:

“That Council refuses the proposed extractive industry for sand and gravel at Lot 51 (RN 451) Reserve Road, Muchea for the following reasons:

- 1. The proposal does not meet the objectives of the zone “to allow for the extraction of basic raw materials where it is environmentally and socially acceptable”.*
- 2. The proposal does not meet the requirements of the Landscape Protection Special Control Area of the Shire of Chittering Town Planning Scheme No 6.*
- 3. The proposal does not meet the requirements of the Water Prone Special Control Area of the Shire of Chittering Town Planning Scheme No 6.*
- 4. The proposal does not meet the objectives and preferred development under Clause 5.4 of the Shire of Chittering Local Planning Policy No 10 Basic Raw Materials and Extractive Industries.*
- 5. The proposal does not meet the aims and objectives of the Shire of Chittering Local Biodiversity Strategy as it will require the high disturbance of natural vegetation which is mapped as “High Conservation Value” on the subject property.*
- 6. The proposal will cause dust and noise nuisance with the use of Reserve Road, as stated by the submissions received.”*

Following this, the applicant has undertaken modifications aiming to resolve issues and concerns raised by the agencies and Council. The proposal includes the following:

- Planning consent is sought for ten (10) years;
- Subject property is 155.39ha;

- Estimated sand reserve on site between 2.4 million cubic metres and 4.4 million cubic metres of which 600,000 cubic metres at depths up to 17m has been identified as resource quality;
- Previous gravel extraction has occurred on site;
- Previous extraction at depths of 2m has been undertaken on the site.
- Proposed excavation for sand is 5m and 2m for gravel;
- No excavation below water table;
- Site ranges from 80m AHD at the southeast corner and 145m AHD in the northwest;
- Yalyal Brook flows east to west along the northern boundary (neighbours property) of the subject property;
- According to a study in the report, Yalyal Brook flows at 3.5million litres a day;
- A fauna survey uncovered a number of bird species with some identified as threatened species;
- Flora survey identified at least one (1) priority three species;
- Approximately 50% of the property is previously cleared;
- Access to be via Reserve Road from Yalyal Road;
- All water supply proposed to be obtained from Yalyal Brook;
- Proposed workforce of 2 to 3 persons.

All other relevant information including dust management, water management, dieback management are contained in the attached Excavation Management Plan (EMP).

The amendments made to the original proposal include the following:

- The EMP has been amended to exclude any areas containing native vegetation from excavation;
- The EMP has been amended to include a 20m vegetation buffer in accordance with the Department of Environment and Conservation's (DEC) suggestion;
- Inclusion of a Weed Management Programme in accordance with the DEC suggestion;
- Water will now be extracted from a licensed bore and not from Yalyal Brook on recommendation of the Swan River Trust.

Consultation

The application was advertised in accordance with Clause 9.4.3 of the Scheme. An advertising sign at the property and advertisement in the local newspaper in was undertaken as well as letters for comment to affected landowners and relevant agencies. Due to minor amendments made to the revised application, further public consultation was not undertaken.

The submissions have been tabled in the attached Schedule of Submissions.

Statutory Environment

State: Mining Act 1914

As part of the consultation period it was noted by the Department of Mines and Petroleum that a possible conflict with a tenement subject to the Mining Act could occur as a result of this proposal. The applicant has provided a letter from the tenement holder as part of their revised proposal.

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:

To preserve productive land suitable for grazing, cropping and intensive horticulture and other compatible productive rural uses in a sustainable manner;

To protect the landform and landscape values of the district against despoliation and land degradation;

To encourage intensive agriculture and associated tourist facilities, where appropriate;

To allow for the extraction of basic raw materials where it is environmentally and socially acceptable.

The western half of the property falls within the Landscape Protection Special Control Area:

6.2 LANDSCAPE PROTECTION AREAS

6.2.1 *The Landscape Protection Areas are delineated on the Scheme Map. Planning Approval is required for any development within the Special Control Area.*

6.2.2 Purpose

- (a) To secure the areas delineated on the Scheme Map from undue subdivision and development that would detract from the landscape value of the rural environment;*
- (b) To conserve and enhance the character of the significant landscape area; and*
- (c) To ensure land use and developments are compatible with the landscape values.*

6.2.3 Landscape Areas

The Landscape Protection Areas are:

- (a) The Chittering Valley Landform System: for the protection of the Brockman River Catchment its biodiversity and the drainage pattern and land degradation problems;*
- (b) The Gingin Scarp: for the protection of the landform against denudation, water quality (nutrient export) and erosion;*
- (c) The northern uplands: for the agricultural quality of the undulating landforms and rural production.*

6.2.4 Planning Requirements

In dealing with an application for Planning Approval, the Local Government will not support:

- (a) A dwelling or outbuilding on any ridgeline as may be prominently visible from any public road or which may adversely affect the aspects of neighbouring dwellings;*

- (b) *Land uses which are not related to the general objectives of the zone;*
- (c) *The storage or keeping of non-agricultural vehicles or materials on the land as may be visible from any public road;*
- (d) *The removal of any natural vegetation from any ridgeline;*
- (e) *The removal or lopping of trees other than for-*
 - i. *fire fighting or fire protection purposes;*
 - ii. *the removal of dead or dying trees;*
 - iii. *clearance for power lines, emergency access, emergency works by a public authority, sight lines and traffic safety on roads;*
 - iv. *if the vegetation is posing a risk to public safety;*
 - v. *the vegetation is part of an area planted for fodder, timber plantation, or any other crop;*
 - vi. *in association with the establishment of a Building Envelope.*

The Local Government may require, where appropriate, as a condition of any planning approval, additional planting of vegetation to be undertaken to ensure no net loss of vegetation or to repair any degraded landscape.

6.2.5 Relevant Considerations

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

- (a) *The statement and the nature of the key elements of the landscape and its character;*
- (b) *The conservation and enhancement of the landscape values;*
- (c) *The impact of any buildings and associated works on the landscape due to height, bulk, colour, general appearance and the need to remove vegetation;*
- (d) *The requirement for all roofing of any building to be of a non-reflective nature;*
- (e) *A change of land use where in the opinion of the Local Government the proposed development may cause a deterioration of the landscape value and/or cause an adverse effect(s) on the environment.*

6.2.6 Referrals 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 south-western edge of the property falls within the Water Prone Special Control Area:

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 proposed extractive industry use is defined under the Scheme as:

“means an industry which involves the extraction, quarrying or removal of sand, gravel, clay, hard rock, stone or similar material from the land and includes the treatment and storage of those materials, or the manufacture of products from those materials on, or adjacent to, the land from which the materials are extracted, but does not include industry-mining.”

The proposed extractive industry use is an ‘A’ use in the Zoning Table:

“means that the use is not permitted unless the Local Government has exercised its discretion by granting Planning Approval after giving special notice in accordance with clause 9.4.”

The proposal is for the extraction of basic raw materials. The following clause of the Scheme applies:

5.16 BASIC RAW MATERIALS

- (a) *Extraction of essential materials for roads and construction are to be permitted in areas where they will not adversely affect living environments, the landscape quality or contribute to land degradation problems during and after operations;*
- (b) *Extraction of basic raw materials within the rural zones is to be managed in accordance with best industry practices including consideration of end use and rehabilitation at time of decommission;*
- (c) *Appropriate buffer areas are to be applied to protect both the extractive operations as well as the living and agricultural environment in nearby areas;*
- (d) *Council will not support development within those buffer areas, which may be detrimental to the efficiency of the industries. This is to protect the basic raw materials precincts from development that may compromise its operations.*

Policy Implications

State: Statement of Planning Policy No 2.4 Basic Raw Materials

The proposal is not identified as a “Priority Resource Location” or “Key Extraction Area” in the Policy. The proposed extractive industry does not have any state significance.

Statement of Planning Policy No 4.1 State Industrial Buffer Policy

It is deemed the proposal involves the need for an off-site buffer. An extractive industry land use is subject to this Policy. As stated in this Policy, an off-site buffer can be established provided a number of criteria have been met to the satisfaction of the Department of Planning. Further to the buffer requirements of this Policy, Council also stipulates buffer requirements under Local Planning Policy No 10.

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

Guidance Statement No 3 is developed by the Environmental Protection Agency (EPA). Appendix 1 of the Statement sets out the required separation distances between Industrial and Sensitive Land Uses. There are four (4) categories of Extractive Industries in the Appendix. The required separation distance for sand is 300-500 metres. There is no specified separation distance for gravel extraction.

Local: Local Planning Policy No 10 Basic Raw Materials and Extractive Industries

It is deemed the applicant has provided sufficient details subject to the Policy.

Section 5.4 of the Policy applies:

5.4 Preferred Development

- a) *Council prefers extractive industries that:*
 - i) *are located south of the Bindoon Townsite*
 - ii) *do not involve prime agricultural land*
 - iii) *cater for basic raw material needs within the Shire of Chittering*
 - iv) *are situated within areas identified in the WAPC's State Planning Policy No. 10 Basic Raw Materials*
 - v) *are more than 1000m from the nearest house*
 - vi) *do not require the management of acid sulphate soils*
 - vii) *have direct access to Brand or Great Northern Highway*
- b) *Subject to a) above, Council will not approve extractive industries that:*
 - i) *are situated in a visually significant location, such as on a ridge or along an unscreened section of regional or tourist road*
 - ii) *involve major disturbance of high value remnant bushland or natural areas, following detailed environmental assessment*
 - iii) *remove material below the winter groundwater table*
 - iv) *are located on any lot where dieback is present*
 - v) *are situated within 500m of the nearest house*
 - vi) *are located in the Chittering Valley or require access from Chittering, Chittering Valley, Julimar, Blue Plains or Maddern (North) Roads.*

Section 5.4b) of this Policy states which locations/scenarios Council will not approve extractive industries. As part of the revised proposal, the applicant has addressed many of the issues relating to this Section, in particular 5.4b) ii).

The current proposal does not meet some of the items under Section 5.4a) of the Policy. The main concern of this Section that has not been adequately addressed is 5.4a) vii). It is unclear as to what measures the applicant has proposed for the use of Reserve Road and Yalyal Road.

Financial Implications

Nil

Strategic Implications

Local: Shire of Chittering Local Planning Strategy 2001-2015

The subject property is identified on the Strategy Map to support for Rural Retreat development. The Strategy Map also shows the Perth-Darwin National Highway to intersect the property however recent correspondence from Main Roads confirms this alignment has changed and no longer affects the property.

Currently the property is an Agricultural Resource zone and the following section applies:

8.8 AGRICULTURAL RESOURCE AREA

8.8.1 Description/Location

The majority of the agricultural land falls into this category with the more productive areas being in the eastern and northern parts of the Shire. Land to the west, mainly on the Dandaragan Plateau and Ellen Brook palusplain are less productive where there are the deeper leachable sands. On the lower plains, waterlogging constricts the full capacity of the land for pasture.

The heavier soils are associated with the better class of grazing, cropping and horticulture activities.

Lack of water prevents the better land for more intensive and profitable agriculture. When irrigable water becomes available, the land has a high capacity to convert to intensive agriculture.

8.8.2 Aims

To maintain agricultural lands for primary productive purposes;

To protect and improve the natural environment, including the landscape quality of the land.

To facilitate the conversion of suitable land, to intensive agriculture based upon appropriate soils and irrigable water supplies;

To prevent the loss of productive land to non-agricultural purposes;

To allow agro-tourism and eco-tourism to develop in the rural areas;

To allow for the subdivision of non-productive land or areas of vegetation worthy of preservation in sustainable lot sizes under conservation covenants in accordance with WAPC Policy.

To protect and revegetate streamlines to provide for biodiversity corridors.

The proposed is for the extraction of basic raw materials:

8.9 PRIMARY BASIC RAW MATERIALS AREAS (Figure 9)

8.9.1 Description/Location

The main area for basic raw materials is the lower part of the Shire although there are numerous small pits for gravel and sand throughout the rest of the Shire.

Extraction of essential materials for roads and construction are to be permitted in areas where they will not adversely affect living environments, tourism, the landscape quality or contribute to land degradation problems during and after operations.

8.9.2 Aims

To manage the extraction of basic raw materials within the rural zones in accordance with best industry practices including consideration of end use and rehabilitation at time of decommission;

To ensure appropriate buffer areas are applied to protect the extractive operations as well as the living or agricultural environment in nearby areas.

Shire of Chittering Local Biodiversity Strategy 2008:

Figure 5 of Part 2 in the Strategy indicates the subject property to contain “High Conservation Value” with Good to Very Good vegetation condition, as per Figure 6 in Part 2, of the native vegetation covering approximately 50% of the property. Figure 5 also indicates the property to contain “vegetation complexes protected at less than 10% regionally”.

Figure 7 of Part 2 in the Strategy identifies the subject property to contain “Local Ecological Linkages”.

Site Inspection

Site inspection undertaken: Yes

Triple Bottom Line Assessment

Economic Implications

The proposal could provide the opportunity for local employment and provide sand and gravel material for the locality. It could also be viewed during the operation of extractive industry approval neighbouring properties may be impacted by the use of the local roads for heavy haulage. Submissions raised indicate the heavy haulage use would devalue properties using Reserve Road for access.

Social Implications

Based on the submissions received from the public, the proposal may impact negatively upon landowners in the locality. The submissions raised a number of concerns specifically relating to the increase in traffic of heavy haulage on the local road. This was raised in most submissions due to Reserve Road requiring upgrading and sealing to be suitable for the heavy haulage. Use of this road could cause noise and dust nuisances to landowners in the locality and detract from the rural amenity.

Environmental Implications

The revised application submitted has addressed many of the concerns raised in the consultation period and under the Scheme and policies. The main concerns related to the impacts on Yalyal Brook and the impacts on the remnant vegetation on the property. The applicant has submitted the revised application, which has removed the use of water from Yalyal Brook in place of a licensed bore and the applicant has proposed to implement a 20m buffer from remnant vegetation. These modifications have met DEC requirements and would address some of the concerns raised by the public.

Comment

The outlined reasons for refusal are included provided in the Officer's Recommendation to Council for the proposed Extractive Industry and Excavation Licence. Please be advised that these were not considered by Council but withdrawn from the Agenda by the applicant. As previously outlined, the following additional information and/or changes have been provided to the Excavation Management Plan:

- The EMP has been amended to exclude any areas containing native vegetation from excavation;
- The EMP has been amended to include a 20m vegetation buffer in accordance with the Department of Environment and Conservation's (DEC) suggestion;
- Inclusion of a Weed Management Programme in accordance with the DEC suggestion;
- Water will now be extracted from a licensed bore and not from Yalyal Brook on recommendation of the Swan River Trust.

However, it is also necessary to determine whether the reasons for refusal have been adequately addressed by the applicant. These are outlined and discussed below.

1. *The proposal does not meet the objectives of the zone "to allow for the extraction of basic raw materials where it is environmentally and socially acceptable".*

Comment: The socially acceptable nature of the proposal is questionable based upon the submissions received during the initial advertising period. Many complaints arose regarding dust and noise nuisance potential from Reserve Road. It is believed that these claims are substantiated given the road is currently gravel and includes two sharp corners. The intersection of the road with Great Northern Highway would also be undesirable for use by trucks, given it has a small left turning lane and no turning bubble for those turning right onto Reserve Road. It is recommended that Council require a Traffic Management Plan outlining the upgrade requirements for Reserve and Yalyal Roads, given the likely impact the use of these roads is to have on the neighbouring rural residential uses. This should ensure that the proposal remains socially acceptable.

With regards to environmentally acceptable, the applicant has excluded high conservation value remnant vegetation from the extraction areas. However, the proposal still shows excavation to the edge of the high conservation value area with no buffer. Additional advice sought from the Landcare Group substantiates claims of a possible "Edge Effect", whereby dust from extractive industry can impact upon vegetation where it is directly adjacent. A similar effect exists for gravel roads. With the exception of outlining dust control as necessary on the property and roads used for transport, no further information is provided. It is recommended that a Dust Management Plan be provided by the applicant, as well as further evidence detailing justification regarding excavation to the edge of high conservation value remnant vegetation for Stages 2 and 3. At this time, it is not recommended that approval is issued for Stages 2 and 3, as excavation issues have not yet been fully resolved.

The location of Stage 3 is a concern given the high conservation valued area that needs to be preserved in accordance with the Shire of Chittering Local Biodiversity Strategy and the local biodiversity linkages through this area. It is noted that the applicant had identified the required buffer in consultation with the Department of Environment and Conservation (DEC). However, based on the preservation of the high conservation valued area, it is recommended that Council does not support Stage 3 for the area to be included for future extraction.

Similarly Stage 2 has also been identified as the local biodiversity linkages and therefore should be protected from extractive industry as this will have an adverse implication to the environment. Therefore it is also recommended that no extractive industry is to be permitted in stage 2.

If the above issues are addressed, it is believed that the proposal can be considered socially and environmentally acceptable.

2. *The proposal does not meet the requirements of the Landscape Protection Special Control Area of the Shire of Chittering Town Planning Scheme No 6.*

Comment: Based upon site inspection, the site is not considered to be visually significant, even though it is part of the Gingin Scarp. Extractive industry does occur on other parts of this scarp within the Landscape Protection Special Control Area. Furthermore, distance from public roads (excluding Yalyal Road) ensures that the proposal is not easily viewed. Whilst the proposal will result in the removal of some trees, these are singular and not part of the remnant vegetation. It should be noted that revegetation of the site is proposed at the completion of excavation, with seeds collected on-site.

3. *The proposal does not meet the requirements of the Water Prone Special Control Area of the Shire of Chittering Town Planning Scheme No 6.*

Comment: Detailed review of the requirements of the Water Prone Special Control Area has revealed that only a small portion of the land, which is outside of the extraction area, is included in the Ellen Brook Palusplain). As such, the requirements relating to this Special Control Area are not applicable to the proposed extractive industry and excavation licence.

The original application proposed extraction of surface water from Yalyal Brook for the operations. The applicant after discussion with the DEC and Swan River trust submitted a revised application proposing for an approved licensed bore to be used for all the operations. This mitigates the impacts on Yalyal Brook and the Ellen Brook Catchment. It is advised however that a Catchment Management Plan be implemented as per Clause 6.3.3(f) of the Scheme to ensure all operations on the site have been dealt with accordingly. The provision of a Catchment Management Plan should address any concerns of leaching and surface water runoff into Yalyal Brook and its catchment system.

4. *The proposal does not meet the objectives and preferred development under Clause 5.4 of the Shire of Chittering Local Planning Policy No 10 Basic Raw Materials and Extractive Industries.*

The proposal does not meet the preferred development criteria for basic raw material extraction due to the following:

- The land is not identified within the WAPC State Planning Policy No.2.4 Basic Raw Materials;
- The nearest house is within 1km. Stage 3 is fully included within the 1km buffer to the nearby residence and Stage 2 would be partially impacted if a 1km buffer was imposed;
- It is not confirmed whether the property has acid sulphate soils or not in preliminary works.

However, it does meet Council's "will not" approve criteria outlined in Section 5.4 b) of the policy, as evidenced by the following:

- It is not located in a visually significant location.
- Does not involve major disturbance of high value remnant bushland, with the exception of possible “Edge Effect”;
- It will not remove material below the winter groundwater table, as outlined in the EMP;
- No dieback is present on the lot, as outlined in the EMP;
- No house is situated within 500m of the extraction, as buffers have been included within the EMP; and
- The proposal is not located in the Chittering Valley, nor will require access from any roads prohibited for transporting from extraction sites.

Based on the above, the proposal still does not meet Council's preferred development criteria outlined in 5.4 a) of Local Planning Policy No.10. Council needs to determine that if the applicant has met the “will not” criteria outlined in Section 5.4 b) of the Policy.

5. *The proposal does not meet the aims and objectives of the Shire of Chittering Local Biodiversity Strategy as it will require the high disturbance of natural vegetation which is mapped as “High Conservation Value” on the subject property.*

The revised application has removed all excavation within remnant vegetation areas on the property. The disturbance of the vegetation due to the proposed activities on site however may still be present due to the likely dust emissions onto the existing vegetation adjoining the excavation areas and the possibility of impact on groundwater due to the use of a licensed bore for all operations. Discussions with the Landcare Group further substantiate the environmental impact of excavation to adjoining vegetation, mostly relating to dust. It is recommended that Council impose a condition for the applicant to establish a buffer from excavation to existing vegetation and that Stage 2 and 3 are not issued approval until such time as additional information is provided justifying that excavation will not impact high conservation value remnant vegetation.

6. *The proposal will cause dust and noise nuisance with the use of Reserve Road, as stated by the submissions received.”*

The proposed access route of Yalyal Road and Reserve Road to gain access to the Great Northern Highway requires detailed assessment, given the likely dust and noise nuisance generated. There have been no changes to the matter of access as part of the revised application. The issue lies with the current alignment of Reserve Road having sharp bends which is considered to be unsuitable for heavy haulage use. Furthermore, Reserve Road is currently unsealed and with the use of this road for heavy vehicle will require the ongoing maintenance and upgrading.

The Shire's Technical Services advised that the applicant provide Council with a more detailed plan for the upgrade and maintenance of Reserve Road prior to any excavation commencing. It was also advised that the applicant need to provide additional details as to the types of vehicles used, the consideration on the speed limit would need to be reduced for safety of other road users and further assessment of the sharp bends in Reserve Road for its suitability of heavy haulage use.

9.1.4 Proposed carpark and picnic ground – Reserve 38837 Great Northern Highway, Chittering*

Applicant	Ellen Brockman Integrated Catchment Group on behalf of the Shire of Chittering
File ref	A10070
Prepared by	Brendan Jeans, Senior Planner
Supervised by	Azhar Awang, Executive Manager Development Services
Voting requirements	Normal
Documents tabled	Nil
Attachments	1. Locality Plan (1 page) 2. Application Details (8 pages)

SUBSTANTIVE MOTION / COUNCIL RESOLUTION – 090612

Moved Cr Mackie / Seconded Cr Gibson

That Council endorse the proposed carpark and picnic ground concept at Reserve 38837 Great Northern highway, Chittering subject to securing the necessary funding.

Advice Note:

No allocation has been made in the Shire of Chittering 2012/13 budget.

THE SUBSTANTIVE MOTION WAS PUT AND DECLARED CARRIED 6/0
7.59PM

OFFICER RECOMMENDATION

Moved Cr Mackie / Seconded Cr Gibson

That Council endorse the proposed carpark and picnic ground at Reserve 38837 Great Northern highway, Chittering subject to securing the necessary funding.

AMENDMENT

Moved Cr Norton / Seconded Cr Mackie

That the word ‘concept’ be included after the words ‘picnic ground’ and an advice note be included as follows:

“Advice Note:

No allocation has been made in the Shire of Chittering 2012/13 budget.”

**THE AMENDMENT WAS PUT AND DECLARED CARRIED 6/0
AND FORMED PART OF THE SUBSTANTIVE MOTION**
7.59PM

Background

Council’s consideration is requested for the development of a carpark and picnic area on Reserve 38837 Great Northern Highway, Chittering.

Submitter	Submission Comments	Applicant Response Comments	Officer Response Comments
Department of Minerals and Petroleum	<ol style="list-style-type: none"> 1. The application conflicts with access to minerals under the Mining Act. 2. The westernmost corner of the proposal area is located in an area that is highly prospective for titanium-zircon mineralization (mineral sands), which is covered by a Mining Act tenement. 3. The registered tenement holders object to taking of sand because it would potentially sterilise or consume mineral sands that are likely to occur within it. 4. The Department cannot support the grant of the extractive industry over the area marked 'Prospective Zone' (attached plan) without appropriate measures being taken to ensure any titanium-zircon mineralization is not also removed without authorization under the Mining Act. 5. The registered tenement holders have proposed to negotiate with other parties. 	Noted	<ol style="list-style-type: none"> 1. Noted. 2. Noted. 3. Noted. The Applicant has submitted a document from the Tenement holder with the revised application stating no objection to the proposal. 4. Noted. Refer to comment above. 5. Noted. Refer to comment 3.
Department of Water	<p>The Department recommends the following:</p> <ol style="list-style-type: none"> 1. The site is within the Swan River System Surface Water Area, proclaimed under the Rights in Water and Irrigations Act 1914, where they may be a requirement to obtain a licence for the use of surface water. The issue of a licence is not guaranteed but if issued will contain a number of conditions including the quantity of water that can be pumped each year. The proponent is encouraged to contact the Department of Water's Swan Avon Region office to discuss water management options. 2. The site is located within the Gingin Groundwater Area. The proposal has identified that water be sourced from Yalyal Brook. The extraction of surface water will require a license from the Department of Water. 	Noted	<ol style="list-style-type: none"> 1. Noted. Further correspondence provided between the applicant and Department of Water as part of the revised application confirms approvals/licences required will be obtained. 2. Revised application stipulates no extraction of surface water from Yalyal Brook will occur.
FESA	No comment.	Noted	Noted
Main Roads WA	<ol style="list-style-type: none"> 1. The details of the application do not provide sufficient detailed information and background study regarding traffic volumes proposed. 2. Reserve Road is not on the Restricted Access Vehicles network which limits the type of vehicle that may be used. 3. The stated vehicle frequency will not provide a major impact to the intersection of Reserve Road and Great Northern Highway. 4. If the vehicle frequency increases from the stated figure, the Reserve Road and Great Northern Highway intersection may need to be upgraded. It may be appropriate that the Shire seeks a contribution from the proponent. 5. The concept that vehicles may access Brand Highway is not currently possible. The northern end of Reserve Road degenerates to a sand track. Use of the Iopollo Road/Brand Highway intersection will not be supported by MRWA. 	Noted	<ol style="list-style-type: none"> 1. Noted. Applicant has stated four (4) truck movements per day is proposed. No study or detailed information supports this. 2. Noted. Applicant has advised type of vehicles used have not been determined. 3. Noted. 4. Noted. Council may impose a road contribution requirement upon any extractive industry approval using local road infrastructure. 5. Noted.
Ellen Brockman Integrated Catchment Group Inc.	<p>Object for the following reasons:</p> <ol style="list-style-type: none"> 1. Impact on the Yalyal Brook and vulnerable Carter's freshwater mussel and other significant freshwater fauna. 2. Impact on the ground and surface water of the Ellen Brook, a priority 	Noted	<ol style="list-style-type: none"> 1. Noted. The extraction of surface water from Yalyal Brook is no longer proposed. All water is to be sourced from a licensed

		<p>catchment for the state government and Swan River Trust. This impact would include salinity risk.</p> <ol style="list-style-type: none"> 3. The lot falls within a "Landscape Protection" zone. 4. The lot falls within two local environmental linkages and a designated HCVA in the Biodiversity Strategy for special protection. 		<p>bore.</p> <ol style="list-style-type: none"> 2. Noted. 3. This has been noted in the report. 4. Noted.
Department of Environment and Conservation		<ol style="list-style-type: none"> 1. DEC recommends proponent undertakes a comprehensive survey to determine presence or absence of Declared Rare Flora on Lot 51 in accordance with EPA Guideline Statement 51 to the satisfaction of the DEC. 2. DEC recommends areas proposed for extracting sand/gravel which encompass areas of remnant vegetation be considered for exclusion from the project to ensure the full feeding resource potential is available for Carnaby's Cockatoo. 3. DEC is not satisfied with the proposed clearing of good quality vegetation. 4. DEC believes project has potential to significantly impact upon a species of national significance under the EPBC Act 1999, namely feeding grounds for Carnaby's Cockatoo. Applicant may require assessment under the EPBC Act. 5. DEC recommends proponent undertakes a fauna survey of remnant bushland in accordance with EPA Guideline Statement No 51 to the satisfaction of the DEC. 6. DEC recommends as a condition of approval the remnant vegetation identified for retention be protected under a conservation covenant. The DEC Covenant Coordinator and National Trust of Australia Covenant Coordinator should be contacted. 7. DEC recommends the proponent establish a fenced off vegetation buffer to ensure no visual impact on the dwelling (500m to east of site) along the length of Lot 51 eastern boundary. 8. DEC recommends the proponent provide more detail on what is the volume of water the project is expected to annually draw from Yalyal Brook and report whether this is sustainable and will not have any adverse environmental impacts to the satisfaction of the Department of Water. 9. DEC recommends proponent fence off and establish 20m vegetation screen buffer along length of Yalyal Brook to protect its riparian zone and water quality from impacts of project. 10. DEC recommends as Yalyal Brook is part of the Ellenbrook Catchment and is priority catchment in Swan River Catchment that the Shire of Chittering seeks comment from Swan River Trust regarding proposal. 11. DEC recommends proponent develop a revegetation plan to establish visual and Yalyal Brook buffers to satisfaction of Shire of Chittering. 12. DEC recommends proponent develop a weed management plan for Lot 51 that is endorsed by the Shire of Chittering. 13. A permit to clear native vegetation may be required under the <i>Environmental Protection Act 1986</i>. 		<p>All comments prior to submission based on revised application have been noted. Consultation between the applicant and DEC has occurred.</p>

	<p>The following comments are in respect to the revised application:</p> <ol style="list-style-type: none"> 1. DEC supports the application of the Shire of Chittering Policy TPS6 – buffer zone to Yalyal Brook in the EMP. However DEC does recommend the EMP include fencing of the creek line and establishing a 20m vegetation screen and buffer along the length of Yalyal Brook to protect its riparian zone and water quality from impacts of proposal. 2. DEC understands Yalyal Brook is a proclaimed waterway and as such a license to take water for the proposed extractive industry project should be applied for from the Department of Water. 3. DEC recommends the proponent provide more detail on what volume of water the project is expected to annually draw from Yalyal Brook and report whether it is sustainable and will not have any adverse environmental impacts to the brook to the satisfaction of the Department of Water. 4. DEC recommends as Yalyal Brook is part of the Ellenbrook Catchment and is a priority sub-catchment in the Swan River Catchment that the Shire of Chittering seek comment from the Swan River Trust. 5. DEC supports the revised proposal to extract in areas of cleared paddock. 	<ol style="list-style-type: none"> 1. Yalyal Brook already has in excess of 20m of vegetation along its length and no excavation will take place within 140m of the Brook. On this basis we believe that a 20m vegetation screen and fencing is not necessary and is onerous. 2. The EMP has been amended so that water will be extracted from a bore and not from Yalyal Brook. It is understood that a license for water use will be required from DoW and shall be pursued by the applicant after approval of the excavation license. 3. As water will now be extracted from a licensed bore and not from Yalyal Brook, this detail information is not required. An application to the DoW for the required license will determine the sustainability of the proposed water use. 4. The Swan River Trust were provided with a copy of the EMP for review. Their recommendations have been taken on board and the EMP amended accordingly. 5. Noted. 	<ol style="list-style-type: none"> 1. Noted. 2. Noted. Water licence for operations will be required prior to issue of an excavation licence. 3. Noted. 4. Noted. Any advice from Swan River Trust shall be advised to the applicant. 5. Noted.
1	<p>Object for the following reasons:</p> <ol style="list-style-type: none"> 1. A large excavation will more than likely impact upon the natural spring fed creek and the surrounding unique environment significantly. 2. A large sand and gravel pit close by will massively impact upon the aesthetic appeal and will devalue our property significantly, estimated by an agent of at least \$150,000. 3. The Reserve Road gravel section is already a road that becomes problematic regularly because of erosion issues and we would be concerned with extra traffic exasperating the issue. 4. With increased activity it will likely increase crime in the area, which may include increase in illegal dumping of rubbish and increased occurrences of break ins and malicious property damage. 5. This project would mean a substantial increase in heavy vehicle usage in the area and because it is in a valley, would be exaggerated to nearby residences. One of the primary attractions of our property is its remoteness and quietness being set back from the main road by some distance and nestled in a valley. 6. It is my understanding that several projects have been proposed and are less likely to succeed in the long term such as residential subdivisions on nearby and adjacent properties which could substantially boost the 	Noted	<ol style="list-style-type: none"> 1. Noted. 2. Noted. 3. Noted. 4. Noted. 5. Noted. 6. Noted. The ‘need’ for basic raw materials within the Shire is considered as part of the assessment.

	<p>value of our property especially as mains power would come closer to our property and road system likely be upgraded. If a proposal for sand and gravel excavation is granted, these outcomes would not be even a remote possibility in the next 15 to 20 years.</p> <p>The minimum recommendations should include the following:</p> <ol style="list-style-type: none"> 1. Liaison with Ti West Joint Venture at Chandala and other agencies in relation to environmental impact studies, compliance programs, rehabilitation programs etc. 2. Plans in relation to minimising damage to aesthetic appeal of area. 3. Plans ensuring road infrastructure is substantially improved to accommodate heavy traffic with minimal impact on local residential traffic. 4. Plans for increasing security in area. 5. Plans minimising noise pollution in area with onsite heavy machinery. 6. Plans to compensate local residences either monetarily or through development (road, power, parks etc) to help compensate for loss of quality of life and economic impact on value of surrounding properties in short and long term. 		<ol style="list-style-type: none"> 1. Noted. 2. Noted. The revised application addresses this. 3. Noted. 4. Noted. 5. Noted. All noise generated shall comply with the <i>Environmental Protection (Noise) Regulations 1997</i>. 6. Noted.
2	<p>The following concerns:</p> <ol style="list-style-type: none"> 1. Maintenance of Reserve Road with added loading from trucks over the distance. 2. Growth on roadside impairing vision of property owners pulling out onto Reserve Road and risk of contact with laden trucks. 3. Time of day for trucks operating and speed limit on Reserve Road. 	Noted	<ol style="list-style-type: none"> 1. Noted. Road maintenance and contributions are requirements of extractive industries using local road infrastructure. 2. Noted. 3. Noted. Operation hours are restricted in all extractive industry operations. Speed limits on public roads are not determined by means of a development application.
3	<p>The following concerns:</p> <ol style="list-style-type: none"> 1. Having maintenance graded this road many times, it's obvious it will not withstand the intense constant weight of loaded trucks. 2. We strongly recommend Reserve Road will require an upgrade to bitumen, including realigning the S bend for sufficient road width to carry the heavy vehicles. 3. Dust control will be impossible. 	Noted	<ol style="list-style-type: none"> 1. Noted. 2. Noted. 3. Noted.
4	<p>Object:</p> <ol style="list-style-type: none"> 1. On the grounds that it will reduce the flow of Yalyal Brook, which terminates onto our land. 	Noted	<ol style="list-style-type: none"> 1. Noted. Applicant shall not extract surface water from Yalyal Brook as part of the revised application.

Lot 51 Reserve
Road Chittering
WA

Excavation Management Plan



26/4/12

Kathryn Kinnear

Bio Diverse Solutions **Page 75**

Item 9.1.4 - Attachment 3

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APPENDICES

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APPENDIX C – STAGING AND SITE MANAGEMENT

1. Introduction

Bio Diverse Solutions was commissioned by Highclere Pty Ltd as Environmental Consultants to prepare an Excavation Management Plan and Excavation Licence Application for Lot 51 Reserve Road, Chittering. This report outlines the field assessment, consultation and analysis undertaken by Bio Diverse Solutions in February 2011 and gives guidance for the management of extractive industries at the site.

This Excavation Management Plan has been completed as per the Shire of Chittering Town Planning Scheme No. 6, Local Planning Policy No. 10, Basic Raw Materials and Extractive Industries.

1.1. Background

Sand and Gravel are scarce in the Shire of Chittering and surrounding districts and a commercial market exists for this type of material. The commencement of basic raw material extraction from the site will provide the Shire of Chittering and beyond with readily available building resources without the need to source from outside the district. Due to the size of the deposit, the operation is seen as a medium to long term opportunity.

This Excavation Management Plan applies to the proposed excavation of sand and gravel on Lot 51 Reserve Road, in the Shire of Chittering, Western Australia. This plan outlines strategies to manage the extraction of sand and gravel on-site through current best industry practices, to reduce environmental impacts from extraction operations and to ensure appropriate buffer areas are applied to protect nearby living and agricultural areas.

The excavation Licence sought is for <100,000 tonnes per year.

Planning consent is sought for 10 years and an Excavation Licence for 5 years.

1.2. Statutory Conditions

This Extraction Management Plan has been prepared for Lot 51 Reserve Road, Chittering to address management and environmental issues for extraction of sand and gravel. This document and the recommendations contained are aligned to the following policies and guidelines:

- Shire of Chittering Town Planning Scheme No. 6, Local Planning Policy No. 10, Basic Raw Materials and Extractive Industries;
- EPA Document No. 3, Separation Distances between Industrial and Sensitive Land Uses;
- "Planning for Bushfire Protection Edition 2" WAPC(2010);
- Bushfires Act 1954;
- Wildlife Conservation Act 1950;
- Environmental Protection (Noise) Regulations 1997;
- Environmental Protection (clearing native vegetation) Regulations;
- Environmental Protection Act 1986;
- Rights in Water and Irrigation Act 1914; and
- State Planning Policy No.2.4 *Basic Raw Materials*.

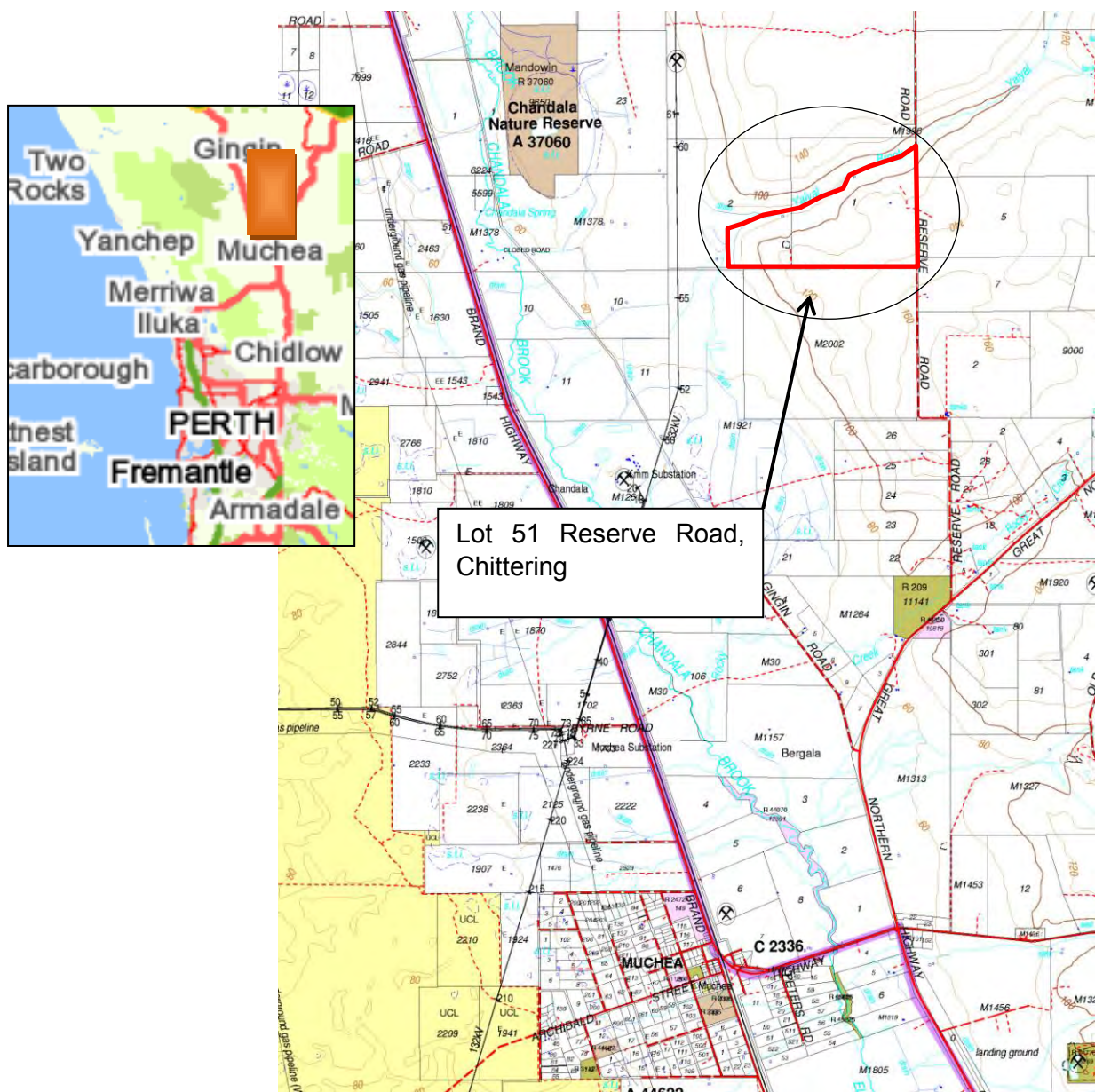
1.3. Site assessment and Consultation

Site assessment was undertaken by Daniel Debunnetat (Bio Diverse Solutions) in February 2011 to prepare this plan. Consultation occurred on site and during the preparation of this plan with the landowner Graham Edwards. Further information for the preparation of this Excavation Management Plan was sourced from previous unpublished reports and government agency databases.

1.4. Location and Ownership

The subject site has been owned for over 25 years by Graham and Janet Edwards of 55 Ashmore Way, Sorrento 6020, Perth. It is located approximately 60km north east of Perth in the locality of Muchea in the Shire of Chittering. The site is approximately 150 ha in total and situated in a rural landscape. Please refer to Figure 1 below – Subject Site Locality and Appendix A Location Map.

Figure 1 – Subject Site Locality



1.5. Description of the Resource

The development proposal involves the extraction of sands and gravel with the construction of internal access roads for heavy machinery and trucks. The sand reserve on the site is estimated to be between 2,400 000m³ and 4,400 000m³ of which 600,000m³ at depths up to 17m has been identified as resource quality. Suitable uses include structural fill on either residential or commercial properties, road bases for upgrading existing roads, and building foundations.

Gravel deposits lie across the centre of the property which are dieback disease free (*Phytophthora cinamomi*) mostly within remnant vegetation areas. Gravel has been previously extracted to depths of approximately 2 metres at two sites on the property. Common use for gravel of this nature is for formed gravel roads which specifically require *Phytophthora* free gravels.

The extraction of gravel or sands is not proposed below the water table to depth to 2 (meters for gravel and approximately 5 metres for sands). Excavation will not occur below the level of the winter groundwater table. The high water table areas (4.9m) will be excluded from excavation via the 100m buffer requirement from adjacent lands (as required by the Shire of Chittering) and groundwater shall not be intercepted at any other excavation depth across the site.

1.6. Aims of Proposal

The aims of the proposal are to:

- Excavate sand and gravel from the property using current industry best practice;
- Reform land surface as closest possible to previous state;
- Revegetate disturbed and reformed landforms with indigenous species;
- Revegetate the northern valley of site adjoining Yalyal Brook with indigenous species; and
- Provide a supply of sands and gravel for development throughout the Shire of Chittering and nearby districts.

1.7. Relation to other plans and documents

Other documents which have been prepared as part of the planning process for the Excavation of Lot 51 Reserve Road include:

- Whelans Town Planning Application for Planning Approval Documentation.
- Lot 51 Reserve Road, Muchea, Initial Gravel & Flora Assessments, Dr Colin D Walker (January 2010).
- Preliminary Geotechnical Investigation and report on the resource at Lot 51 Reserve Road Muchea, Parsons Brinckerhoff Australia Pty Limited (July 2010).
- Gravel and Flora Assessment lot 51 Reserve Road, Dr Colin D Walker (September 2010).
- Additional geotechnical investigation and report on sand resource at Lot 51 Reserve Road, Muchea, Parsons Brinckerhoff Australia Pty Limited (January 2011).

2. Existing Environment

2.1. Climate

Chittering has similar climate to Gingin (27 Km's away) and thus has been described as per Bureau of Meteorology descriptions of Gingin. Gingin experiences a Mediterranean climate, characterised by hot, dry summers and cool to mild, wet winters. These seasons extend into the autumn and spring months, which are transitional periods between the main seasons.

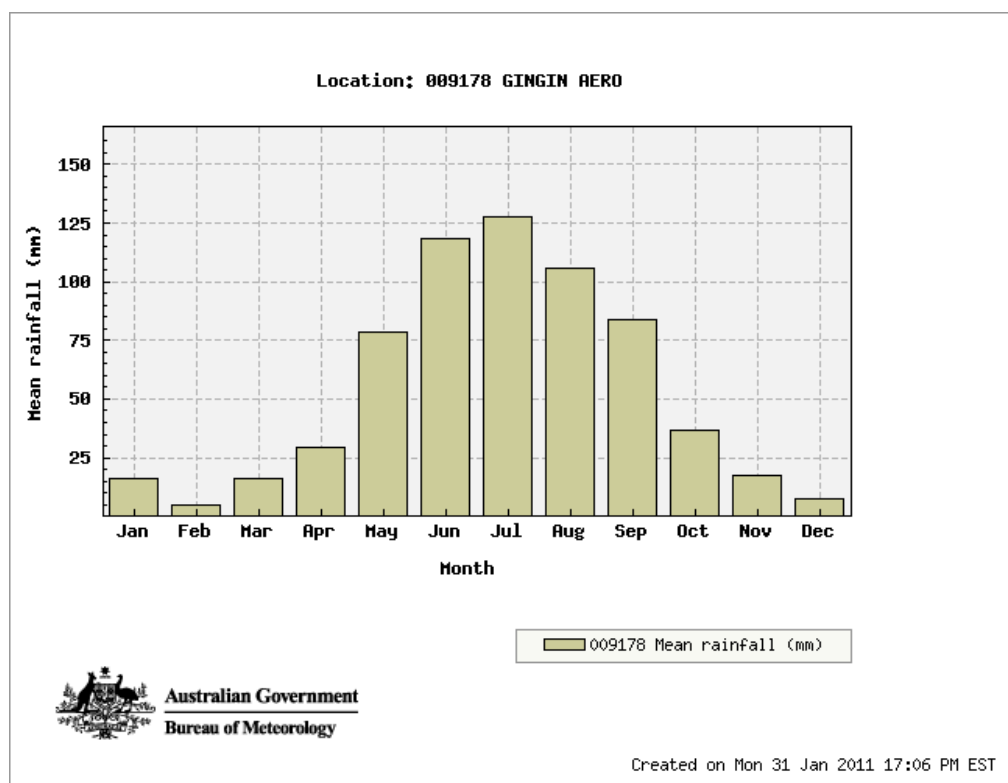
The climate of the region is strongly influenced by the position of the axis of the band of high pressure known as the sub-tropical ridge, and in the warmer months by the development in the easterlies to the north of the ridge and troughs of low pressure near the West Coast. For much of the year the ridge is located to the south allowing the east or southeasterly winds to prevail. During the cooler months the ridge periodically moves to the north allowing cold fronts to pass over the west coast and deliver much of the annual rainfall. Sometimes these fronts interact with tropical cloud bands from the northwest and this can enhance the amount of rainfall produced.

2.2. Rainfall

The annual mean rainfall for the site is 652.4mm which occurs on 75 rain days, approximately 79% falls between May and September. Rain occurs on two days out of every seven on average during winter. Flooding is rare in Gingin, however heavy rain may be produced by strong winter cold fronts or, less frequently, by summer storms or, more rarely, by decaying tropical cyclones. The highest daily rainfall recorded is 95mm (BOM 2011).

In contrast to winter rainfall, the mean summer rainfall is just 28.4mm on an average of 4 rain days. It is not unusual for there to be extended dry periods during the warmer months. Please refer to Gingin Annual Rainfall graph below (Figure 2).

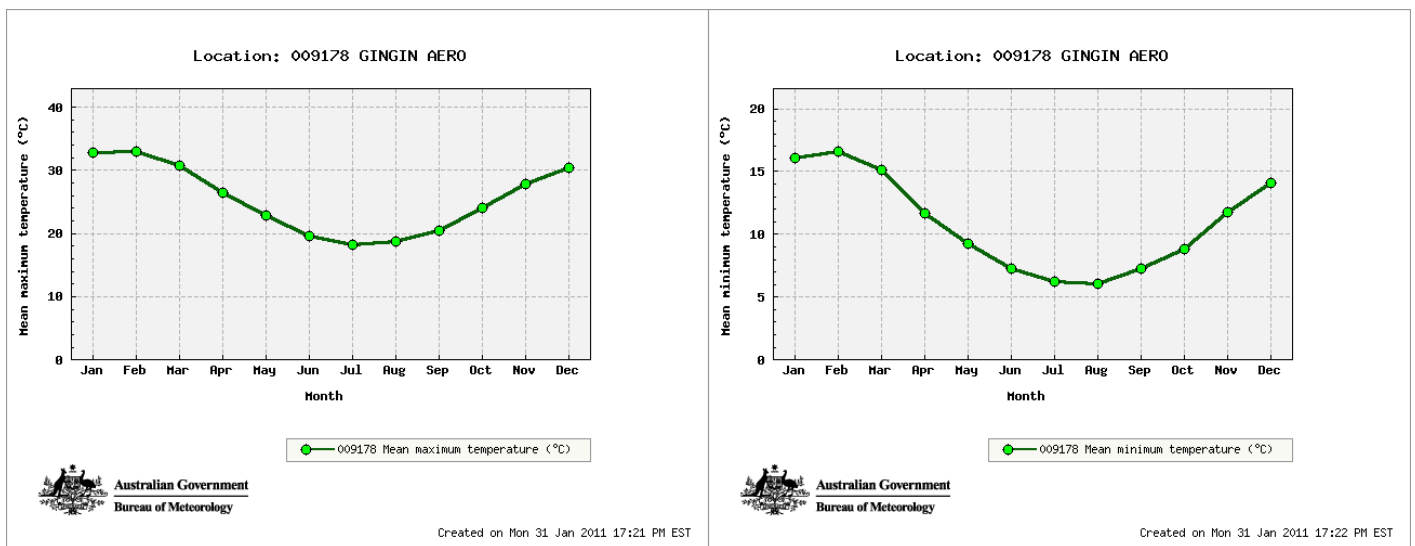
Figure 2 – BoM Average Rainfall for Gingin Station



2.3. Temperature

Mean monthly air temperatures range from 33°C in February to 18.3°C in July. Summer maximum temperatures are strongly dependent upon the arrival time of the reliable sea breezes from the south west. Heatwaves are associated with strong easterly winds and the late arrival or absence of the sea breeze. The highest temperature ever recorded is 46.3°C, however, the temperature exceeds 40°C on only seven days per year on average. The average minimum temperature ranges from just 6.1°C in August to 16.6°C in February. Temperatures below 5°C are not uncommon during any of the winter months. The lowest temperature ever recorded at Gingin is -3.7 (BOM 2011). Please refer to average temperatures below for Gingin, Figure 3.

Figure 3 – Average Temperatures BoM



2.4. Topography

The subject site is located to the west (foothills) of the Gingin Scarp which typically has moderate terrain with gentle valleys. The average slope for the site is calculated between 2.5° and 5.7° with an average of 4.6°. The site slopes in a northwest direction from the highest point of 145m AHD in the southeast corner to 80m AHD at the bottom of the valley bordering Yalyal Brook. The slope decreases with proximity to the Brook. Please refer to Photographs 1 and 2 below and Existing Site Mapping Appendix B.



Photograph 1 – View of valley floor adjoining Yalyal Brook in the southwest of property.



Photograph 2 –View looking west of southern boundary along Yalyal Road.

2.5. Geology and Hydrology

Geological surveying undertaken of the Chittering region indicates the site is from the Quaternary/Cainozoic Period: Laterite-chiefly massive, but includes overlying pisolithic gravel and laterised sand, colluvial soil and undifferentiated sand over laterite of coastal plain includes minor alleviated areas. Soils of the site range from coarse gravel, laterite, light grey medium sand to pale brown sand and silica sands. The site does not require Acid Sulphate Soils Management.

Yalyal Brook flows east to west along the northern boundary of the property. The Yalyal Brook has been monitored historically by Dr Tom Arkley (formerly of Agro Nutritional) for 30 years regularly. The current flow of Yalyal Brook is estimated at 15,750,000 Litres/year (Pers Comms G.Edwards 2011).

2.6. Fauna

A level 1 Fauna survey was undertaken of the site by SMEC (2010), where a number of bird species were present on the property these included:

Australian Wood Duck, Collared Sparrowhawk, Wedge-tailed Eagle, Australian Kestrel, Painted Button-quail, Red-capped Parrot, Common Bronzewing, Carnaby's Cockatoo, Galah, Australian Ringneck, Elegant Parrot, Shining Bronze Cuckoo, Laughing Kookaburra, Sacred Kingfisher, Rainbow Bee-eater, Splendid Fairy-wren, Striated Pardalote, Weebill, Western Gerygone, Western Thornbill, Yellow-rumped Thornbill, Brown Honeyeater, Brown-headed Honeyeater, New Holland Honeyeater, Tawny-crowned Honeyeater, Western Spinebill, Red Wattlebird, Rufous Whistler, Grey Shrike-thrush, Willie Wagtail, Black-faced Cuckoo-shrike, Grey Butcherbird, Australian Magpie, Australian Raven, Tree Martin, Grey-breasted White-eye and Australian Pipit. Kangaroos have been observed on the property, whilst common species of minnows, marron, gilgies and a fresh watermussel are found in the Yalyal Brook.

The Department of Sustainability, Environment, Water, Population and Communities Protected Matters Search Tool identifies one mammal, the Chuditch or Western Quoll (*Dasyurus geoffroii*) with "species or species habitat likely to occur within the area." The Chuditch is considered to be of national environmental significance and is listed as endangered under the Environmental Protection and Biodiversity Conservation (EPBC) Act, 1999.

The species distribution pattern for the Chuditch covers the south-west corner of Western Australia only, with extremities in range extending to Geraldton in the North and Esperance in the East. The Chuditch is associated with Jarrah forest (*Eucalyptus marginata*) vegetation and has been identified as far north as Kalbarri National Park (SMEC, 2010). The likelihood of Chuditch occurrence in the Jarrah marri woodlands (See Section 2.7) is low as the vegetation has been grazed for over 25 years and has limited midstorey and understory vegetation for habitat. (pers Obs D.Debunnetat 2011).

A survey for Carnaby's Cockatoo and other threatened species (listed under the WA Wildlife Act and Environmental Protection and Biodiversity Act 1999) was undertaken over 2 days in October and November 2009 by R.E. & C. Johnstone And T. Kirkby. A "possible – probable" nest hollow for Carnaby's was located in a large Marri paddock tree at 31.30.30.4S, 115.59.10.6E. This tree habitat tree should be avoided with a 20m buffer of excavation/disturbance from it as shown in Staging and Site Management Mapping Appendix C. All other habitat trees located during the survey are confined to the Banksia woodlands in the south east of the property and these areas are not proposed to be disturbed for excavation. Referral to the Department of Sustainability, Environment, Water, Population and Communities is not deemed necessary as no disturbance will occur to Carnaby Cockatoo habitat from this proposal.

2.7. Flora

A detailed vegetation and Phytophthora assessment was undertaken by Dr Colin Walker *BSc PhD MBA* in September 2010 (Walker 2010) where 140 native flora species were at least partially identified including at least one priority three species. Most of the species were found in remnant vegetation in the south and east of the property. Marri-Jarrah was predominantly found over shallow lateritic soils through the centre of the property while deeper sand over laterite soils produced Banksias, Allocasuarinas and Todtiana. Five orchid species were observed over the site, namely *Caldenia flava*, *Diuris corymbosa*, *Leptoceras menziesii*, *Pterostylis vittata*, *Thelmitrya crinata*, and *Leptoceras menziesii*.

The whole site has historically been grazed by cattle (pers comms G. Edwards 2011), with no fencing in place between the pasture and the remnant native vegetation. Signs of disturbance from grazing was evident with minimal midstorey species present and ground cover species regenerating from disturbance (Pers Obs D. Debus 2011).

The Banksia woodland and Jarrah/marri vegetation type was generally in *Good Condition: Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate to it.* (Keighery, 1994). Please refer to Photographs 3 and 4 below.



Photograph 3 – View of Banksia – Allocasuarina Woodland vegetation along Yalyal Road in the south of property.



Photograph 4 – View of Jarrah/Marri vegetation in the south of site.

Assessment by Dr Walker in 2010 on gravel and sands for fungal pathogens (Walker D September 2010), revealed no traces of *Phytophthora*, whilst 5 samples revealed traces of *Pythium*, which was deemed by Dr Walker of minor concern. *Pythium* is regarded as an opportunistic root pathogen that enters dying roots after they have been weakened by other agents such as *Phytophthora* or many other plant stresses. The presence of *Pythium* simply indicates that stresses such as clearing, death of annuals, larger plants dying in old age, are present. Relatively few invasive weed species were observed on site.

Approximately 50% of the property has been cleared for grazing, these areas are generally over sandy soils where a few remnant Marri trees still remain. This vegetation type is considered to be in a “*Completely Degraded*” condition: “*The structure of the vegetation is no longer intact and the area is completely or almost completely without native species*” (Keighery, 1994).

The northern boundary along the Yalyal Brook contains a range of rushes and the Paperbark tree species of *Melaleuca preissiana*, *Melaleuca raphiophylla*, and *Eucalyptus rudis*, though the vegetation lies outside the property boundary. Please refer to Photographs 5 and 6 over the page.



Photograph 5 – View of Yalyal Brook crossing in southwest of site.



Photograph 6 – View of paperbarks along Yalyal Brook.

2.8. Firebreaks and Fire Control

There are existing internal firebreaks around the boundary of the property which are currently in good condition and to the standard of the Shire of Chittering Fire Break requirements. Please refer to Photograph 7 below. Present day fire control of the site is aided by easy access to emergency water from the bordering Yalyal Brook. Water has previously been pumped from the Brook onto the property for irrigation purposes (Pers Comms G.Edwards 2011). Please refer to Photograph 8 below.



Photograph 7 – View of fire break and Yalyal Road.



Photograph 8 – View of Reserve Road crossing Yalyal Brook and water pipe from previous pumping to property.

2.9. Access

Access to the property is presently via Reserve Road, a formed gravel road connecting Great Northern Highway in the south, and Yalyal Road, a lesser gravel road which borders the entire southern boundary of the site. Due to the lack of fencing along the southern border of the property, access runs the length of Yalyal Road. Access off Reserve Road to the east of the site is via unformed gravel.

2.10. Water Supply

The water supply for the subject area is presently from Yalyal Brook bordering the northern boundary, and surface runoff. An old concrete water tank is located upslope of the disused citrus orchard amongst remnant vegetation. Water has previously been pumped onto the property from Yalyal Brook for stock watering and emergency fire fighting purposes. Yalyal Brook is a proclaimed watercourse under the Rights in Water and Irrigation Act 1914.

3. Project Planning

3.1. District Context

The Shire of Chittering's mineral resources consist of predominantly clay, sand and rock and are concentrated in the southern parts of the Shire. Sand and in particular gravel are scarce in large quantities throughout the Shire, especially dieback free. As resources in neighbouring regions become exhausted, demand for Chittering's quality raw materials will increase.

The Extraction of sand and gravel from Lot 51 Reserve Road will assist the Shire of Chittering to cater for basic raw material needs within the Shire. The site is not prime agricultural land, with all extraction areas having low visual impact and within close proximity to the Great Northern Highway.

3.2. Land Zonings and Policies

State Planning Policy No.2.4 – Basic Raw Materials, Shire of Chittering Town Planning Scheme No.6

This policy sets out the matters which are to be taken into account and given effect to by the WAPC and local governments in considering zoning, subdivision and development applications for extractive industries.

SPP2.4 was designed to facilitate the extraction of basic raw materials close to the major markets in the metropolitan region and to avoid sensitive development close to basic raw material resources which could otherwise inhibit extraction of the resource.

Lot 51 is zoned Agricultural Resource under Town Planning Scheme No.6 (TPS6). An Extractive Industry is an 'A' use within this zone, which is a use that is not permitted unless the Local Government has exercised its discretion by granting Planning Approval after publically advertising the proposal.

Under TPS6 the western portion of Lot 51 is subject to a 'Landscape Protection' Special Control Area (SCA), the purpose of which is to conserve and enhance the character of a significant landscape area, in this instance being the Gingin Scarp and its protection against denudation, water quality (nutrient export) and erosion.

This Extraction Management Plan outlines the techniques that will be employed to protect against denudation, water quality and erosion.

There is also a 'Water Prone' SCA over a small portion of the western most area of Lot 51, which relates to the Ellen Brook Palusplain. The purpose of this SCA is to:

- a. *Manage development in areas where there is a 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. *Preclude development and the use of land which may increase the amount of nutrients from entering the surface and/or sub-surface water systems, and'*
- c. *Ensure that wetland environmental values and ecological integrity are preserved and maintained.*

This proposed Extraction Management Plan is considered to be in accordance with the requirements of the Scheme.

Shire of Chittering By-law Relating to Extractive Industries

The Shire of Chittering By-law relating to Extractive Industries sets out the requirement for an Extractive Industry Licence. Included in the By-law are the particulars regarding application, renewal and fee requirements as well as operation and management requirements and penalties.

Shire of Chittering Local Planning Policy No.10 – Basic Raw Materials and Extractive Industries

The Shire of Chittering has prepared this policy to guide decision making with regard to the commercial extraction of basic raw material. The provisions within this policy have been addressed by this Excavation Management Plan.

3.3. Existing Land Use and Assets

Lot 51 Reserve Road has historically been cleared for agriculture and stock grazing. Two locations on the property have been used for gravel extraction in the past (approximately 6-8 years ago), whilst a disused citrus orchard is located to the north east of the property. There is no housing on the property. Please refer to Photographs 8 and 9 below.



Photograph 8 – View of disused gravel pit.



Photograph 9 – View of disused minor gravel pit in north east of property.

3.4. Responsible Authorities

Shire of Chittering

- Issues the Extractive Industries Licence;
- Regulates land zonings in association with the Department of Planning; and
- Has input into the use of roads in the area.

Department of Environment and Conservation

- Oversees all aspects of environmental impact and methods of extraction; and
- Oversees enforcement of the Wildlife Protection Act 1950.

Department of Resources and Industry

- Controls the methods of extraction and safety.

Main Roads Western Australia

- Ensures access roads are trafficable for heavy vehicles.

FESA

- Ensures a sufficient Fire Management is implemented.

Department of Water

- Has control over the management of ground water in the area.

3.5. End Use of property

The short term end use shall be to continue grazing and agricultural pursuits with the long term end use possible subdivision to Rural Retreat lots.

4. Excavation Program

4.1. Excavation and Processing

Excavation will be carried out as a sequence.

1. Topsoil will be removed and stored in low dumps adjacent or within the pits for resspreading during the rehabilitation process. Where possible direct spreading onto a rehabilitation area will be undertaken to avoid long term storage.
2. Overburden will then be removed and either directly transferred to a rehabilitation area or stored in low dumps for later rehabilitation use.
3. Pits will be excavated to depth to 2 meters for gravel and approximately 5 metres for sands.
4. All static and other equipment will be located on the floor of the quarry to provide visual and acoustic screening.
5. Stockpiles will be located on the floor of the pit to reduce visual impact where practical.
6. There will be no processing of materials on site, material shall be stockpiled or directly transported for use.
7. At the end of excavation the floor of the quarry will be deep ripped, covered by overburden and topsoil, and rehabilitated to a constructed soil.

4.2. Staging and Timing

Excavation of the site will occur over 3 stages. Please refer to Appendix C Staging and Site Management Plan. Stage one will proceed from the south west corner of the site encompassing the sands and gravels and will progress eastwards. Stage One will require some clearing of paddock trees.

Stage Two will be predominantly gravel extraction through the centre of the site over existing cleared areas. Areas to the north near Yalyal Brook will produce smaller amounts of sands.

Stage three focuses on the sand and gravel deposits in the east and northeast of the site. The large 300,000m³ sand deposit is located over the cleared area to the south of the gravel deposit and will be targeted first in Stage three. Shallower reserves of sand are found in the far northeast corner of the plot and will be the final areas excavated in Stage three.

Remnant native vegetation areas shall be excluded from all stages of development with the cleared paddock areas utilised for excavation and extraction.

4.3. Hours of Operation

Hours of operation will be:

Monday to Friday	0600hrs to 1800hrs
Saturday	0730hrs to 1700hrs
Sunday and Public Holidays	Closed

4.4. Access, Transport and Security

The quarry will be accessed off Yalyal Road in the South, as work progresses to the north east, Reserve Road shall be used (Stage Three). The property will be fenced along Yalyal Road and repaired where required along Reserve Road. Gates will be erected at access points.

Warning signs will be maintained as required by the Department of Resources and Industry and the Shire of Chittering.

Gate standards are to be as follows:

- Minimum width 3.6 metres; and
- Approved by the Shire of Chittering.

4.5. Equipment and Workforce

No dwellings or permanent structures will be constructed for the purposes of excavation at the site. Machines used will include a bulldozer, front-end loader and trucks for transportation of excavated material and refuelling machinery. A water pump will be required and small pipeline for pumping water from Yalyal Brook to a water tank on site for washdown and firefighting purposes.

No fuel will be stored on site, mobile tankers will be used to refuel machinery.

The workforce required will vary depending on level of operation and market demands, but should consist of no more than 2-3 persons.

4.6. Water Usage

All water required for Dieback washdown bays, dust suppression and firefighting will be sourced from bore water resources and stored in the solitary concrete water tank on site. A permit for extraction will be required from the Department of Water (DoW) and shall be pursued from the owner prior to commencement of extractive industry operations. .

5. Environmental Management Plan

5.1. Surrounding Land Use and Buffers

Existing surrounding land uses are predominantly grazing and broadacre agricultural pursuits with some rural living developments. Three dwellings are within 1km of the excavation site. The closest dwelling is approximately 60m from the lot boundary on Reserve Road to the east of the subject area, this house will be over 500m (buffer) from the proposed excavation site. A “20m Vegetative Buffer” is proposed along the eastern boundary to ensure there is no visual impact to the excavation activities.

One dwelling to the north is 300m from the edge of the property and 500m from the excavation site. A property lies to the south east of the subject area approximately 400m away from the edge of the subject site and 950m from the excavation site.

According to EPA Document No. 3 Separation Distances between Industrial and Sensitive Land Uses, a buffer distance to residential buildings of 300-500m is required for sand and gravel extraction without the use of blasting. The Shire of Chittering TPS 6 document requires a setback distance of 500m. The excavation site complies with this requirement. Please refer to Appendix B Existing Site Map for dwelling locations and Appendix C Staging and Management Map for buffer distances.

A sand quarry currently in use lies approximately 3km's south on Reserve Road.

A “Yalyal Brook Buffer 40m Buffer Zone” from the creekline (as per Shire of Chittering Policy TPS6) has been applied from the creek centreline, with the buffer area shown inside lot 51 Reserve Road cadastral boundary on the Staging and Management Plan Appendix C. The Shire of Chittering also require a 100m setback of excavation from any land not owned by the land owner or consent holder (Shire of Chittering Policy TPS6), this has been applied to all edges of the excavation area.

Note: all buffer distances will be subject to detailed feature survey and the Staging and Management Plan Appendix C is a guide, with accuracy to within 5m.

5.2. Noise Management

Noise is controlled by the Environmental Protection (Noise) Regulations 1997. The Environmental Protection (Noise) Regulations 1997, require that dwellings in non-industrial areas are not subjected to noise levels exceeding 45 dBA for more than 10% of the time, 55 dBA for more than 1% of the time and never exceeding 65 dBA during normal working hours.

Methods of extraction are not expected to be any different to excavation on other quarries in the area and coupled with undulating and shielding landforms and bush, it is not anticipated that noise will be of concern. All workers on site will use correct noise protection equipment when operating machinery.

5.3. Dust Management

Excessive dust has the potential to impact on workers, adjoining land and dwellings. Dust could be a potential problem during land clearing and reinstatement and during excavation. The access roads, turn around areas and excavation pits will be watered as necessary to reduce the generation of dust in the drier months. With the implementation of buffer zones and dust suppression methods, dust should not impact on neighbouring dwellings.

The generation of dust will be minimised by;

- Clearing and reinstating vegetation, topsoil and overburden operations will be confined to the wetter months, April to October, where possible;
- Minimum buffer distances of 300-500 metres to known sensitive premises are anticipated to provide sufficient distance to enable dust to settle;
- Completed sections of the quarry will be rehabilitated as soon as practical to reduce the area of bare soils;
- Continuous supply of water from bore water sources and stored in water tanks; and
- Loads likely to generate dust or sand will be wetted down and/or adequately covered.

5.4. Water Quality

Excavation is one of the few planned uses permitted within Priority Water Resource Areas. The main risk of contamination to waterways is the minor drips that occur during refuelling (removal of hoses etc.). Minor spills are quickly degraded by soil microbial matter. No fuel is proposed to be stored on site, mobile tankers shall be used to refuel site machinery.

5.5. Refuelling

Refuelling from mobile tankers is undertaken on most quarries and mine sites. Loaders, bulldozers and other equipment will be refuelled on site. Soil contaminated by large spills will be removed from site to an approved disposal area. If an incident occurs (i.e. spill or malfunction of equipment) refer to section 5.13 and 5.14 of this document.

The majority of the site is relatively free draining sandy soils and is a model site for water sensitive design to be applied as per Department of Water Sotrmawater Management Manual (2007). No stormwater infrastructure is proposed to be located within the foreshore reserve. Water management strategies should be aligned to current Best Practise and applied to this site, these include:

1. Maintain and where possible enhance water quality by:
 - Minimise waterborne sediment loading
 - Minimise export of pollutants to surface or ground water
 - Minimise post development flows across the site
 - Apply point source water management
 - Limit use fertilisers on land
2. Encourage water conservation by:
 - Minimise the export and use of water
 - Promote the use of rainwater
 - Promote ground water recharge where appropriate
 - Reduce irrigation requirements
3. Management of the water regime by:
 - Prevent flood damage in existing and proposed excavation areas
 - Prevent erosion of adjacent wetlands, waterways and slopes
 - Ensure pollutants do not enter into adjacent waterways

A concept drainage design was not prepared as part of this assessment, site investigation in light of the proposal did not see any major restrictions on drainage. The proposal does not involve major road networks and storm water drainage will utilise current road alignments. The use of water sensitive design principles should be applied where all 1:1 events are contained in road side swales to prevent scouring over slopes small rock riffles can be added in the swales to reduce the

velocity of water downslope during storm events. Rock pitching can be used from materials on site to stabilise areas such as drains and culverts.

5.6. Groundwater and surface water management

Excavation will not occur below the level of the winter groundwater table. The highest known ground water is found in the south-west corner and north of the subject area adjacent to the Yalal Brook.

Site soil testing undertaken by Parsons Brinkerhoff (2010) in June (winter) 2010 indicated the highest known water tables were at located adjacent to the Yalal Brook (CPT 4, 9 and 10) and was intercepted at approximately 4.9m Below Ground Level (BGL). This area will be excluded from excavation via the 100m buffer requirement from adjacent lands (as required by the Shire of Chittering) and groundwater shall not be intercepted at any other excavation depth across the site. Please refer to the Parsons Brinkerhoff (2010) report for further site soil testing detail.

Groundwater and surface water will be protected by the following:

- No excavation below the water table, areas with high water table 4.9m) will be excluded from the proposed excavation pits;
- The extraction of sands and gravel is a chemically free operation with the only liquids used being lubricants for machinery;
- All water used on site will be drawn from bore water sources with an approved permit from DoW;
- No potential chemical pollutants will be kept on site. Minor servicing will be conducted onsite by mobile service vehicles;
- Major servicing of large machinery will only be undertaken offsite;
- The access roads will be installed with locked gates and fences when the site is unmanned to prevent illegal dumping of rubbish;
- Minor use of fertilisers – only small amounts used revegetation to stimulate native plant seedling establishment;
- Refuelling will be carried out using mobile tankers. There will be no fuel stored on site;
- In the event it occurs, spill management and containment shall be carried out as per DEC recommended procedures (Section 5.15 of this document); and
- No interception of groundwater from excavation activities shall occur and separation to groundwater will comply with DoW Guidelines.

Water shall be sourced from groundwater bore sources. A license for bore water extraction will be required from the DoW and shall be pursued by the applicant at approval of the excavation license process.

5.7. Flora and Fauna

The resource area consists of remnant vegetation and parkland areas. The areas of pasture are completely degraded from past grazing and farm activities. Areas of remnant vegetation are not proposed to be cleared and will be preserved for the refuge of fauna, habitat protection and biodiversity. The parkland cleared (paddock areas) will be excavated and returned to a rehabilitated state as outlined in Section 5.13

5.8. Dieback Management Plan

Dieback refers to *Phytophthora*, a plant disease that impacts on remnant vegetation. Disease is a potential problem when equipment is brought to the site from a dieback infected area. No plant or soil materials will be brought onto site apart from that used for rehabilitation. In general there should be little need for soil or rehabilitation materials to be brought onto the site.

All vehicles and equipment to be used on site for clearing and land reinstatement will be washed down prior to entering the site at designated wash down bays. Please refer to Appendix C Staging and Site Management Plan. Wash down/brushdown bays are located downslope from uninfested vegetation. Any washdown effluent will be bunded and collected on-site and not allowed to drain to adjacent bushland. Water use to washdown equipment/vehicles will be minimised when possible and dry cleaning techniques used e.g. stiff brushes, compressed air.

Plant Disease Management

The following will apply to all aspects of operations:

- Earth moving vehicles and equipment are to be cleaned prior to entering site;
- Access to the site will be controlled (fenced and gated and locked when quarry unattended);
- Completed areas will be rehabilitated as soon as practicable;
- The rehabilitated surface will be free draining and not contain wet or waterlogged soils;
- Materials used in rehabilitation will be dieback free from on site, additional plants or seeds will have to be certified dieback free;
- Signage erected to indicate dieback free areas and wash-down/brush down procedures; and
- Road and transport vehicles are to be restricted to defined roads, loading and turn around areas.

5.9. Weed Management

Weed management is to be used in conjunction with dieback disease management. The following Weed Management Plan is to apply to all aspects of site operations. The list compiled is based on species that may occur on site. Please refer to Table 1 over the page.

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Table 1 – Weed Management Program

Species		Treatment	Responsibility
Grasses			
Kikuyu	<i>Pennisetum calndestinum</i>	Control with herbicides whilst growing.	Spray/ Civil Contractor as required
Pampas grass	<i>Cortaderis selloana</i>	remove large plants with backhoe, burn or cover >1m	Civil Contractor as required
Blowfly grass	<i>Briza maxima</i>	Hand weed or spraying. Cool burn in late winter to spring before flowering.	Spray/Civil Contractor as required
Flat weed	<i>Hypochaeris spp</i>	Hand weeding with weed fork – remove taproot from soil. Mowing ineffective	Spray contractor and Civil contractor
Hare's-tail Grass	<i>Lagurus ovatus</i>	Prevent seed set for 2-3 years by the removal of the topsoil through civil works	Spray and Civil
Woody Weeds			
Ink weed	<i>Phytolacca octandra</i>	Uproot heavy infestations and cut remaining plants 5cm below ground. Spraying is effective.	Spray and civil contractor
Acacia Species	10 Different Eastern States Species	Spray/inject large trees in spring to early summer or fell, slash or doze. Treat seeds in early summer with spraying. Treat new seedlings prompt	Spray and bobcat
Victorian Teatree	<i>Leptospermum laevigatum</i>	Slash, feel or bulldoze thickets, burn when dry. Spray regrowth, seedlings can be hand removed	Spray and bobcat
Sweet pittosporum	<i>Pittosporum undulatum</i>	Recommended control hand pull seedlings where possible, Spraying (diesel) to lower trunk and/or injection on mature trees. Foliar spray recommended.	Spray and civil contractor
Tagasaste	<i>Chamaecytisus palmensis</i>	Slash, feel or bulldoze thickets Recommended control hand pull seedlings where possible. Spraying (diesel) to lower trunk and/or injection on mature trees, foliar spray recommended.	Spray and civil contractor
Montpellier Broom	<i>Genista monspessulana</i>	Uproot heavy infestations and cut remaining plants 5cm below ground. Spraying is effective.	Spray and bobcat
Myrtle leafed Milkwort	<i>Polygala myrtifolia</i>	Spray/inject large trees in spring to early summer or fell, slash or doze. Treat seeds in early summer with spraying. Treat new seedlings prompt.	Spray and bobcat

Table 1 Cont.

Species		Treatment	Responsibility
Herbs			
Bridal creeper	<i>Asparagus asparagoides</i>	Hand spray or mist during winter. When stems emerge after spraying retreat or trim these stems and burn the tubers and root system.	Spray Contractor
Watsonia	<i>Watsonia spp</i>	Remove by hand and broad spray	Spray contractor/civil works
Arum lily	<i>Zantedeschia aethiopica</i>	Spray (effective) plants in late winter until just wet before flowering. Mechanical removal only effective when root matter is completely removed.	Spray Contractor
Night shade	<i>Solanum nigrum</i>	Prevent seed set for several years. Hand remove plants before flowering and/or spray during the plant is growing in summer.	Spray contractor
Fleabane	<i>Conyza species</i>	Spray in late spring. Hand removal-remove taproot. Introduction of native species which provide shade.	Spray Contractor/Civil works
Agapanthus	<i>Agapanthus praecox</i>	Remove by hand, machine and broad spray	Spray contractor/civil works
Cotoneaster	<i>Cotoneaster pannosus</i>	Spray in late spring. Hand removal/mechanical - remove taproot.	Spray Contractor/Civil works
Blackberry and Dog Rose	<i>Rubus Species</i>	Three annual summer spray applications when plant is actively growing, repeat as new growth appears	Spray contractor
Dolichos pea	<i>Dipogon lignosus</i>	Manual removal not effective, spray infestations in August	Spray contractor
South African Gladiola	<i>Gladiolus undulatus</i>	Remove by hand and broad spray	Spray contractor
Lantana	<i>Lantana camara</i>	Spray (effective) plants in late winter until just wet before flowering. Mechanical removal only effective when root matter is completely removed.	Spray Contractor
Wild radish	<i>Raphanus raphanistrum</i>	Selective control in bushland areas, spray plants until just wet from seedling stage to podding. Isolated plants should be removed manually.	Spray Contractor
Patersons Curse		Manual remove and burn if flowering or seeding. Spray large infestations in early winter before reached 6 leaf stage, repeat if necessary. Spray top at flowering, repeat if necessary.	Spray Contractor
Afghan melon	<i>Citrullus lanatus</i>	Spray graze – spray, follow by heavy grazing 3 days later. Chemical control via spray control recommended for summer and winter outbreaks	Spray contractor/civil works
Periwinkle	<i>Vinca major</i>	Mow or cut the vines early to late spring, spray regrowth several times 3months apart, spot spray localised infestations	Spray contractor/civil works

In addition to treatments as outlined in Table 1 the following is to apply to all weed management operations:

- Comply with Dieback Management Plan in 5.6;
- Apart from approved rehabilitation materials, no plant, soil or fill will be brought onto site;
- Site is to be secured to prevent trespassers illegally dumping rubbish and green waste;
- All weeds on site removed promptly on discovery;
- Remove weeds from least affected areas to the most affected areas (Bradley Method); and
- Do not use weed affected soils for rehabilitation, but bury them at least 500mm below the surface; and
- Regularly monitor the site for invasive species.

If weeds are discovered on site they will be treated using the following methodology:

- Large woody weeds will be burned, poisoned or removed from site and disposed to approved green waste;
- Small weeds will be sprayed by a licensed contractor or landholder as outlined in Table 1; and
- Initial follow up spraying will be undertaken at 6 months and 18 months and repeated as necessary.

Inspections should be carried out 6 monthly for weed infestations. As infestations are identified they should be monitored after treatment, monthly for treatment progress and then annually for follow up treatments until eradicated.

5.10. Fire Management

There is little potential fire risk from mineral resource quarrying, however fire is always a potential risk in remnant and rehabilitated vegetation. Perimeter firebreaks will be maintained to the standards of the Shire of Chittering.

External Fire Risks

Surrounding the site there is fragmented landscapes with areas of remnant bushland interspersed with cleared paddock areas. The predominant fire risk associated with the site is the property to the north bordering Yalyal Brook and south bordering Yalyal Road. Heavily vegetated areas (Extreme Risks) under hot conditions can give rise to hot and intense fires. The following fire control methods should be enforced at all times during summer periods.

Fire control methods:

- Fire break maintenance will occur annually before October 16th (prior to Fire Season);
- Clear a firebreak of all flammable material, for a width of no less than three metres (3m), immediately inside the external boundaries of the property;
- Trees must be trimmed back to provide a vertical clearance of a minimum three and a half metres (3.5m) to allow fire appliances to drive along the firebreak;
- Areas cleared for any prescribed burning or burning off require a twenty metre (20m) firebreak;
- Abide by Shire imposed Vehicle Movement and/or Harvest ban due to dangerous fire weather conditions or if there are bush fires already burning during the Restricted and Prohibited Burning Times (i.e. High-Very High Fire Danger days); and
- Maintain at all times minimum 30,000L of water in separate fire fighting tank for fire fighting purposes; and
- A mobile fire fighting appliance dedicated to fire fighting operations is located on the property at all times during summer operations.

5.11. Aboriginal Sites

There are no Aboriginal Sites within 500 metres of the proposed excavation site.

5.12. Rehabilitation Management

Rehabilitation will be to constructed soils and a return to remnant vegetation. The following Objectives will apply to all rehabilitation works:

- To re-instate vegetation to continue the future biodiversity of the area.
- Assist naturally revegetating foreshore areas to return to pre-disturbed state;
- To establish vegetation through revegetation and regeneration of denuded areas with local endemic with similar composition of adjacent bush land;
- To reduce weed invasions and competition of weeds with native species; and
- To assist with on the ground implementation of the revegetation.

Revegetation methods

- The preferred method of revegetation is to use the seed from existing topsoil and remnant vegetation on site. Seed will be collected at appropriate seasons from adjacent vegetation and dispersed over constructed soils.
- Any weeds likely to significantly impact on the rehabilitation will be sprayed with Roundup or similar herbicide, or grubbed out, depending on the species involved.
- Rehabilitation will be carried out progressively during the first available winter months' following the restoration earth works. Leaving the completed earth works for one season will reduce the success of rehabilitation by at least 50% due to compaction effects and weed infestation.
- Seeds of remnant species will be scattered during autumn.
- Tree and tall shrub species to be used for rehabilitation occur on site and will include but not be limited to endemic species as listed below.

Species list

Species shall be sourced from stockpiled topsoil, adjacent bushland and seed/brush collection onsite as per the following list and spread at the first Autumn rains (usually after three continuous rain days is recommended). Some species will regenerate from stored topsoil (understorey and midstorey species)

Genus species Subspecies/variety Common Name (Walker 2010)

Acacia pulchella Prickly Moses
Adenanthos cygnorum Common woollybush
Alexgeorgea nitens
Allocasuarina humulis Dwarf sheoak
Amphipogon turbinatus var. *turbinatus*
Anigozanthos sp
Arnocrinum preissii
Astroloma microcalyx Swan berry
Astroloma pallidum Kick bush
Banksia menziesii Firewood banksia
Banksia attenuata Slender banksia
Banksia grandis Bull banksia
Banksia sessilis Parrot Bush
Bossiaea eriocarpa Common Brown Pea
Burchardia congesta Milkmaids
Calothamnus sanguineus Silky-leaved Blood flower
Corymbia calophylla Marri
Eucalyptus todtiana Picklybark
Eucalyptus marginata Jarrah
Gastrolobium nervosum

Gompholobium sp
Hemiandra pungens Snakebush
Hibbertia heugleii
Hibbertia hypercoides Yellow Buttercups
Hibbertia serrata Serrate-leaved Guinea flower
Jacksonia floribunda
Petrophile linearis Pixie Mops
Petrophile seminuda
Synaphea spinulosa
Xanthorrhoea preissii Grasstree

The revegetation methodology is proposed to be undertaken using the following steps:

1. Spray herbaceous weeds and remove any woody weeds 1 month prior to revegetation. Prepare soil with small machine.
2. Furrow/mound the soil along contours to assist with water harvesting for establishing seeds.
3. Disperse seed (30% tree species 70% understorey/midstorey species) along windrows.
4. Collect brush from adjacent tree and understorey species lay randomly over the revegetation area in a mixed fashion to stabilise the site and provide seed establishment.
5. Inspect site after first large rainfall event, re-lay any brush where required.
6. Inspect site after 6 months to determine success rate of native seed and any weed establishment. Remove weeds either through selective spraying or hand removal.
7. Inspect site after 18 months to determine success rate of native seed and any weed establishment. Remove weeds either through selective spraying or hand removal.

Topsoil Management

- Where possible topsoil and overburden will be directly transferred from an area being cleared to an area to be rehabilitated. Where this is not possible the topsoil and overburden will be stored in low dumps (overburden and 0.5m for topsoil) for future use in rehabilitation.
- The darker brown and more earthy sand will be preferentially retained for use in soil reconstruction.
- Excavation will be worked progressively in the stages as shown on the attached staging plan.
- Where possible topsoil clearing will be undertaken in wetter months.

Landform Reconstruction and Contouring

- Final landform will be approximately 1.5 metres below current landform level in the gravel extraction areas and 4 metres below current landform level in sands (this may be less depending on useable materials and spoil amounts)
- Batter slopes will be retained around the perimeter at 1:5 vertical to horizontal.

Soil Restoration

- The excavated floor will be deep ripped to aid root access.
- A minimum of 500mm of overburden will be spread over the surface of the floor of the quarry and batter slopes.
- 100-200mm of topsoil will be spread directly from an area being cleared or from a topsoil dump.

5.13. Bank stability works/erosion control

The predominant soil type is deep sands with adjacent gravels over sand. Loose sands during revegetation works can be subject to prevailing winds and water erosion. Mounding of the revegetation areas will assist with the runoff from the revegetated areas and brushing will reduce

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the effects of wind erosion. The mounding and contouring of soil will also assist in trapping water for seedling germination and growth. Mounding should occur along contours or in flat areas perpendicular to creek flow direction.

Specific areas noted for stabilisation are adjacent to the Yalyal Creek in the north and in the rehabilitation/remediation areas. These areas have slopes into the creek area and are most subject to water erosion. Stabilisation techniques will need to be applied during and post excavation (i.e. use of sediment traps). Mulching of pit faces or use of geo-fabrics should be used wherever possible to ensure there is minimal erosion to the site. The creek area should not receive untreated storm water from surface water run-off, all water will need to be treated prior to entering into the creek.

It is recommended as the site is predominantly sandy (topsoil) in nature, best practise is carried out when site is developed and sediment traps are installed during development activities with any bare ground areas stabilised (i.e. mulching).

6. Monitoring and Reporting

Monitoring of rehabilitation will be assessed annually and at the completion of each stage to ensure compliance with rehabilitation program and completion criteria. Table 1 below summarises environmental monitoring activities required for sound environmental management of the site during excavation, these should be combined into contractor contractual obligations. The extraction licence holder will be responsible for implementing this monitoring plan.

Table 1: Environmental monitoring activities during excavation activities

After rain	Inspect all sediment control structures
	Check all drains are free from debris or chemicals (i.e. hydrocarbons)
	Storm water structures are checked and/or are cleaned out
	Check for erosion after wet periods and winter months
	Ensure drainage structures are working as per design
Monthly	Ensure sediment controls are working appropriately
	Ensure and erosion/mulched areas are maintained
	Monitor any revegetation for weeds and species loss
Six monthly	Slashing of environmental weeds and weed works as per the Weed Management Plan methodologies.
Quarterly	Storm water structures are checked and/or cleaned out
	Remove overhanging or unsafe branches (roads, firebreaks)
	Check vehicle access remains to designated roads (especially if staged)
	Check for stagnant water and mosquito infestations
	Check for any degraded areas/erosion
Yearly	Check working condition of roads and access
	Storm water structures are checked and/or are cleaned out prior to wet seasons
	Check working condition of rock pitching (if any)
	Check working condition of drainage systems and structures

6.1. Control of Environmental Incidents

An important aspect in the environmental program is management of non-conformance or incidents. An environmental incident is an event which could result in pollution to the local environment. The planning of site works and methodology aims to limit the risk and harm of subdivision operations/works impacting on-site or off-site.

If an incident or event occurs, it should be emphasised to all personnel working on site that all incidents are documented. Investigations should be conducted and action plans established in order to ensure the event does not happen again.

6.2. Corrective and Preventative actions

An Environmental Investigation should include the following basic elements:

- Identify the cause of the incident;
- Identifying and implementing the necessary corrective action;
- Identifying the personnel responsible for carrying out corrective action;

- Implementing or modifying controls necessary to avoid repetition; and
- Recording changes in written procedures required.

This should occur immediately from an incident occurring. It is recommended if an environmental incident occurs an Environmental Consultant is appointed to address the issue immediately and give advice on remedial actions.

6.3. Spill Management Procedures

The following information is from the DEC Spill Management Brochure (DEC 2011). This should be the methodology employed should a spill from fuel or chemical occur.

Dealing with minor spills

A small spill is considered to be a spill of 5 litres or less providing the product is not concentrated. For concentrated products of any quantity the spill must be treated as a large spill.

- 1. Assess safety.** Make sure that people are kept clear, and that you have the right training and equipment to deal with the spill.
- 2. Stop the source.** Providing it is safe to do so, stop the spill at its source. This may involve righting an overturned container or sealing holes or cracks in containers.
- 3. Contain and clean up the spill.** The spill should be mopped up immediately.
- 4. Record the spill.** Record when, what, how and where the spill occurred, clean up measures undertaken and the names of any witnesses. Also make note of what changes can be made when handling, transporting or storing chemicals to ensure a similar incident does not happen again.

Dealing with large spills

A large spill is considered to be anything over 5 litres or concentrated chemicals of any volume.

- 1. Assess safety.** Make sure that people are kept clear, and that you have the right training and equipment to deal with the spill.
- 2. Consult the Material Safety Data Sheet (MSDS).** The MSDS will have instructions on how to deal with specific chemical spills.
- 3. Put on protective clothing.** If necessary, put on gloves and goggles, a mask and an apron.
- 4. Stop the source.** Providing it is safe to do so, stop the spill at its source. This may involve righting an overturned container or sealing holes or cracks in containers.
- 5. Contain and control the flow.** The spill should be prevented from filtrating into the ground or entering the stormwater system. The outer edge of the spill should be dammed with rags, blankets, sand, sands bags, mops and/or absorbent booms.
- 6. Clean up the spill.** Promptly cover the spill using absorbent materials such as the correct absorbent granules for the product (Note that some strong acids will react with some types of granules and sawdust), sand and rags, being mindful not to splash the spill. Using a dustpan or spade, the absorbent granules or sand must then be scooped up and placed into a container. This waste material is not to be buried or thrown into the environment. The method of disposing this waste will depend on the amount and the type of chemical that was spilt. The Department of Environment Controlled Waste Section will advise on the appropriate disposal of hazardous substances. There are several contractors that will dispose of contaminated substances and soils. All contact phone numbers can be found below
- 7. Notify the appropriate authority.** If the spill does enter a stormwater drain or open ground, the Department of Environment and your local council must be notified. Please refer to the phone numbers listed below. If there is a hazard to health or property, call Fire and Rescue on 000 immediately.
- 8. Record the incident.** Record what, how and where the spill occurred and the names of any witnesses. Also make note of what changes can be made when handling, transporting or storing chemicals to ensure a similar incident does not happen again.

Who to call in an emergency

All hours phone numbers

Life / property emergencies: Ambulance, Fire or Police	000
Pollution emergencies - Department of Environment	1800 018 800
Poisons Information Centre	13 11 26
Water Corporation – Emergencies and water service difficulties	13 13 75

Business hours phone numbers

Fire and Emergency Services Authority	9323 9300
Department of Environment	9222 7123
Department of Mineral and Petroleum Resources – Explosive and Dangerous Goods	9222 3333

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Appendices

Appendix A – Location map

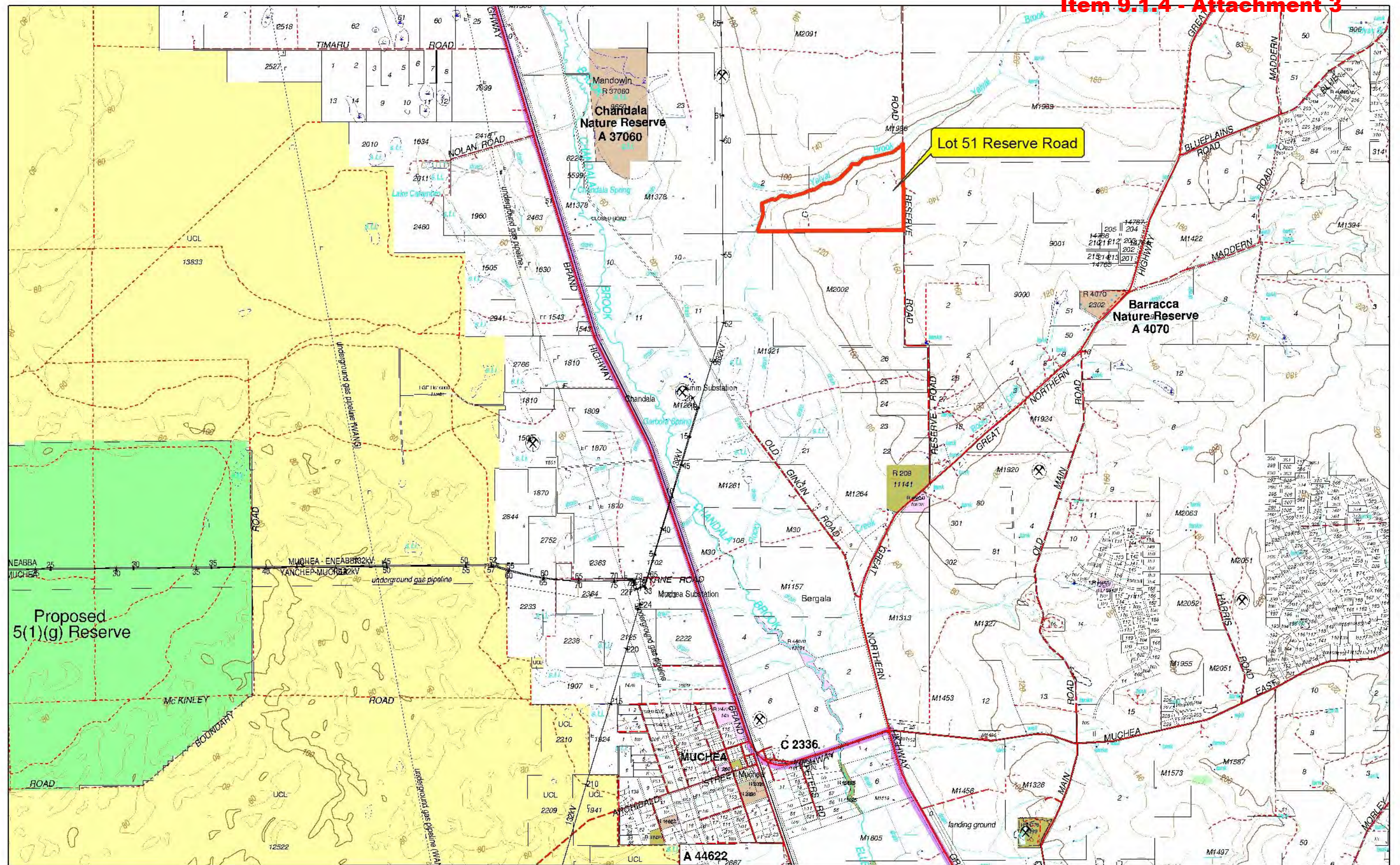
Appendix B - Existing Site

Appendix C – Staging Plan and Site Management

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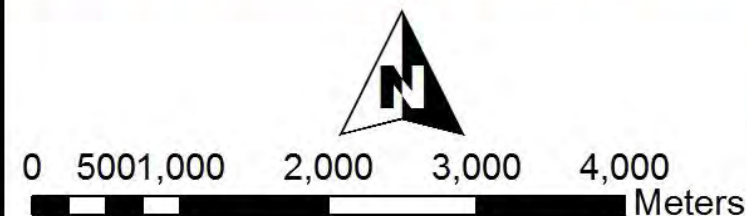
Appendix A

Location Map



Legend

— Subject site



**BIO
DIVERSE
SOLUTIONS**

55 Peppermint Drive
Albany, WA 6330
Australia
Tel: 08 9841 3936
Fax: 08 9841 3936
Mob: 0447 555 516

CLIENT Lot 51 Reserve Road
Chittering WA

Location

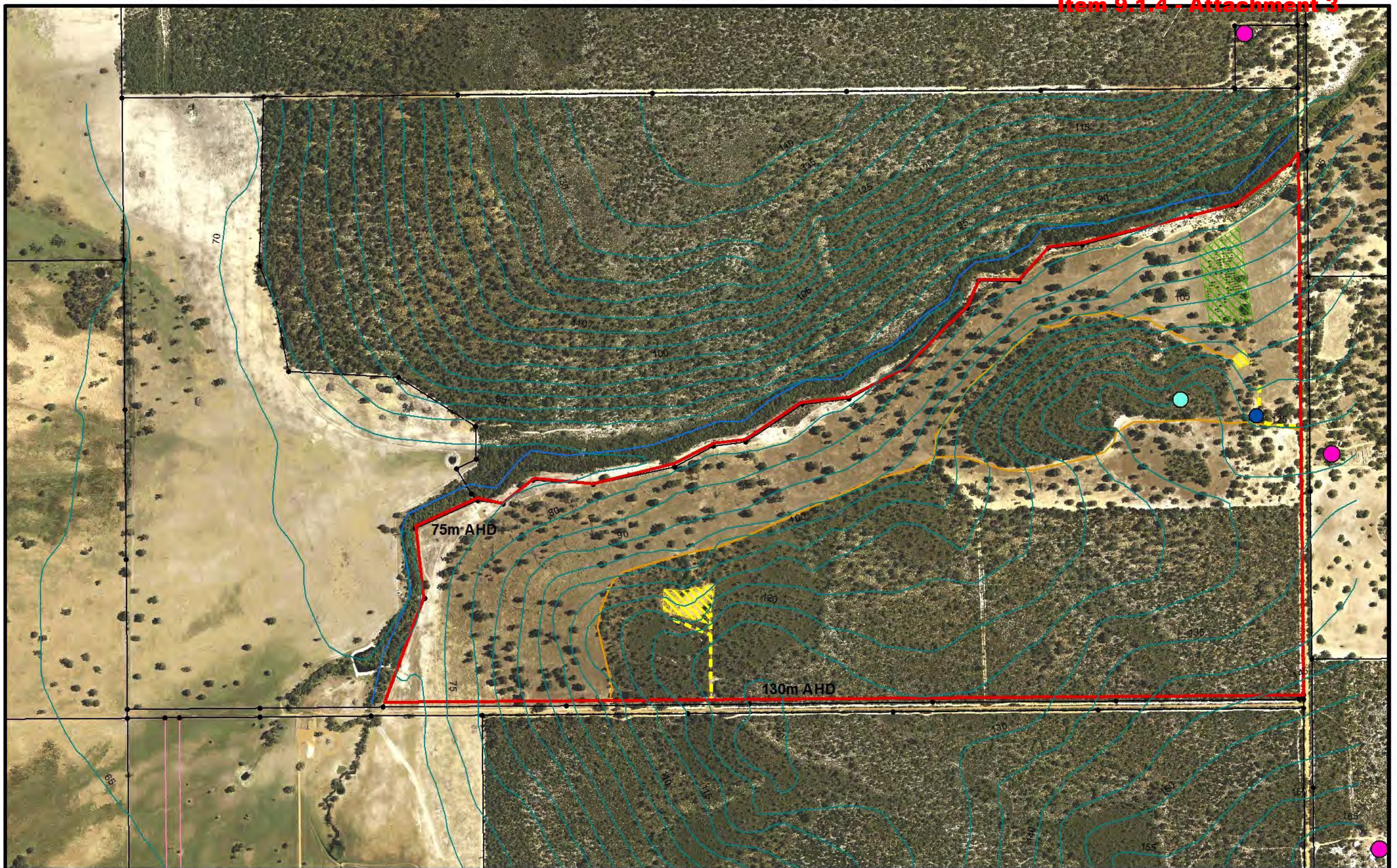
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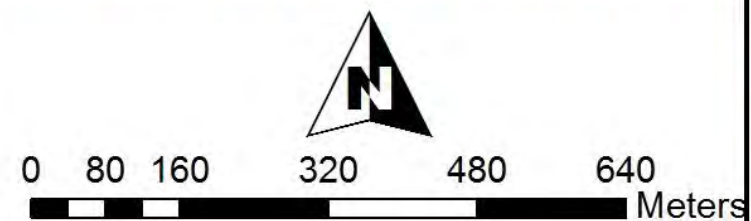
Appendix B

Existing Site Mapping



Legend

- Subject site
- Cadastre
- Dirt Track
- 5m Contours
- Existing formed Road (internal)
- Yalyal Brook
- Neighbouring Dwellings
- Water tank
- Abandoned shack
- previous gravel extraction
- Dis-used citrus orchard



**BIO
DIVERSE
SOLUTIONS**

55 Peppermint Drive
Albany, WA 6330
Australia
Tel: 08 9841 3936
Fax: 08 9841 3936
Mob: 0447 555 516

CLIENT

Lot 51 Reserve Road
Chittering WA

Existing Site

STATUS

FINAL

FILE

WHE L010

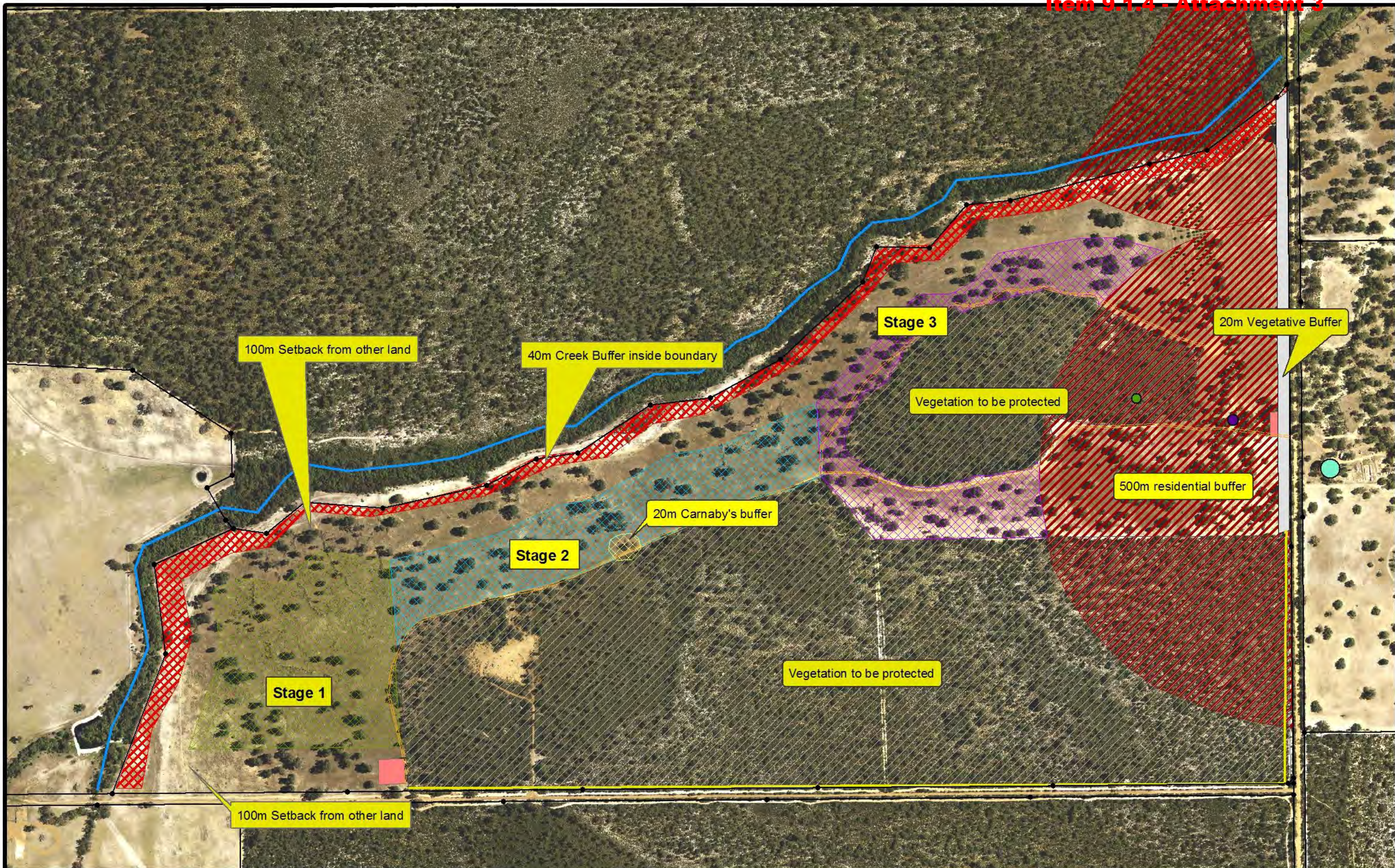
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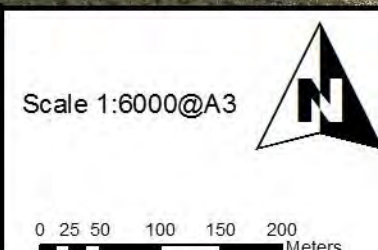
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Appendix C

Staging Plan and Site Management



Water tank	Dirt Track	Stage 2
Neighbouring Dwellings	20m Vegetative Buffer	Stage 1
Abandoned shack	20m Carnaby's Buffer	Natural Vegetation to be protected
Fire Break	Yalyal Brook 40m Buffer Zone	500m Residential Buffer Zone
Yalyal Brook	Wash down area	Stage 3



BIO DIVERSE SOLUTIONS

55 Peppermint Drive
Albany, WA 6330
Australia
Tel: 08 9841 3936
Fax: 08 9841 3936
Mob: 0447 555 516

CLIENT		Lot 51 Reserve Road Chittering WA	
Staging and Management			
STATUS	FILE	DATE	
FINAL	WHEL010	16/09/2011	

Locality Plan

Lot 51 (RN 451) Reserve Road

Muchea



FORM B 2

FORM APPROVED
NO. B2891

WESTERN AUSTRALIA
TRANSFER OF LAND ACT 1893 AS AMENDED

BLANK INSTRUMENT FORM

Restrictive Covenant

(Note 1)

THIS RESTRICTIVE COVENANT is made the day of 2015

B E T W E E N :

ANDREW MICHAEL SHEPPARD and)
COLETTE LOUISE SHEPPARD both of 7)
Tuross Way, Ellenbrook, Western Australia)
(Subdividers))

A N D

SHIRE OF CHITTERING of PO Box 70, Great)
Northern Highway, Bindoon, Western Australia)
(Shire)

R E C I T A L S :

- A. The Subdividers are registered as the proprietors of an estate in fee simple in the land described in Item 1 of the Schedule (**Land Burdened**).
- B. The Land Burdened is subject to the encumbrances noted in Item 2 of the Schedule.
- C. The Land Burdened is situated within the district of the Shire.
- D. The Subdividers have sought and received from the Western Australian Planning Commission (**WAPC**) by Approval No. 151406 (**Approval**), approval to subdivide land to create the Land Burdened.

E. The Approval was issued subject to a number of conditions including the following:

"4. A Restrictive Covenant, to the benefit of the local government, pursuant to section 129BA of the *Transfer of Land Act 1893* (as amended) is to be placed on the certificates of title of the proposed lot(s) advising of the existence of a restriction on the use of the land. Notice of this restriction to be included on the diagram or plan of survey (deposited plan). The restrictive covenant is to state as follows:

"No new development is to take place outside the defined building envelope(s), unless otherwise approved by the local government."

(Condition 4)

F. The Subdividers enter into this Deed to create, pursuant to s.129BA of the Transfer of Land Act 1893, the restrictive covenant required to comply with Condition 4 of the Approval.

OPERATIVE PART:

1. SUBDIVIDERS' COVENANTS

The Subdividers for themselves and their successors in title with the intention of binding so far as is possible the Land Burdened in the hands of whoever it may come HEREBY COVENANT with the Shire under and by virtue of the provisions of Section 129BA of the Transfer of Land Act 1893 for the benefit of the Shire not to carry out nor suffer to permit to be carried out any development on the Land Burdened other than within the approved building envelopes for the Land Burdened unless otherwise approved by the Shire.

2. COSTS

The Subdividers shall pay the costs of and incidental to the preparation, execution, stamping and registration of this Deed and all stamp duties and registration fees payable hereon.

3. INTERPRETATION

In this Deed:

“approved” means approved by an authorised officer of the Shire.

Reference to the parties includes their personal representatives, successors and lawful assigns.

Where a reference to a party includes more than one person the rights and obligations of those persons shall be joint and several.

Headings have been inserted for guidance only and shall be deemed not to form part of the context.

The Schedule and Annexures (if any) form part of this Deed.

SCHEDULE

ITEM 1 LAND BURDENED

Lot 98 on Deposited Plan 405399 and being the whole of the land comprised in
Certificate of Title Volume Folio ; and
Lot 99 on Deposited Plan 405399 and being the whole of the land comprised in
Certificate of Title Volume Folio .

ITEM 2 ENCUMBRANCES

1. Mineral Reservation contained in Transfer T8763/1930;
2. Mineral Reservation contained in Transfer T15912/1947;
3. Notification L582456; and
4. Mortgage M316843.

MORTGAGEE'S CONSENT

COMMONWEALTH BANK OF AUSTRALIA being the mortgagee under Mortgage M316843 hereby consents to the terms of the Restrictive Covenant contained herein.

DATED the _____ day of _____ 2015.

EXECUTED by the parties as a Deed.

Executed by ANDREW MICHAEL
SHEPPARD in the presence of

Signature of Andrew Michael Sheppard

Witness Sign

Full Name of Witness

Address

Occupation

Executed by COLETTE LOUISE
SHEPPARD in the presence of

Signature of Colette Louise Sheppard

Witness Sign

Full Name of Witness

Address

Occupation

THE COMMON SEAL of the SHIRE OF)
CHITTERING was hereunto affixed in)
the presence of:)

SHIRE PRESIDENT

(PRINT FULL NAME)

CHIEF EXECUTIVE OFFICER

(PRINT FULL NAME)

Item 9.1.5 - Attachment 1

INSTRUCTIONS

1. This form may be used only when a "Box Type" form is not provided or is unsuitable. It may be completed in narrative style.
2. If insufficient space hereon Additional Sheet Form B1 should be used.
3. Additional Sheets shall be numbered consecutively and bound to this document by staples along the left margin prior to execution by the parties.
4. No alteration should be made by erasure. The words rejected should be scored through and those substituted typed or written above them, the alteration being initialled by the persons signing this document and their witnesses.

NOTES

1. Insert document type.
2. A separate attestation is required for every person signing this document. Each signature should be separately witnessed by an Adult Person. The address and occupation of the witness must be stated.

OFFICE USE ONLY

LODGED BY	McLeods
ADDRESS	220 - 222 Stirling Highway CLAREMONT WA 6010
PHONE No.	9383 3133
FAX No	9383 4935
REFERENCE No.	38108-15.10.05-NE-RestrictiveCovenant
ISSUING BOX No.	346K

PREPARED BY	McLeods		
ADDRESS	220 - 222 Stirling Highway CLAREMONT WA 6010		
PHONE No.	9383 3133	FAX No.	9383 4935

INSTRUCT IF ANY DOCUMENTS ARE TO ISSUE TO OTHER THAN LODGING PARTY.

TITLES, LEASES, DECLARATIONS ETC. LODGED HERewith

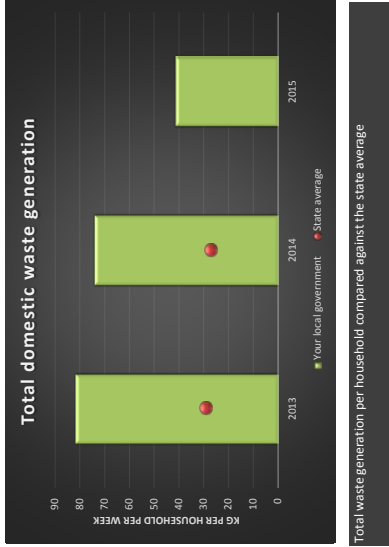
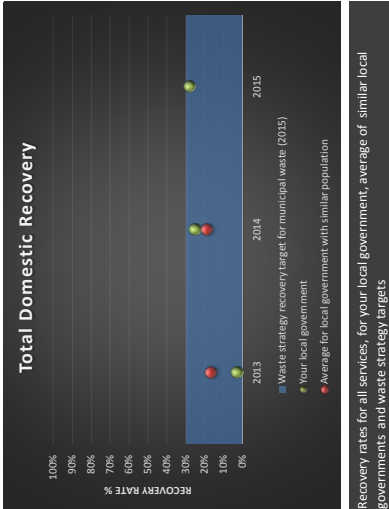
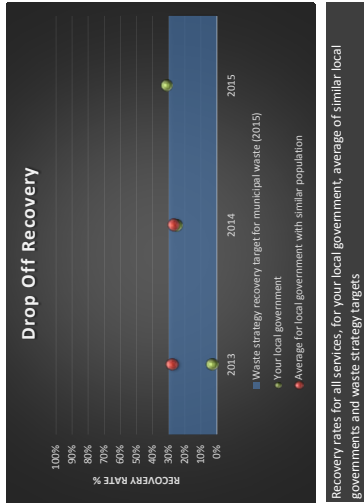
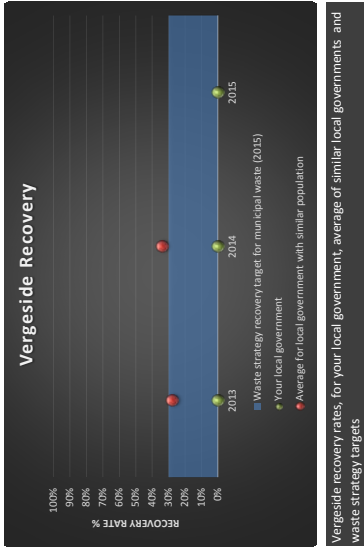
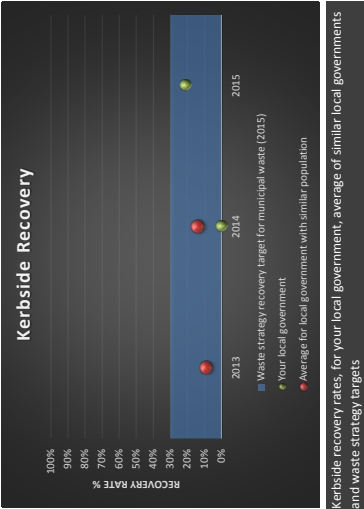
1.	_____	Received Items
2.	_____	Nos.
3.	_____	
4.	_____	
5.	_____	
6.	_____	Receiving Clerk

Registered pursuant to the provisions of the TRANSFER OF LAND ACT 1893 as amended on the day and time shown above and particulars entered in the Register.

EXAMINED

Charting your local government's waste management indicators (domestic services)

Do not enter data in this worksheet



Recovery rate for all services

Total recovery rates	2013	2014	2015
Your local government	3%	25%	28%
Average for local government with similar population	17%	19%	
Waste strategy recovery target for municipal waste (2015)	30%	30%	30%

Total waste generation per household

Waste per household per week (kg)	2013	2014	2015
Your local government	82	74	42
State average	29	27	



Summary of your local government's waste management indicators

Please do not fill in this sheet. The values of the indicators applicable to your local government (2nd column) will automatically be calculated using the information that you will supply in this census. ONLY the number of households and commercial premises may be edited. Proceed to Section A.

INDICATOR	CALCULATED VALUE	Unit
W&R SERVICES FOR RESIDENTIAL PREMISES		
Number of households in local government	1,900	households
% households provided with waste & recycling services at premise	94%	%
Waste per person	14	kg per week
Waste per household	42	kg per week
Diversion rate	28%	%
Annual cost of providing waste & recycling collection services to households	\$509	AU\$ per household
Annual charge for providing waste & recycling services to households	\$259	AU\$ per household
Annual cost of household recycling service	\$193	AU\$ per household
Annual charge for household recycling service	\$117	AU\$ per household
W&R SERVICES FOR COMMERCIAL PREMISES		
Number of commercial premises (preliminary - June 2013)	0	commercial premises
% of commercial premises provided with waste & recycling services	#DIV/0!	%
Cost of providing waste collection services to commercial premises	#DIV/0!	AU\$ per commercial premise
Charge for providing waste collection services to commercial premises	N/A	AU\$ per M3
Cost of collecting recyclables from commercial premises	N/A	AU\$ per commercial premise
Charge for collecting recyclables from commercial premises	N/A	AU\$ per M3

Section A - Participant's Details

	Response
First Name	Glenn
Family Name	Sargeson
Position title	Principal Environmental Health Officer
Organisation	Shire of Chittering
Email address	eho@chittering.wa.gov.au
Direct contact phone number	9576 4600
Do you authorise the release of information you provide in this Census to the Western Australian Local Government Association (WALGA)?	Yes
Do you authorise the release of the information you provide in this Census to the Forum of Regional Councils (FORC)?	Yes

Section B1 - Domestic kerbside collection services

Domestic kerbside services are containerised, regular services where waste or recycling are collected from the kerb in front of the residence.

[CLICK HERE TO VIEW PHOTOS OF THIS SERVICE.](#)

	Kerbside waste (garbage) collection		Kerbside collection of recyclable materials				Comments / additional information
	Mixed waste collected and transported directly to landfill or transported to landfill via a transfer station	Mixed waste collected and processed in an AWT (or Resource Recovery Facility)	Co-mingled dry recycling	Green waste collection	Recycling - containers only	Recycling - paper & cardboard only	
Does your local government provide this service to your residents?	Yes	No	Yes	No	No	No	
If so, is the service run in-house or outsourced to a contractor?	Avon Waste		Avon Waste				
Percentage of households in the LGA that receive this service (%)	94%		94%				
Resident participation rate (%)	80%		80%				Estimated
Type of container	MGB		MGB				
Size of container	240L		240L				
Colour of container	dark green or black with red lid		dark green or black with yellow lid				
Frequency of collection	Weekly		Fortnightly				
Tonnes collected at kerbside for this service in 2014-15	1,061		389				Kerbside service only operated for 10 months.
Tonnes disposed to landfill from this service in 2014-15	1,061		79				
Tonnes recycled in 2014-15	-	-	310	-	-	-	

Section B2 - Other kerbside services

	Other service 1	Other service 2	Other service 3	Comments/ additional information
Does your local government provide OTHER regular kerbside (note: containerised) collection services such as for car batteries, waste oil, fluorescent tubes, etc?				

Section B3 - Domestic vergeside collection services

[CLICK HERE TO VIEW
PHOTOS OF THIS SERVICE](#)

Vergeside collection services are intermittent, non-containerised collection services, such as green waste and "hard waste" collections. "Hard waste" is bulky household items such as furniture, mattresses and whitegoods.

	Domestic <u>green</u> waste vergeside collection services	Domestic <u>hard</u> waste vergeside collection services	Comments /additional information
Does your local government provide this service to your residents?	No	No	
If so, is the service run in-house or outsourced to a contractor?			
Percentage of households in the LGA that receive this service (%)			
Frequency of service			
Tonnes collected from verges for this service during 2014-15			
Tonnes disposed to landfill from this service during 2014-15			
Tonnes recycled in 2014-15	-	-	

Section B4 - Domestic Drop-off Services *(also called "mums & dads" waste service)*

[CLICK HERE TO VIEW
PHOTOS OF THIS SERVICE](#)

Waste that is self hauled by householders to facilities such as transfer stations, landfills, recycling depots that are **operated by your local government**. Include householder waste transported by cars, utes and trailers **BUT not** trucks.

	Domestic waste drop-off services	Domestic recycling drop-off services			Comments / additional information
	Mixed waste drop-off facilities	Dry recyclables Drop-off (includes paper/ cardboard, packaging containers)	Green waste drop-off	Hard waste or bulk rubbish drop-off (includes "junk shop" materials)	
Number of drop-off facilities operated by the local government	2	2	2		
Number of drop-off facilities operated by private operators or not-for-profit groups	0	0	0		
Tonnes collected for this service in 2014-15	1,924	214	511	30	All greenwaste is mulched and used on site.
Tonnes disposed to landfill from this service for 2014-15	1,828	1	10	5	
Tonnes recycled in 2014-15	96	213	501	25	

Section B5 - Public Place and Special Events

[CLICK HERE TO VIEW
PHOTOS OF THIS SERVICE](#)

Public Place services are permanent bins in public places, such as street litter bins and bins in public parks. Special event services are temporary bins that are put in place for events, such as bins for a festival or extra bins brought in for a sporting event.

	Public Place		Special Events		Comments / additional information
	Waste (Garbage)	Recycling	Waste (Garbage)	Recycling	
Does the local government provide this service? (either in-house or through a contractor)	Yes	No	Yes	No	
Tonnes collected for this service in 2014-15	2		1		
Tonnes disposed to landfill from this service in 2014-15	2		1		
Tonnes recycled in 2014-15	-	-	-	-	

Section C - Materials recycled from ALL domestic services in 2014-15

Either enter amount (in tonnes) recycled in each service column or enter a total amount in the "TOTAL" column.

Volume to weight conversion factors for various materials are available here [Conversion Factors](#)

Tonnages here should exclude contaminants/residuals. Generally, the sub-total for each type of service should not be more than recycling tonnes reported in Section B (shown at bottom of table).

Material type	Tonnes recycled					Comments / additional information
	Kerbside	Vergeside	Drop-off	Public Place & Special Events	TOTAL	
Paper and cardboard	226		213		439	Kerbside information from Avon Waste
Glass	60				60	
Plastics	13				13	
Aluminium packaging (cans)	6		1		7	
Aluminium non-packaging			1		1	
Steel packaging (cans)	4				4	
Steel non-packaging					-	
Other metals (copper, etc)					-	
Organics from mixed municipal waste					-	
Green waste			501		501	
Wood / timber					-	
Mattresses					-	
Textiles					-	
Tyres / rubber					-	
E-waste			21		21	
Waste oil			16		16	
Batteries			13		13	
Household Hazardous Waste			-		-	
Other - please specify			-		-	

Section D - Waste composition data

	Response	Comments / additional information
Was a waste audit undertaken in this local government area in 2014-15	No	

If "Yes", please provide a copy of the results to DEC with this form.

Section E - Annual cost and charges for collection / processing / disposal of domestic material (\$)

Section E1 - Annual cost of collection / processing / disposal (\$/Yr) 2014-15

Please enter either cost per service or total amounts, depending on the information available in your local government

Collection Service	Cost (\$/yr)					Comments / additional information
	Kerbside	Vergeside	Drop-off	Public Place	TOTAL	
Waste / garbage (includes AWT or RRF)	\$232,408		\$368,538		\$ 600,946.00	
Recycling	\$223,294		\$143,320		\$ 366,614.00	
Hard waste / bulk rubbish					\$ -	
Green waste					\$ -	
Sub-total	\$ 455,702.00	\$ -	\$ 511,858.00	\$ -		

Do not fill this table

CHECK

total by waste type \$ 967,560.00

total by waste service \$ 967,560.00

total direct entry \$ 967,560.00

All totals should be equal; otherwise, check your cost entries.

Section E2 - Charges for domestic services (\$/yr)

Collection Service	Charge	Unit	Comments / additional information
Kerbside & vergeside <u>waste</u> collection per residence	\$ 142	\$ per year	only operating for 10 months Normal cost \$170
Kerbside & vergeside <u>recycling</u> collection (if separate) per residence	\$ 117	\$ per year	only operating for 10 months. Normal cost \$140

Collection Service	Charge	Unit	Comments / additional information
Drop-off <u>waste</u> collection	60		per year
Drop-off <u>recycling</u> collection	0		must be sorted

Section F: Services to commercial premises provided by this local government

This includes services that the local government contracts private companies to provide to commercial premises on its behalf.

Section F1: Types of commercial services

	Waste (Garbage) services	Mixed recycling services	Paper & Cardboard only	Other	Comments / extra information
Does your local government offer this service to commercial premises in its LGA?	No	No	No	No	
Is the service provided in-house or outsourced to a contractor?					
Number of premises receiving this service					
Types of containers (if more than one type, please list)					
Frequency of collection (if more than one frequency, please list)					
Tonnes collected from commercial premises for this service during 2014-15					
Tonnes disposed to landfill from commercial premises for this service during 2014-15					
Tonnes recycled in 2014-15	0	0	0	0	

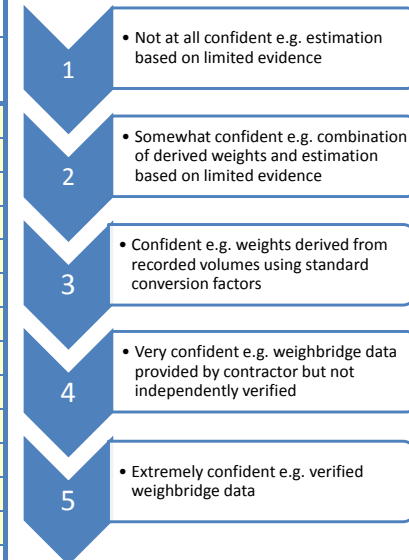
Section F2: Costs and charges for commercial services

	Waste (Garbage) services	Recycling services	Comments / extra information
Total annual cost to local government of providing commercial service (\$/yr)			
Total annual revenue from charges to commercial premises for services			
Total fortnightly bin capacity (m3) (total bin capacity*number lifts)			

Section G1 - General			
		Response	Comments / extra information
G1	Was any new waste or recycling infrastructure built in your local government area in 2014-15?	No	
G2	Does your local government recycle C&D waste from its own operations (including road upgrades)?	Yes	
G3	Does your local government recycle green waste from its own operations?	Yes	
G4	Does your local government have a Sustainable Purchasing Policy or a Green Purchasing Policy?	Yes	
G5	How much (in AU\$) did your local government spend on waste and recycling education programs in 2014-15?	500	

Section G2 NEW - Data accuracy

Section G2 - data accuracy		
Rate the accuracy of data provided by your local government to the census. Where 1 represents the lowest level of confidence in the accuracy of the provided data and 5 represents total confidence in the accuracy of provided data. See the diagram to the right for further details about the confidence scale		
Rate your confidence in the data reported for each of these services	Accuracy (1-5)	Comments / extra information
Kerbside - mixed waste to landfill	3	
Kerbside - mixed waste to AWT		
Kerbside - comingled recyclables	3	
Kerbside - separated organics & greenwaste		
Vergeside - greenwaste		
Vergeside - hardwaste		
Drop Off - mixed waste	2	
Drop Off - recyclables	2	
Drop Off - greenwaste	2	
Drop Off - other	2	
Public place bins	2	
Special events bins		
Other		



Section H - Littering and Illegal Dumping

This information is provided to the Keep Australia Beautiful Council.

		Response	Comments / additional information
H1	How many infringement notices were issued in the 2014-15 financial year for littering	2	
H2	How many infringement notices were issued in the 2014-15 financial year for illegal dumping	2	
H3	Did your local government commence court proceedings against anyone for illegal dumping in 2014-15?	No	
H4	What were the estimated costs of cleaning up illegally dumped material in your LGA during 2014-15? (\$)	1500	
H5	Does your local government have any programs in place aimed at preventing illegal dumping? If so, please provide a brief summary.	Yes	Hidden cameras, signage, surveillance by outside work force and inspection staff eg rangers, EHO. Shire Facebook reporting.
H6	Does your local government have any programs in place aimed at preventing littering? If so, please provide a brief summary.	Yes	Same as above.
H7	Does your local government use CCTV to record and prosecute littering and/or illegal dumping? If so, how many infringements / prosecutions have resulted from the evidence?	Yes	1 Infringement

Section I - Local government waste & recycling services

How much waste does your Local Government collect through its own activities, such as street sweepings, road works, roadside prunnings and park maintenance? Please combine tonnes if waste is collected from more than 4 service types.

	Service 1	Service 2	Service 3	Service 4	Comments/ extra information
Service description	parks & gardens				
Tonnes collected from this service in 2014-15	1,600				Parks and Gardens
Tonnes disposed to landfill from this service in 2014-15	1,350				
Tonnes recycled in 2014-15	250	-		-	Greenwaste recycled

Section I - NEW
Only complete this section if you
have collected the relevant data
during 2014-15

Frequently asked questions about the census

General questions about the Census

- What is the purpose of completing the Census?
- What does the Waste Authority do with the information?
- What are the benefits in collecting the data for my local government?
- Who should complete the Census?
- Where can I obtain the information I need to complete the Census?
- Why can't information submitted for quarterly reporting under the Waste Levy be used to complete the Census?
- Data reporting to government is onerous, why are various requirements not merged?
- What can I do if I do not understand some of the terms used?
- Do I need to complete all the boxes in the worksheets?
- What is the average weight of waste in a green topped, domestic, 240L bin?
- Our local government does not send waste / recyclables to a facility that has a weighbridge, how do we handle data in cubic metres or number of skips/loads?

Questions about managing data from several waste services

- Our local government provides kerbside, vergeside and drop-off facilities
 - Our drop-off facilities / landfills are unmanned and waste disposed is not recorded. We **do not** provide kerbside or vergeside collection services, how do I fill out data for drop-off / landfill in this case?
 - Our drop-off facilities and/or landfills are unmanned and waste disposed is not recorded. We **do** provide kerbside or vergeside collection services and waste is disposed of to the drop-off / landfill sites, how do I fill out data for drop-off / landfill

Questions about handling data from a mixture of domestic and commercial services

- Why should my local government know the number of bins provided to householders & commercial premises?
 - Our waste contractor / in-house collection services only provides one quantity for all waste collected. How can I breakdown (estimate) this figure into waste collected from commercial premises and waste collected from households?

Questions about public place and / or special event services

- Our waste contractor / in-house collection services only provide one quantity for all waste collected. How can I breakdown (estimate) this figure into waste collected from public place bins or special event bins and waste collected from households?

Questions about estimating material streams within the recyclables

- Our local government does not receive a breakdown of tonnes of materials recycled?

Questions about cost data

- Where can I find information about costs and charges ?

Contact

Please email enquiries about the census to waste.data@DER.wa.gov.au

General questions about the Census

What is the purpose of completing the Census?

- A To collect quality data in a consistent format for reporting, identifications of trends, opportunities and risks for local and state governments
- A To identify and track issues and priorities to inform policy, programs, funding resources
- A To measure progress against your local government waste management objectives and targets, and KPIs outlined in the WA Waste Strategy

What does the Waste Authority do with the information?

- A Data is used to identify trends, issues and opportunities
- A Data is used to inform policy, develop programs and fund initiatives
- A Data is collated and reported on behalf of local governments to other agencies including State and Australia Governments (e.g. Survey of WA Recycling Activity, NEPM Used Packaging Materials, Household Hazardous Waste program, National Litter Index, National Greenhouse and Energy Reporting Scheme (NGERS))

What are the benefits in collecting the data for my local government?

- A Enables access to funding from the WARR Account
- A Enables measurement of progress ainst your local government waste management objectives and targets
- A Facilitates development of business cases for receipt of funding (internal and external) for waste and recycling initiatives, plant and equipment, infrastructure
- A Identifies areas for improvement / change / cost savings to operational activities

Who should complete the Census?

- A Ideally, the Census should be completed by a local government officer who has the task of completing the Census included in their job description.
- A However, the Census could be completed by a dedicated Waste Officer, Environmental Health Officer, Administrator, Accounts Officer, member of Engineering / Works / Waste Services or a combination of staff members (depends on who holds the relevant information)

Where can I obtain the information I need to complete the census?

<http://www.wasteauthority.wa.gov.au/programs/data/where-to-find-waste-and-recycling-data/>

Why can't information submitted to quarterly reporting under the Waste Levy be used to complete the Census?

- A The Waste Levy data is a 'subset' of data required for the Census, only data on solid waste to landfill from the metropolitan area is reported

Data reporting to government is onerous, why are various requirements not merged?

- A Some data reporting requirements have been merged including those required including national reporting requirements under the NEPM-UPM legislation, reporting to Keep Australia Beautiful Council and WALGA's waste and recycling data requirements.

What can I do if I do not understand some of the terms used?

- A The final worksheet is a 'Glossary' and explains terms used in the Census
- A Cells where there is a red triangle visible in the corner indicates that an explanatory comment has been inserted (refer to below example)

Section B1 - Domestic kerbside collection services

Domestic kerbside services are containerised, regular services where waste or recycling are collected from the kerb in front of the residence.

[CLICK HERE TO VIEW PH SERVICE](#)

	Kerbside waste (garbage) collection		Kerbside collection of recyclable materials			
	Mixed waste collected and transported directly to landfill or transported to landfill via a transfer station	Mixed waste collected and processed in an AWT (or Resource Recovery Facility)	AWT Alternate Waste Technology: These are plants for processing mixed putrescible waste, such as the facilities operated by SMRC, MRC, Dicom and Atlas. They are sometimes called "Resource Recovery Facilities"		Recycling - containers only	Recycling - other
Does your local government provide this service to your residents?	No	No	No	No	No	No
If so, is the service run in-house or outsourced to a contractor?						
Percentage of households in the LGA that receive this service (%)						
Resident participation rate (%)		% Households The default value is 100.				
Type of container						
Size of container						
Colour of container						

SUMMARY Section A Section B1&B2 Kerbside Section B3 Vergeside Section B4 Drop-off Section B5 PR&SE

generated by Florence's

Do I need to complete all the boxes in the worksheets?

- A No, only complete information relevant to services provided by your local government
- A For example, if your local government provides only "Co-mingled dry recycling" then complete only this box and no others under 'Kerbside collection of recyclable materials'

Section B1 - Domestic kerbside collection services

Domestic kerbside services are containerised, regular services where waste or recycling are collected from the kerb in front of the residence.

[CLICK HERE TO VIEW PHOTOS OF THIS SERVICE.](#)

	Kerbside waste (garbage) collection		Kerbside collection of recyclable materials			
	Mixed waste collected and transported directly to landfill or transported to landfill via a transfer station	Mixed waste collected and processed in an AWT (or Resource Recovery Facility)	Co-mingled dry recycling	Green waste collection	Recycling - containers only	Recycling - paper & cardboard only
Does your local government provide this service to your residents?	No	No	Yes	No	No	No
If so, is the service run in-house or outsourced to a contractor?						
Percentage of households in the LGA that receive this service (%)			Please select "Yes" or "No" The default value is "No"			
Resident participation rate (%)						
Type of container						
Size of container						
Colour of container						
Frequency of collection						
Tonnes collected at kerbside for this service in 2011-12						

SUMMARY Section A Section B1&B2 Kerbside Section B3 Vergeside Section B4 Drop-off Section B5 PFAS

Our local government does not send waste / recyclables to a facility that has a weighbridge, how do we handle data in cubic metres or number of skips/loads?

- A Alternatively, in-house volumetric to weight conversion factors can be used if these are likely to be more accurate for your waste streams

What is the average weight of waste in a green topped, domestic, 240L bin?

- A Data from waste audits conducted in your local government should be used as a more specific and localised average weight where available

Questions about managing data from several waste services

Our local government provides kerbside, vergeside and drop-off facilities

- A Each Census worksheet pertaining to services provided by local governments must be completed
- A Data needs to be reported separately so as to avoid duplication

Our drop-off facilities / landfills are unmanned and waste disposed is not recorded. We do not provide kerbside or vergeside collection services, how do I fill out data for drop-off / landfill in this case?

- A Data can be estimated from information contained in waste audits conducted and based on population
- A Data can be estimated from landfill surveys
- A Data can be estimated from sizing of landfill trenches and estimated capacity remaining

Our drop-off facilities and/or landfills are unmanned and waste disposed of is not recorded. We do provide kerbside or vergeside collection services and waste is disposed of to the drop-off / landfill sites, how do I fill out data for drop-off / landfill in this case?

- A Data for kerbside / vergeside could be completed based on most accurate data recording system available eg. weighbridge tonnages, contractor records, estimation based on number of bin lifts and residents, estimation based on waste audit data and population
- A Data for drop-off facilities / landfill could be estimated based on an average (possibly estimated) amount of waste per drop-off and the number of visits to the facility
- A Note that it is very important to be clear about any assumptions made when estimating information in this way and to record all assumptions and methods carefully for transparency and to enable year on year comparisons

Questions about handling data from a mixture of domestic and commercial services

Why should my local government know the number of bins provided to householders & commercial premises?

- A To calculate waste disposed of by residents and commercial premises
- A To accurately reflect the cost of providing waste and recycling services to both residential and commercial customers
- A To ensure services provided by contractors and invoicing is accurate and reflective of service being carried out

Our waste contractor / in-house collection service only provides one quantity for all waste collected. How can I breakdown (estimate) this figure into waste collected from commercial premises and waste collected from households?

- A Only report waste collected from households in Section B1&2 of the Census and report waste collected from commercial premises in Section F
- A Your local government has records (generally from Accounts) of how many bins are provided to domestic premises and how many are provided to commercial premises
- A Estimation of household and commercial waste can be calculated based on the number of bins provided and assumed weight of bins (refer to example calculations below). Note that this assumes all bins are collected at the same frequency (e.g. weekly). If, for instance, commercial bins are collected twice weekly, multiply the commercial capacity by the number of collections per week (e.g. capacity x 2 in this example).
- A Your waste contractor (who will have as part of their contract documentation the number of bins at commercial & domestic premises) can also provide this estimation

Example method of estimating waste collected from commercial premises

	Number of Bins		Total Capacity m³ (capacity x bins)		Total (domestic & commercial)
Bin Capacity (m³)	Domestic	Commercial	Domestic	Commercial	Bin capacity x number of bins
4.5	-	50	-	225	225
3	-	100	-	300	300
1.5	-	50	-	75	75
0.24 (240 L)	59,000	1,000	14,160	240	15,000
Total Capacity			14,160	840	15,000 m³
Estimated Service Proportion			(14,160 ÷ 15,000) x 100 94%	(840 ÷ 15,000) x 100 6%	

Total waste collected (tonnes per annum)			51,126 tonne p.a.
Calculation	0.94 x 51,126	0.06 x 51,126	
Estimated waste collected (For reporting to Annual Census)	48,263 t p.a.	2,863 t p.a.	

Questions about public place and / or special event services

Our waste contractor / in-house collection services only provide one quantity for all waste collected. How can I breakdown (estimate) this figure into waste collected from public place bins or special event bins and waste collected from households?

- A Only report waste collected from households in Section B1&2 of the Census and report waste collected from public place and special events in Section B5
- A Your local government has records (generally from Accounts) of how many bins are provided to domestic premises
- A Your local government has records (generally from Engineering/Waste/Works/Parks & Services or Accounts) of the number and type of public place and / or special event bins
- A Estimation of household and public place or special event bins waste can be calculated based on the number of bins provided and assumed weight of bins (refer to example calculations below)
- A Your waste contractor (who will have as part of their contract documentation the number of bins at domestic premises, special events or public place recycling) can also provide this estimation

Example Method 1 of estimating waste collected from public place bins

a		Number of public place bins	50
b		Estimated average weight per bin (tonnes)	0.015
c		Number of times collected per year	52
d	a x b x c	Estimated total tonnes collected from PP service	39

Example Method 2 of estimating waste collected from public place bins (if all bins are the same size on a given collection round)

a		Number of PP bins	50
b		Number of time serviced per week	2
c	a x b	Total number of PP bin services per week	100
d		Total number of ALL services per week	1000
e	(c ÷ d) x 100	% PP bin Services	10%
f		Total of all waste collected from run	5000
g	f x e	Estimated total tonnes collected from PP service	500

Questions about estimating material streams within the recyclables

Our local government does not receive a breakdown of tonnes of materials recycled?

- A This data can be requested from the disposal facility (note: data will likely be provided based on a percentage calculation of tonnages disposed of and overall tonnages of a particular material recycled from the facility)
- A Data can be requested from your waste contractor (if relevant) as the waste contractor will be invoiced / reimbursed for recyclables disposed of inclusive of contamination / residuals sent to landfill

Questions about cost data

Where can I find information about costs and charge?

- A Your local government's Accounts section will have information about waste and recycling costs and charges

Conversion factors

The factors below are for uncompacted materials, unless specified otherwise. If factors other than those listed here are used, please indicate factor and reference under the Comments column.

Converting volume to weight:

To calculate tonnes from m³, multiply the conversion factor by the volume (in m³).

Material	Tonnes per m ³	Comments
Aluminium cans - whole	0.026	
Aluminium cans - flattened	0.087	
Aluminium cans - baled	0.154	
Car Batteries	0.375	1 car battery= 5 kg 75 car batteries = 1 m ³
Carpets (uncompacted)	0.3	
Cement sheet (uncompacted)	0.5	
Ceramics (uncompacted)	1	
Cobbles/boulders	1.4	
Co-mingled containers (uncompacted plastic, glass, steel and aluminium cans)	0.063	
Garden/vegetation (uncompacted)	0.15	
Glass bottles - whole	0.174	
Glass bottles - semi-crushed	0.347	
Greenwaste processed	0.3	
Greenwaste unprocessed	0.15	
Greenwaste unprocessed compacted	0.26	
Inert (mixed) waste	1.3	
Metals - ferrous metal scrap	0.5	
Metals - steel, trimmings	1.2	
Other Textiles	0.15	
Putrescible (mixed) uncompacted waste	0.3	
Putrescible (mixed) compacted waste	0.425	
Paper / Cardboard	0.1	
Plaster board	0.2	
Plastic containers - whole	0.01	
Plastic containers - whole, some flattened	0.013	
Plastic containers - baled	0.139	
Rubber	0.3	
Steel cans - whole	0.052	
Steel cans - flattened	0.13	
Steel cans - baled	0.226	
Wood / Timber	0.3	
Waste oil	0.8	1000 li oil/paint= 1 m ³

Converting number of items to weight:

Tyres		
Motorcycle	4kg	per tyre
Passenger	8kg	per tyre
Light Truck	16kg	per tyre
Truck	40kg	per tyre
Mattress - queen size	20kg - 30kg	dry weight
Appliances		
Average of all	71kg	
Air conditioner	30kg - 90kg	
Dishwasher	40kg - 50kg	
Dryer (clothes)	30kg - 60kg	
Freezer	30kg - 90kg	
Microwave oven	10kg - 20kg	
Refrigerator	30kg - 121kg	
Washing machine	60kg - 80kg	
Ovens	40kg - 60kg	

Sources: Resource Smart - Victoria; Resource Recovery Rebate Scheme; Waste Wise event toolkit; WARRA administration policy; Tyre Stewardship Australia; US EPA; United Nations University

Conversion Factors for hauled waste and recycling materials using vehicles

Vehicle Type	Weight	
	Putrescible	Inert
Single axle trailer, ute, car and van	0.3	1.3
Tandem axle trailer	0.6	2.6
Open trucks, Gr wt <5t	0.9	3.9
Open trucks, Gr wt >5t, <12t	1.8	7.8
Open truck – 3 axles (“6 wheeler”)	3	13
Open truck – 4 axles (“8 wheeler”)	3.6	15.6
Open truck – 5 axles (“Bogy Semi” or “6 wheel pig trailer”)	5.4	23.4
Open truck – 6 axles (“Tri-axle Semi”)	6	26
Open truck – 8 axles	7.8	26
Open truck – 9 axles (“8 wheeler plus trailer”)	9.6	41.6
Open truck – 11 axles (“Road Train”)	12	52
Bins 2-4m3	1.2	3.9
Bins 4-8m3	2.4	7.8
Bins 8-12m3	5	13
Bins 12-19m3	6.5	20.15
Bins > 20m3	8	22
Compactor trucks <8m3	1.7	5.2
Compactor trucks 8-12m3	4.25	13
Compactor trucks 12-18m3	4.34	20.15
Compactor trucks 18-32m3	10.6	32.5
Compactor trucks >32m3	14.9	45.5

Facilities that do not have a weighbridge should use these conversion factors to report all waste entering or leaving the facility

Source: Excerpt fromDEC Landfill Levy Administration Policy July 2009, *Transport mode weight calculations*

Glossary

Term	Explanation
Ad hoc events	See 'special events'
Annual charges	<p>Waste (kerbside and vergeside): \$/yr/Premises – annual fee householder pays for waste collection service, may be provided in a breakdown in rates fees.</p> <p>Kerbside recycling: \$/yr/premises – annual fee householder pays for recycling collection service, may be provided in a breakdown in rates fees.</p> <p>Drop-off waste or recycling charges: - fees paid by householder (i.e. general public) to dispose of waste or recycling (e.g. disposal fees for trailer of waste to be disposed of at landfill)</p>
AWT	Alternate Waste Technology: These are plants for processing mixed putrescible waste, such as the facilities operated by SMRC, MRC, DiCom and Atlas. They are sometimes called "Resource Recovery Facilities"
Bulk rubbish collection	See hard waste collection
C&D waste	Construction and demolition waste. Material generated from commercial, government or residential building sites
Co-mingled dry recyclables	Common recyclables, mostly packaging; such as glass, plastics, aluminium & steel cans, cardboard, paper, liquid paperboard (milk cartons). 'Dry recyclables' excludes organic material. For most local governments in WA, this is known as the "yellow top bin" collection.
Commercial & Industrial waste	Waste originating from commercial and/or industrial activities (non-municipal and not construction & demolition)
Composting	The biological process that converts organic material into a useful soil additive. This process diverts organic material from landfill and so prevents the production of methane (a powerful greenhouse gas).
Contamination	Waste component of recyclables that is usually sent to landfill
Contractor invoices	Financial information that often contains waste tonnage / volume data. Often received monthly
Conversion Factors	Calculation used to convert a known volume of material to a weight. Factors are specific to the type of waste and level of compaction
DEC	Former: Department of Environment and Conservation, Western Australia. www.dec.wa.gov.au
DER	Department of Environment Regulation
Dockets	Dockets / tickets / receipt which provide evidence of waste delivery to a facility (landfill, transfer station etc.) usually provides volume or tonnage information and costs
Domestic (or 'household') waste or recycling	Waste or recyclables generated from households collected by Local Government or their contractors.
Drop-off facility	Site where residents can bring their waste or recyclables for disposal. Often located at the local landfill or transfer station
E-waste	Electronic or electrical waste (anything with a plug or battery), such as televisions (CRTs), computers, fridges, printers, kettles, irons, microwaves etc.

	In Australia this is often used to refer to goods such as computers and their peripherals and televisions covered by product stewardship legislation.
Evaluation	Assessing data sets against relevant benchmarks and/or targets to establish the overall performance of a programme or project (usually carried out at key milestones for a project or at specific points in a year)
Financial year	Year running from 1 st July to 30 th June (e.g. 01/07/2012 – 30/06/2013) inclusive.
Fluorescent tubes/lamps	Light tubes or compact fluorescent (energy efficient) globes (rather than standard incandescent light globes)
FORC	The Forum of Regional Councils (FORC) comprises the five metropolitan Regional Councils and the City of Greater Geraldton who have agreed voluntarily to work to promote areas of common interest associated with waste management.
General waste	Material that is intended for disposal to landfill or AWT, normally what remains after the recyclables have been collected separately. (Also mentioned under 'Mixed waste')
Green Purchasing Policy	See 'sustainable purchasing policy'
Green waste	Plant material generated from gardens and parks e.g. grass clippings and vegetation prunings.
Gross (weight)	Total (laden) weight of vehicle and contents (waste)
Hard waste (see also bulk waste and vergeside collection)	The collection of bulky items of discarded 'junk' (e.g. furniture, TVs, barbeques etc.) from households on a regular, but infrequent basis (generally about 4 times per year).
Household	Occupants of a dwelling whether a house, flat, unit or farm with its own street address (or lot number for some rural dwellings)
Illegal dumping	A particular type of littering where people go out of their way to dump rubbish. It can be small bags of rubbish in urban streets and parks or trailer loads of material in National Parks or bushland reserves. Illegal dumping can be prosecuted under the Litter Act 1979 and can attract an infringement notice of up to \$500 or up to thousands of dollars if taken to court
Inert waste	Inert waste is neither chemically or biologically reactive and will not decompose; examples include glass, sand and concrete.
KABC	Keep Australia Beautiful Council. A movement active in all states and territories to lead, challenge and inspire all Australians to strive for a sustainable and litter free environment
Kerbside collection	A regular, containerised collection services (often a wheelie bin) where the waste or recycling is collected from outside a resident's dwelling. Can apply to either recycling or general waste (and in a few instances green waste)
Kerbside green waste collection	Collection of green waste (garden waste) in a separate container to the waste bin and separate from the recycling bin. This is a different service to the vergeside green waste collection, which is a bulk, non-containerised collection. Vergeside data is recorded in a separate section.
LG	Local Government
LGA	Local Government area.

Liquid paperboard	Composite packaging composing mainly of reconstituted paper fibres (e.g. milk cartons); often recyclable depending upon local infrastructure.
Litter	Rubbish left in public places; not disposed of into a bin. Common litter items include: cigarette butts, chip and confectionery wrappers, fast food containers and drinks bottles.
MGB	Mobile Garbage Bin – A wheeled bin with a lid often used for kerbside collection of waste or recyclables. (Often called a ‘wheelie bin’).
Mixed recyclables	Sometimes referred to as ‘commingled recyclables’ any of: bottles, cans, jars, cardboard and paper collected mixed together for recycling
Mixed waste	Waste (general waste and / or recyclables sent to landfill or AWT).
Monitoring	An ongoing process of collecting data and other information that can feed into an evaluation process
MRF	Materials Recovery Facility. Plant and equipment for sorting and pre-processing materials from the waste stream for resource recovery.
Municipal waste	Waste derived from residential and public activities, collected by local governments (or their agents) from households, public places and public buildings. Municipal waste may include waste from small commercial premises or other similar activities where this is collected as part of the standard local government service.
MWAC	Municipal Waste Advisory Council: a standing committee of WALGA with delegated authority on municipal waste issues.
NEPM	National Environment Protection Measure: broad framework-setting statutory instruments which outline agreed national objectives for protecting or managing particular aspects of the environment.
Nett (weight)	Resultant weight of contents removed. $\text{Gross Wt} - \text{Tare Wt} = \text{Nett Wt}$
Organic waste	Separated food and/or ‘green’ material (e.g. grass clippings or vegetation prunings).
Percentage of households in the LGA that receive this service (%)	This is the percentage of households in the local government area that the service is provided to. The number may be less than the total number of households in the area, depending on how widely the service is provided. For example, in rural Councils, a kerbside collection service might only be provided to those households within certain towns, but not to those living outside the town or in very small towns. If you don't provide the service, please leave blank or put "0".
Permanent public place	See public place services
Participation rate (%)	This is the percentage of households that have a collection service that typically put their bin out on collection day. This is useful to understand when conducting bin audits since some householders (particularly single or small households) may not ‘present’ their bin for collection every week if it is not full (most common for recycling bins). Also referred to as 'presentation rate'.

Public place services	Public place services are waste bins (and can be public place recycling bins) permanently located in public areas such as in parks and on the street
Putrescible waste	Putrescible waste comprises waste capable of decomposition; examples include food organics, green waste, manures, paper and cardboard.
Receipt	Refer to “docket”
Recyclable	Able to be recycled; that is, that local infrastructure is available for collection, sorting and transport to a recycling facility
Recyclables	Materials that can be collected separately from the general waste and sent for recycling. For the purposes of this report it incorporates container glass, plastic, ferrous and non-ferrous metals, paper, cardboard and green waste, remembering that ‘recyclable’ is a location-specific term
Recycling	A set of processes (including biological) that converts solid waste into useful materials or products, net of contaminants/residuals disposed
Residual waste	Remaining waste that is sent to landfill once the recyclables have been sorted out or the biodegradable organic fraction has been recovered
Reuse	Recovering value from a discarded resource in its original state without reprocessing or remanufacture (e.g. moving clean sand from one construction site to another). The term “reuse” can also be applied in circumstances where an otherwise disposable item is replaced by a more durable item hence avoiding the creation of waste (e.g. using a ceramic coffee mug in place of disposable cups).
Separate paper and cardboard collection	Collection of paper and cardboard in a separate container to the waste bin and a separate container to other recyclables
Separate recyclable containers only	Mixed dry recyclable bottles, jars, cans etc. such as glass, plastics, aluminium and steel (excludes paper and cardboard)
Service provider / contractor	Private waste company contracted to undertake waste and / or recycling collection and transportation to disposal or recycling
Solid waste	Waste products and materials that are ‘spadeable’.
Special event	An event held by the local government that will require additional bins to be provided on a one-off or <i>ad hoc</i> basis (e.g. concerts, fireworks displays or other public gatherings).
Sustainable purchasing policy	<p>Formal policy endorsed by the LG CEO that provides a framework for considering the some or all of the following factors when buying goods or services:</p> <ul style="list-style-type: none"> · Practices / operations that avoid or minimise consumption of resources · Minimise and manage potential environmental and social impacts associated with production of goods or delivery of services · Minimise social and environmental impacts of whole-of-life of goods and services · Provides value for money over whole-of-life · Is locally produced
Tare (weight)	Un-laden weight of vehicle once waste has been removed
Ticket	Refer to “docket”
Tonnage	Weight of material in metric tonnes (equal to 1000 kg)

Tonnes collected at kerbside for this service	This is the total amount of material collected for this service during the financial year. This includes any contamination that is collected. To calculate this, you will need the weighbridge records from your collection vehicles. If you use a contractor, they should report this back to you regularly. If your local government does not use a weighbridge, then estimate the amount in cubic metres (m3) and use the conversion factors at the end of this document to estimate the tonnes.
Tonnes disposed to landfill from this service	This is the amount of material collected in this service that ends up in landfill. For most waste services, that will be the total amount, unless the material is processed in an AWT facility first. For recycling services, this is the contamination that is collected as part of the service and then separated out in the MRF or by the recycling contractor, and then disposed to landfill.
Vergeside service	Vergeside collection services are bulk, infrequent (~every 4-6 month or on demand) services. Material is collected from residential 'vergesides' either non-containerised or in a skip provided by the Local Government. Vergeside services may relate to green waste or hard waste
WALGA	Western Australia Local Government Association. WALGA is the peak industry body that advocates on behalf of ~140 WA Local Governments and negotiates service agreements for the sector. WALGA is not a government department or agency. www.walga.asn.au
Waste	Any substance or object the holder discards, intends to discard or is required to discard. Generally relates to material where the ultimate end point is disposal rather than recycling
Waste audit	Detailed analysis of waste using physical sorting and weighing to identify composition and weight of each material in the waste stream.
Waste Authority	Statutory body to drive strategic planning and policy development for waste in WA. The Waste Authority was established by the Waste Avoidance and Resource Recovery Act (2007).
Waste composition	The proportion of different materials or products present in a given waste streams e.g. 10% glass, 50% general waste, 30% paper and cardboard, 10% plastics.
Waste generation	The sum of products and materials that are recycled, recovered for energy or disposed to landfill.
Weighbridge	Weighing device that vehicles drive onto; often used at landfill gatehouses to accurately weigh the waste delivered