Executive Meeting

Wednesday 29 May 2019

Council Chambers, Shire of Merredin,

commencing at 10.07am

MINUTES

WEROC | Wheatbelt East Regional Organisation of Councils
Incorporating the Shires of Bruce Rock, Kellerberrin, Merredin, Westonia and Yilgarn

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WEROC

Wheatbelt East Regional Organisation of Councils

Shires of Bruce Rock, Kellerberrin, Merredin, Westonia, Yilgarn

An in-person Executive Meeting commencing at 10.07am

MINUTES

1. OPENING AND ANNOUNCEMENTS

WEROC's CEO, Peter Clarke, opened the meeting at 10.07am, welcoming all in attendance.

2. RECORD OF ATTENDANCE AND APOLOGIES

2.1 Attendance

Mr Peter Clarke, CEO Shire of Yilgarn and CEO WEROC (Chair)
Mr Darren Mollenoyux, CEO Shire of Bruce Rock
Mr Greg Powell, CEO Shire of Merredin
Mr Jamie Criddle, CEO Shire of Westonia

Ms Helen Westcott, Joint Executive Officer

2.2 Apologies

Mr Raymond Griffiths, CEO Shire of Kellerberrin

2.3 Guests

Mr Mark Bondietti, Policy Manager Transport and Roads WALGA
Mr Mark Imrie, Managing Director, BSC Solar
Mr Peter Van Der Merwe, local BSC Solar representative
Ms Caren McLaren - Business Development and Sales Executive - Australia, Power Ledger

3. PRESENTATIONS/MEETINGS

3.1 Meeting with Mr Mark Bondietti, Policy Manager Transport and Roads WALGA (Attachment)

The issue of damage to local roads by farmers carting "morrell lime" was raised by the Shires of Merredin and Westonia at the WEROC Executive Meeting held 27 March 2019. At that time, it was agreed that an invitation would be extended to Mark Bondietti, WALGA's Policy Manager Transport and Roads to meet with Member Councils on the issue.

Mark Bondietti has accepted WEROC's invitation to meet with WEROC and discuss what measures could be done to limit this activity.

A copy of Mark Banditti's PowerPoint presentation forms an attachment to the minutes pf the meeting.

Mark Imrie, Mr Peter Van Der Merwe and Ms Caren McLaren entered the meeting at 12.00noon.

3.2 Establishment of Solar Farms – Presentation by BSC Solar and Power Ledger (Attachment)

At the WEROC Council Meeting held in Bruce Rock on 1 May 2019 Greg Powell, CEO Shire of Merredin, advised the meeting he had recently met with a local representative from BSC Solar. BSC Solar are seeking expressions of interest from local governments across the Wheatbelt to be involved in small scale solar farm projects which would see participating local governments develop a revenue stream through the sale of power generated by the solar farms established on Council owned land.

It was agreed that an invitation should be extended to representatives of BSC Solar to meet with the WEROC Executive.

BSC Solar will be joined by Power Ledger for this meeting/presentation.

Representatives from BSC Solar include:

- Mark Imrie, Managing Director, BSC Solar - Mark is Founder and Managing Director of BSC Solar in Western Australia; and
- Mr Peter Van Der Merwe, local BSC Solar representative

Ms Caren McLaren, Business Development and Sales Executive – Australia with Power Ledger will also be participating in discussions with the WEROC Executive.

The PowerPoint presentation used during the presentation/discussions with the WEROC Executive forms and attachment to the minutes.

RESOLUTION: **Moved: Greg Powell** **Seconded: Jamie Criddle**

That representatives from BSC Solar and Power Ledger be invited to address the WEROC Council on Wednesday 26 June to explain the potential benefits to Member Councils in developing small scale solar farms on Council owned land to assist in the development of a revenue stream through the sale of power generated by the solar farms.

CARRIED

4. MINUTES OF MEETINGS

4.1 Minutes from the Executive Meeting held Wednesday 27 March 2019 (Attachment)

Minutes of the Executive Meeting held Wednesday 27 March 2019 have previously been circulated to Member Councils.

RECOMMENDATION:

That the Minutes of the Executive Meeting held Wednesday 27 March 2019 be confirmed as a true and correct record.

RESOLUTION: **Moved: Darren Mollenoyux** **Seconded: Greg Powell**

That the Minutes of the Executive Meeting held Wednesday 27 March 2019 be confirmed as a true and correct record.

CARRIED

4.2 Business Arising – Status Report for May 2019

Executive Meeting Wednesday 28 November 2018

5.5 Permits Allowing Movement of Towed Agricultural Implements on Public Roads

RESOLUTION: Moved: Greg Powell Seconded: Darren Mollenoyux

That WEROC write to the Local Government Agricultural Freight Group to seek an update the matter of permits allowing movement of towed agricultural implements on public roads.

CARRIED

The Executive Officer provided an update on this issue to the WEROC Executive held 27 March 2019.

A further update can be provided as the matter was considered at a meeting of the Local Government Agricultural Freight Group held 2 May 2019. Heavy Vehicle Services officers at the meeting advised as follows with respect to the issue of towed agricultural implements:

- A review of towed agricultural implements is being undertaken by the Department of Transport as the Act and Regulations fall under their jurisdiction.
- Main Roads liaises with DoT;
- The review has been given some priority, however the team undertaking the review is currently involved in a more urgent matter and the review has not progressed very far; and
- A recent update (31 December 2018) to the Heavy Vehicle Agricultural Pilot Authorisation now allows agricultural pilots to accompany an oversize agricultural vehicle or towed agricultural implements up to 7.5m in width (up from 6.0m). As before the authorisation applies to local roads and some limited movement on State roads.

Do Member Councils wish to take any further action on this issue now the above information has been provided?

It was agreed by the WEROC Executive that no further action on this issue was required.

Wheatbelt Communities Inc Meeting Wednesday 27 February 2019

7.4 Demos from the Wheatbelt

RESOLUTION: Moved: Jamie Criddle Seconded: Greg Powell

That Wheatbelt Communities Inc make a donation of $1,000 to West Australian Music (WAM) in support for one of its projects, Demos from the Wheatbelt, subject to WAM providing advice on:

a) The level of funds being sought from participating Councils across the Wheatbelt; and
b) What happens to a donation should the project not proceed due to lack of sufficient funding.

CARRIED

At the Wheatbelt Communities Inc Meeting held 1 May 2019 the Executive Officer provided answers to the questions raised at the previous meeting.

It was agreed that the donation to the WAM project should proceed.

WEROC's contribution towards the Demos from the Wheatbelt has been made and the group will be recognised as a sponsor on all promotion material as well as having its logo on the CD cover.

The Executive Officer has circulated information to Member Councils on the CD launch to take place in Merredin on Friday 30 August 2019.

Council Meeting Wednesday 27 February 2019

6.3 Ongoing Development of the WEROC App and Website

RESOLUTION: Moved: Mr Clarke Seconded: Mr Mollenoyux

That WEROC:

1. *Subject to successful grant funding applications to assist it in resourcing the WEROC App Marketing Project, WEROC look to fund the project in the 2019/2020 financial year and beyond; and*
2. *Go2GUIDES be advised of WEROC's decision.*

CARRIED

No further work on this has been undertaken since WEROC Council met on 1 May 2019.

Executive Meeting Wednesday 27 March 2019

5.3 The Future Governance for WEROC and Wheatbelt Communities Inc

RESOLUTION: Moved: Jamie Criddle Seconded: Greg Powell

That the report be noted and CEOs be requested to review the WEROC 2018/2019 MOU and current Wheatbelt Communities Inc Constitution and provide comment back to the Executive Officer, by Friday 12 April 2019, on any issues that need to be considered/amended in developing the proposed WEROC Inc Constitution.

CARRIED

This matter was again considered by WEROC Council when it met on 1 May 2019 at which time Member Councils resolved as shown below:

RESOLUTION: Moved: Cr Rajagopalan Seconded: Mr Clarke

That:

1. *The Executive Officer prepare a discussion paper on WEROC's future governance which would include a comparison of the Wheatbelt Communities Inc and Warren Blackwood Alliance constitutions;*
2. *A comparison of the Wheatbelt Communities Inc and Warren Blackwood Alliance constitutions be distributed to all Member Councils for comment, with all comments to be received by close of business on Friday 7 June 2019; and*
3. *The discussion paper be tabled for discussion at the WEROC Council Meeting to be held in Kellerberrin on Wednesday 26 June 2019.*

CARRIED 6/1

Work has commenced on preparing a discussion paper. A request has been made for a word copy of the Warren Blackwood Alliance Constitution.

One comment that can be made at this time is that comparing the WEROC MoU against the Wheatbelt Communities Inc (WCI) Constitution is quite difficult as the two documents are very different in nature and purpose. The MoU was developed by six Councils (the Shire of Tammin was previously a Member of WEROC) around 15-20 years ago, being premised on what was thought to be required at the time. The WCI Constitution is constrained by legislation that requires certain provisions to be included and were never contemplated in the MOU.

The discussion paper will be available for discussion at the WEROC Council Meeting scheduled for Wednesday 26 June 2019.

5.5 Group Valuation Services

RESOLUTION: Moved: Jamie Criddle Seconded: Raymond Griffiths

That subject to obtaining a further quotation and Member Councils being satisfied as to the cost comparisons with previous valuations, the WEROC Executive supports WEROC Member Councils undertaking a group valuation of the 3 asset classes.

CARRIED

Peter Clarke, CEO Shire of Yilgarn, advised the WEROC Council meeting on 1 May 2019 that the meeting that the Shire had sought two (2) other quotes as requested but had as yet received no response from the organisations contacted. He undertook to try and obtain additional quotations as had been previously agreed to.

Following the 1 May meeting the Shire sought additional quotations but without success.

Member Councils were advised that Griffin Valuations were the only company to have provided a quotation. Member Councils were asked whether they were still willing to be involved as per agreement at the March meeting of the WEROC Executive. All Member Councils were in agreement to engage Griffin Valuation to undertake the group valuation process.

6.3 Invitation to Nominate for the 2019 Western Australian Regional Achievement and Community Awards

Member Councils agreed they were happy for WEROC to be nominated again.

Rural Health West has advised that the invitation to nominate will be listed for discussion at the Wheatbelt Medical Student Immersion Program Steering Group Meeting to be held on Thursday 9 May 2019.

The Steering Group Meeting has been rescheduled, with the meeting now to be held on Thursday 6 June.

6.7 Raising Brand Awareness – Raising WEROC's Public Profile

RESOLUTION: Moved: Greg Powell Seconded: Jamie Criddle

That the WEROC Executive gave in-principle agreement to proceed utilising social media more effectively.

CARRIED

The Executive Officer had hoped to meet with Miranda Wallace ahead of the WEROC Executive Meeting but this was not possible as she has resigned her position with the Shire of Merredin.

Council Meeting Wednesday 1 May 2019

5.3 WEROC 2019/2020 Budget

RESOLUTION: Moved: Cr Hooper Seconded: Mr Criddle

1. *That the combined Wheatbelt Communities Inc and WEROC Draft Budget for the year ending 30 June 2020, as presented, with a general subscription for each Member Organisation set at $12,000 (excluding GST) and in accordance with the Wheatbelt Communities Inc Constitution, be referred to Member Organisations for comment, with all comments to be submitted to the Executive Officer by no later than Friday 31 May 2019.*
2. *That a budget review be undertaken early in the 2019/2020 financial year following the commencement of the newly formed organisation.*

CARRIED 6/1

At the time of preparing the meeting agenda the Executive Officer had received the following responses from Member Councils:

Shire of Bruce Rock

Wheatbelt Communities Resolution
That Council receives the minutes of the Wheatbelt Communities Inc. Meeting held on the 1st May 2019 at the Shire of Bruce Rock.
And
Council defers its decision to consider the Wheatbelt Communities/WEROC annual membership of $12,000 until further direction is received in relation to the proposed new constitution.

Shire of Kellerberrin

That Council includes $12,000 in the 2019/2020 Budget for Wheatbelt Communities subscriptions.

Shire of Merredin

The Shire has advised that it will be including $12,000 in its 2019/2020 budget for WEROC/WCI operations.

Shire of Westonia

No advice available at 25 May 2019 but closing date for advice to be with the Executive Officer is 31 May 2019.

Shire of Yilgarn

That Council includes annual contributions of $2,000 for Wheatbelt Communities Inc., and $10,000 for WEROC in the Shire of Yilgarn's Draft 2019/2020 Budget acknowledging that the financial contributions may change following a review of both organisations by the Member Councils in late June 2019.

RECOMMENDATION:

That the Status Report for May 2019 be received.

RESOLUTION: **Moved: Jamie Criddle** **Seconded: Greg Powell**

That the Status Report for May 2019 be received.

CARRIED

4.3 Matters for Noting

Nil

5. MATTERS FOR DECISION

5.1 Future WEROC Projects – Asset Management Project

File Reference: 013-2 Strategic and Future Planning
135-5 Economic Sustainability

Author: Helen Westcott, Executive Officer

Portfolio: Shared Function (Economic Development)

Disclosure of Interest: No interest to disclose

Date: 21 May 2019

Attachments: Nil (A report had not been provided as 25 May 2019)

RECOMMENDATION:

That the Executive Officer's Report be noted.

Executive Officer's Report:

Representatives from Accingo, an asset management consultancy, first met with WEROC early in March 2018 to discuss its asset management concept and the potential value it may offer Member Councils.

Since that time Accingo developed a project brief and costing for WEROC's consideration, with approval for the project's "go ahead" being given at the WEROC Council Meeting held Wednesday 27 June 2018. At this time, WEROC Council resolved as follows:

RESOLUTION: Moved: Mr Clarke Seconded: Cr Forsyth

That WE-ROC request Accingo to undertake an asset audit for each of WE-ROC's Member Councils, as outlined in Accingo's Phase 1 Costing provided to WE-ROC and considered at the WE-ROC Council Meeting held 2 May 2018, at a total cost of $17,500 excl GST.

CARRIED

Footnote: Details of what is provided in the asset audit is explained in the costing provided by Accingo. This information is provided below so that Member Councils have an understanding of what the audit entails. To quote from Accingo's costing:

"Phase 1 (b)
Asset audit
This entails a full review of all assets of Plant & Machinery and any assets associated with maintaining plant and equipment such as workshops, tooling etc.
The purpose of this review is to provide the following information;

- *Identification of asset including current location*
- *Reconciliation to Asset register*
- *Full report of condition, hours etc which also assists in the valuation of plant*
- *Understand & report on utilisation, availability, requirements etc*

This data serves several purposes being;

- *Market valuation of current plant & equipment*
- *Ability to forecast potential net cash inflows & savings under Phase 2*
- *Data in which to base decisions on Sale, replacement and ultimately pooling of asset base amongst the WE-ROC shires*
- *Potentially replaces need for asset audit for compliance (to be understood whether this can be achieved)*

Review will be performed by Neil Marsh & Accingo asset consultant which can be partly performed on weekends where a more efficient asset audit process can take place. Accingo will require full asset register and current location (if off site). Some time with CEO's & works managers will also be required both prior & during visit however this time will be kept to a minimum as not to disrupt existing operations.
An initial scoping meeting with CEO / works managers to understand what is to be included / excluded from review should take place prior to audit.

Time assigned to this review is;
2 contractors
14 days in total at $125 per hour for 10 hours per day = $17,500"

Following further discussions with Accingo, the WEROC Executive resolved as follows when it met on Wednesday 25 July 2018:

RESOLUTION: Moved: Greg Powell Seconded: Jamie Criddle

That:

1. *WE-ROC advise Accingo of its agreement to enter into a Contract for the purposes of undertaking an Asset Audit only for each of WE-ROC's Member Councils as outlined in Accingo's Phase 1 Quotation at a total cost of $17,500 excl GST; and*
2. *With respect to accommodation and travelling costs for the conduct of the Asset Audit, Member Councils provide these expenses at their own cost.*

CARRIED

Following further discussion of the project WEROC Council resolved as shown below on Wednesday 22 August 2018:

RESOLUTION: Moved: Mr Criddle Seconded: Cr Forsyth

That the Executive Officer liaise with Accingo and Member Councils to develop a schedule for works associated with the conduct of an asset audit that meets needs of both Member Councils and Accingo and allows for Accingo to have its asset audit report available for the WE-ROC Executive Meeting scheduled for Wednesday 6 February 2019.

CARRIED

Following still further discussions with Accingo, WEROC Council resolved as follows on Wednesday 24 October 2018:

RESOLUTION: Moved: Mr Clarke Seconded: Mr Griffiths

That:

1. *WE-ROC accepts the change/alteration of the scope of works to include the cut-off figure of $2,000 for the value of assets being considered in the review being undertaken by Accingo;*
2. *As a condition of contract Accingo be requested to demonstrate that it carries Workers Compensation Insurance, Public Liability Insurance ($10M) and Professional Indemnity Insurance ($1M); and*
3. *The Executive Officer advise Accingo of WE-ROC's decision and arrange a new exchange of letters.*

CARRIED

As Member Councils are aware, Accingo has accepted the offer made by WEROC to undertake an asset audit for its Member Councils, with work commencing mid-February.

All work associated with the conduct of the asset audit has been completed and Accingo advised that it would be submitting its report by Friday 24 May 2019. No report has been submitted.

Additional Meeting Comment:

A copy of Accingo's draft report was circulated post distribution of the meeting agenda. A copy of the report form will accompany the minutes.

In discussing the report prepared by Accingo the following comments were made:

- Any unresolved data issues need to be resolved, in particular the Shire of Merredin's data needs to be included in the report. Greg Powell was uncertain as to why data from the Shire had not been included in the report and was following up on this with his engineer.
- No information on trucks was contained in the draft report. A request should be made for this to be included and that is not possible to ask why it is not possible.
- The Executive believe information on the frequency n asset is used should be included within the report.
- Staffing issues for plant usage also need to be resolved by the Member Councils – might help to reduce underutilisation of the equipment.
- The Shire of Bruce Rock seek clarification on its data. It appears the Accingo data does not capture the Shire's general ledger for accounts.

Consultation: Nil

Financial Implications: As yet unknown

Voting Requirement: Simple Majority

RESOLUTION: **Moved: Greg Powell** **Seconded: Darren Mollenoyux**

1. **That feedback be provided to Accingo on its draft asset audit report, with a request that the following issues be further reported on:**
    a) **Provision of data for the Shire of Merredin be made available as soon as possible;**
    b) **An explanation as to why the asset audit report contained no information on trucks. If the data is available a request be made for it to be included in the final report provided to WEROC;**
    c) **A request for the inclusion of information on the frequency an asset is used; and**
    d) **Clarification of the data provided for the Shire of Bruce Rock, with details on the differences shown and why these differences occurred.**
2. **That Accingo be requested to have a further draft of its report variable for consideration by the WEROC Executive at its next meeting, scheduled for Wednesday 27 July 2019.**

CARRIED

5.2 Curtin Wheatbelt Community Health Study

File Reference: 075-1 Local Hospitals
013-2 Strategic and Future Planning

Author: Helen Westcott, Executive Officer

Portfolio: Social (Shire of Kellerberrin)

Disclosure of Interest: Nil

Date: 13 May 2019

Attachments: Project Proposal from Dr Andrew Harper, Adjunct Clinical Professor at the Curtin Medical School

RECOMMENDATION:

That WEROC provide financial support to a maximum of $5,000 to Dr Andrew Harper, Adjunct Clinical Professor at the Curtin Medical School, to assist in the conduct of the "Curtin Wheatbelt Community Health Study: An exploratory research proposal".

Executive Officer's Report:

Dr Andrew Harper, Adjunct Clinical Professor at the Curtin Medical School, has approached WEROC for support for a research project developed as a direct result of Curtin student involvement in the Wheatbelt Medical Students Immersion Program (WMSIP) this year and last.

Dr Harper, in addition to writing to the Executive Officer (a meeting was also held on 10 May 2019), has had discussions with Jamie Criddle, CEO Shire of Westonia.

The proposal is to conduct an exploratory study in which students under supervision will interview a small group of Wheatbelt residents and key informants. The aims of the project are to:

- Describe the health experience and health concerns of a small group of Wheatbelt residents and key informants;
- Analyse the themes of issues identified through the interviews to discuss these themes with WEROC's Member Councils to identify possible avenues for advocacy to help address these issues to explore the potential utility of interview data in assisting shires advocate for the health needs of Wheatbelt communities to promote a health partnership with the Wheatbelt; and
- Promote social accountability in rural community health.

An outline of the project forms an attachment to the meeting agenda

The project has the endorsement of the Curtin Medical School, with the School pleased that further academic activity is developing from the WMSIP.

The proposal is an exploratory pilot study to be conducted in Merredin and Westonia with a view to offer the same type of research activity in the remaining WEROC Councils subject to the results obtained in the pilot study. The project's goal is to provide Member Councils with data that will assist in advocacy for improved health services.

The selection of Merredin and Westonia has been determined by the students involved in developing the project proposal.

Dr Harper has advised that the timeline is tight, with the project's ethics application having to be submitted by 7 June 2019. This means that should WEROC agree to support the project its letter of support would have to be sent in early June.

Specifically, funding and support in kind is being sought for:

- Travel to and from the Wheatbelt for 5 students and 3 supervisors, ($600);
- Accommodation for the students and supervisors in the Wheatbelt for three (3 nights) ($3600); and
- Administrative support to set-up interviews, make general administrative arrangements and prepare the final report ($400).

Total funds being sought is $4,600. In-kind support is also sought.

Whilst more detailed information on in-kind support is required, the Executive Officer believes that support for the project should be given. The project is an extension to the WMSIP program that WEROC is a foundation member of and the project has the potential to further improve health outcomes for those who live across WEROC.

WEROC has sufficient funds to assist.

Jamie Criddle might wish to make comment on his discussions with Dr Harper.

Additional Meeting Comment:

The Executive Officer advised that just ahead of the Executive Meeting she had received a copy of the final protocol for the project. Copies of the protocol were tabled at the meeting.

A copy of the protocol also forms an attachment to the minutes of the meeting.

Jamie Criddle suggested that sending Dr Harper a copy of the Verso Report commissioned by CEACA might also assist Dr Harper with aspects of the pilot study related to aged care and the needs of the elderly across the WEROC communities.

RESOLUTION: Moved: Jamie Criddle Seconded: Greg Powell

1. **That WEROC provide in-kind and financial support to a maximum of $5,000 to Dr Andrew Harper, Adjunct Clinical Professor at the Curtin Medical School, to assist in the conduct of the "Curtin Wheatbelt Community Health Study: An exploratory research proposal".**
2. **That the Executive Officer provide Dr Andrew Harper with a copy of the Verso Report.**

CARRIED

5.3 Records Management in Local Government

File Reference: 013-2 Strategic and Future Planning
042-2 Finance, Audit and Compliance

Author: Helen Westcott, Executive Officer

Portfolio: CEO/Governance (Shire of Yilgarn)

Disclosure of Interest: Nil

Date: 20 May 2019

Attachments: Western Australian Auditor General's Report: Records Management in Local Government

RECOMMENDATION:

That the WEROC Executive recommend to the WEROC Council that WEROC seek quotations from suitably qualified records management consultants to undertake a review of Member Councils' recordkeeping policies and procedures to ensure they adequately support their respective Record Keeping Policies.

Executive Officer's Report:

Western Australia's Auditor General recently released a report on the topic of records management in Local Government.

The audit objective was to determine if local government entities effectively manage their records to promote accountable and transparent decision making.

A copy of the report forms an attachment to the meeting agenda.

Key findings of the report were that:

- Recordkeeping plans are approved but lack supporting policies and procedures;
- Recordkeeping plans are current and approved;
- Recordkeeping plans are not supported by adequate Local Government policies and procedures;
- Implementation of recordkeeping plans is poor;
- More regular and thorough records training is needed;
- Local Governments do limited monitoring of staff records management practice;
- Records are often held too long;
- Important records are not properly managed;
- Some records were missing or difficult to find;
- Records were often stored outside records management systems;
- Protection of records is mixed;
- Physical records were generally well managed; and
- Digital records recovery could be better.

Based on these findings the Auditor General made the following recommendations:

> *All LGs, including those not sampled in this audit, should review their recordkeeping policies and procedures to ensure they adequately support their RKP. LGs should implement:*
>
> • *regular and thorough records training*
> • *regular reviews of staff recordkeeping practices*
> • *timely disposal of records*
> • *adequate protection over digital records.*

> *Under section 7.12A of the Local Government Act 1995, all sampled LGs are required to prepare an action plan addressing significant matters relevant to their entity for submission to the Minister for Local Government within 3 months of this report being tabled in Parliament and for publication on the entity's website. The action plan for every LG in our sample should address each point above.*

The Executive Office believes that the review of recordkeeping policies and procedures as recommended by the Auditor General is one that could be undertaken as a WEROC project in much the same way as WEROC has undertaken work around group valuations and asset management reporting.

Additional Meeting Comment:

Peter Clarke advised the meeting he had contact details for two consultants that might be able to assist in undertaking a review of Member Councils' records management practices.

This information was given to the Executive Officer.

RESOLUTION: **Moved: Greg Powell** **Seconded: Jamie Criddle**

That the WEROC Executive recommend to the WEROC Council that WEROC seek quotations from suitably qualified records management consultants to undertake a review of Member Councils' recordkeeping policies and procedures to ensure they adequately support their respective Record Keeping Policies.

CARRIED

6. EMERGING ISSUES

Nil

7. OTHER MATTERS

7.1 LGIS Co-Ordinator

Greg Powell has requested that the issue of the region's LGIS Co-ordinator be listed for discussion, with discussion centred on the performance, cost and outcomes expected of the role and whether or not there may be other options available to Member Councils in fulfilling this role.

There was agreement that the matter of the LGIS Regional Coordinator's performance across Member Councils needs to be raised with LGIS. Member Councils were concerned at the limited service and advice being offered by the current regional coordinator.

It was also agreed that any approaches to LGIS on this matter should be done at ROC level and not on an individual Councils basis. There should be a unified effort to resolving this matter.

It was agreed that Ben Galvin from LGIS should be invited to the next meeting of the WEROC Executive, scheduled for Wednesday 24 July 2019. If Mr Galvin was available to attend the meeting, Member Councils' Works Supervisors should also be invited to attend the meeting.

RESOLUTION: Moved: Darren Mollenoyux Seconded: Greg Powell

That:

1. **Mr Ben Galvin from LGIS be invited to attend the next meeting of the WEROC Executive to discuss concerns Member Councils have with their region's current LGIS coordinator; and**
2. **That should Mr Galvin be available to meet with the WEROC Executive on 24 July, Member Councils' Works Supervisors also be invited to attend the meeting.**

CARRIED

7.2 Project Proposal from WA Tourism and Regional Development Consultancy

The Executive Officer has recently circulated a proposal from Kylie Whitehead of WA Tourism and Regional Development Consultancy.

In her emails regarding the proposal Ms Whitehead advised that RDA Wheatbelt had expressed interest the project proposal. The Executive Officer expressed the view that if this was the case and that funding was available from RDA Wheatbelt for a pilot project to be undertaken it might be worthy of further consideration by WEROC.

Peter Clarke advised the meeting that his Council was meeting with RDA Wheatbelt's Chair in June and he was happy to raise the matter at this time. He would then provide feedback to Member Councils and further actions, if any, could be determined at that point.

7.3 Support for Ramelius Resources Green Finch Mine Clearing Project (Attachment)

Jamie Criddle requested support from WEROC Council for the Shire of Westonia's efforts to have a decision to prohibit clearing at the Greenfinch Open Pit overturned.

A copy of information provided at Westonia Council's May 2019 Meeting was tabled for Member Councils information.

A copy of this information forms an attachment to the minutes of the meeting.

Jamie Criddle noted that the negative impact upon the State Government's decision to prohibit clearing was not confined to Westonia but would also impact upon the Shires of Merredin and Yilgarn, where service industries that supply the mine site would also be impacted.

In discussing how WEROC could assist the Shire of Yilgarn it was agreed that WEROC should approach WALGA for assistance as the inability to clear at the Greenfinch site was impacting upon the economic development of some of WEROC's Member Councils.

Consideration was also given to the value of engaging a lobbyist to assist WEROC in its efforts to have the State Government overturn its decision with respect to the Greenfinch Open Pit.

RESOLUTION: Moved: Greg Powell Seconded: Jamie Criddle

That the WEROC Executive recommend to the WEROC Council that WEROC engage the services of a suitably qualified lobbyist to assist in efforts to have the decision to prohibit clearing of vegetation required for the development of the proposed Greenfinch Open Pit operated by Ramelius Resources.

CARRIED

Mr Mark Bondietti entered the meeting at 11.15am

The meeting adjourned at 11.18am

The meeting resumed at 11.30am

7.4 Cyber Security and WEROC

The Executive Officer tabled a recent article in her local newspaper regarding a recent cyber attack on the City of Bayswater, with a copy of the article forming an attachment to the minutes of the meeting. In tabling the matter for discussion, the Executive Officer suggested that the minimising the risk of cyber attack was an issue that Member Councils should give priority to.

It was agreed that each Member Council would seek an update from their respective IT staff and then discuss the matter at a future meeting of the Executive.

8. FUTURE MEETINGS

WEROC Council	Wednesday 26 June 2019 (Shire of Kellerberrin)
WEROC Executive	Wednesday 24 July 2019 (Shire of Westonia)

9. CLOSURE

There being no further business the Chair closed the meeting at 1.00pm

Power Ledger

Energy, reimagined.

Constraints on the Western Power Electricity Network are Curtailing Economic Growth in Regional WA.

Caren McLaren - May 2019

Who are we…..

Power Ledger are a team of experts with over 100 years of energy industry experience and a world-class development team.

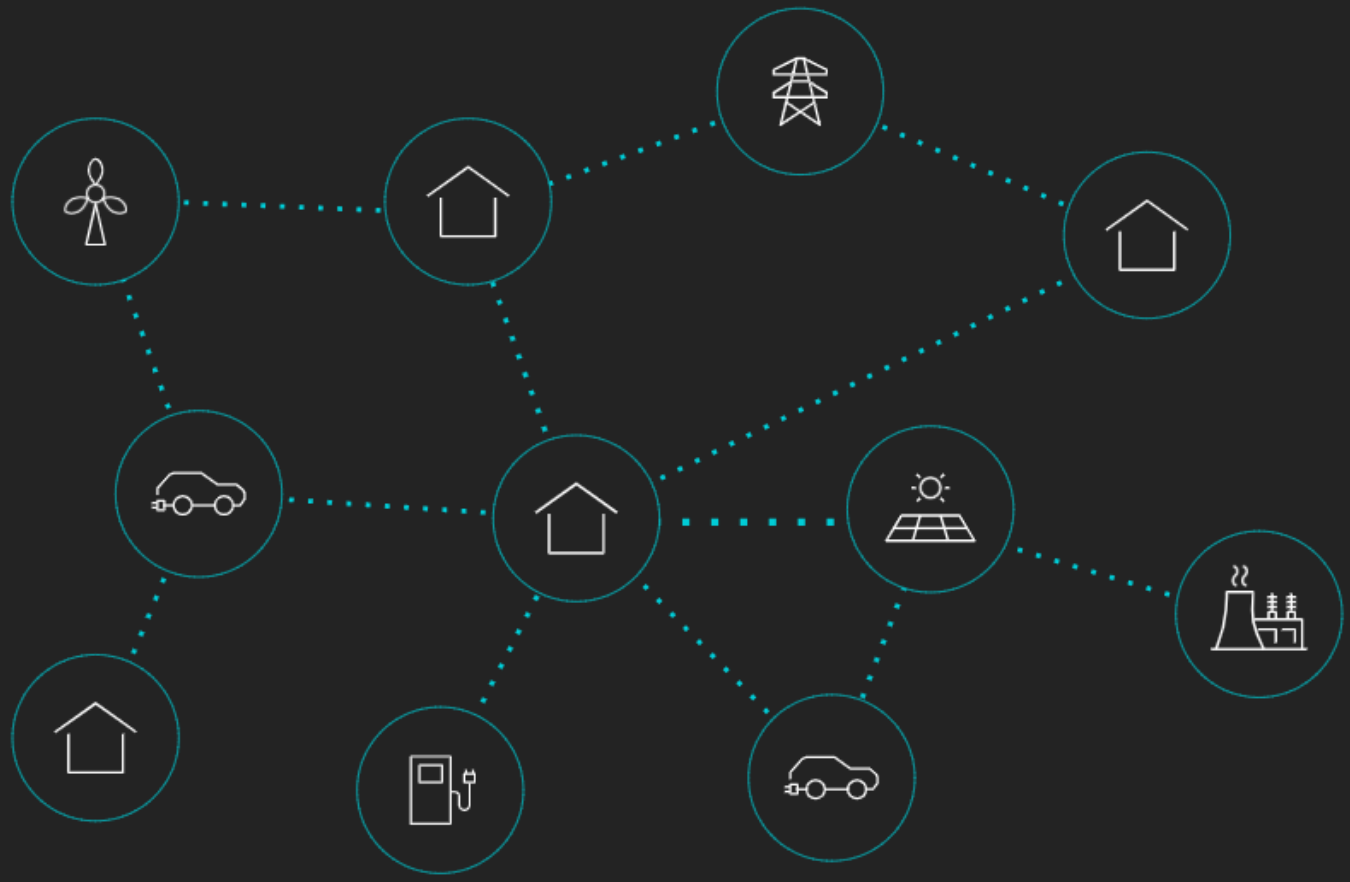
At Power Ledger we see a very different energy future ahead of us. One with lower costs and less waste. A system that's reliable and good for the environment. Where everyone can benefit and contribute to our power needs. Our technology provides a way for consumers and prosumers to benefit from and contribute to a clean, reliable and affordable energy system.

The Traditional, Centralized Energy System

A Decentralized Energy System.

A New way of thinking about Power

Peer-to-Peer Trading



What We Do

Our blockchain technology enables three things...

01

Energy Trading

xGrid

uGrid

VPP 2.0

02

Renewable Asset Financing

Asset Germination Events

03

Efficient Carbon Markets

C6

C6+

xGrid

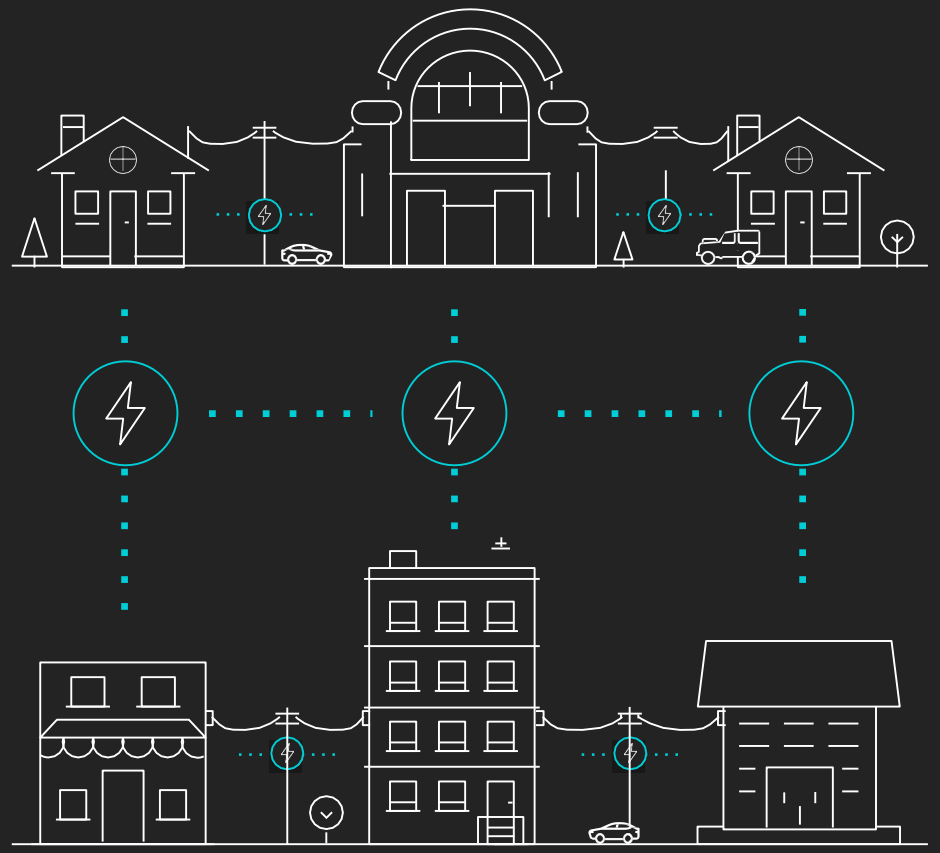
Peer-to-peer electricity trading across the regulated electricity network.

BENEFITS

- Competitive advantage for innovative retailers to obtain and retain customers
- Enables more customers to access low-carbon energy
- More competitive electricity prices for consumers
- Better returns for customers generating excess energy
- Supports overarching energy system

FEATURES

- Real-time settlement
- Detailed billing and usage data
- Automatically converts electricity credits to fiat currency
- Transactions viewable on the blockchain



µGrid

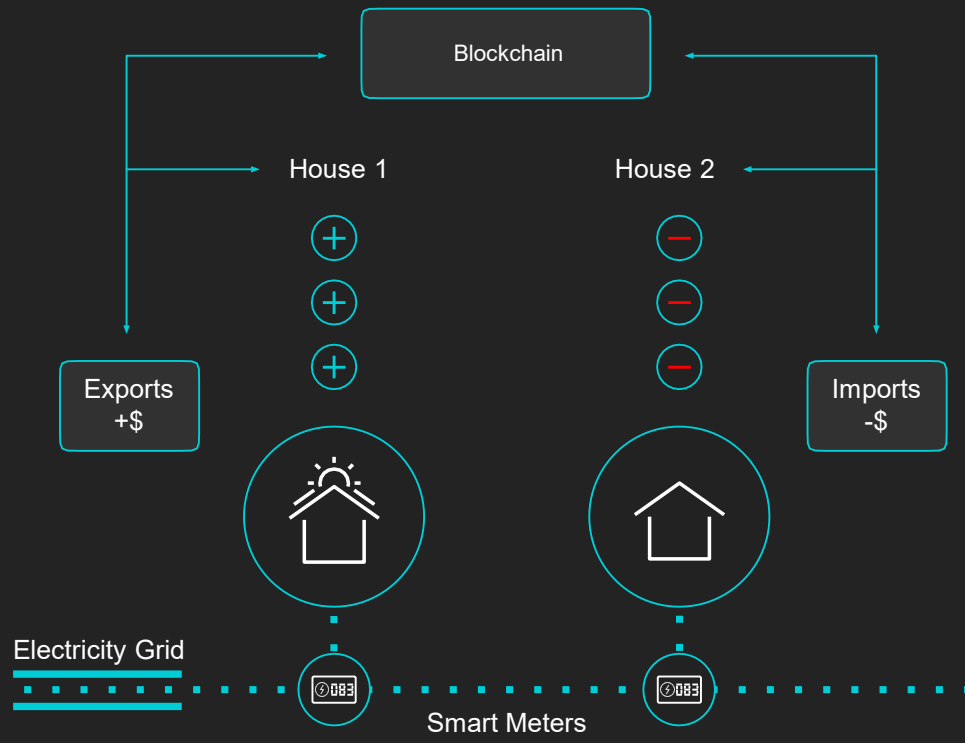
Peer-to-peer electricity trading behind the electricity mastermeter (microgrids).

BENEFITS

- Tenants access cheaper, greener electricity
- Can be implemented on greenfield and brownfield developments
- Improved visibility over energy consumption
- Potential revenue stream for building managers
- Improves sustainability of development

FEATURES

- Real-time settlement
- Detailed billing and usage data
- Automatically converts electricity credits to fiat currency
- Transactions viewable on the blockchain



The Democratization of Power

Power Ledger

Questions?

Accingo Consulting

Date: 23 May 2019

Dear WeRoc Executives

We thank you for the opportunity to work with WeRoc.

Accingo have undertaken a review of mobile assets and plant within scope across the 5 shires with the view to better understand the life cycle of asset management. Providing an independent review……

Our combined expectation was to provide WeRoc executives and councilors with an independent view into what is essentially one of the largest spend and maintenance areas for each council.

Our process for the asset review is built from industry standards however we have undertaken the work with the understanding of requirements within a regional local government environment. With consideration of this variance, and an increased understanding of council requirements through this process, we look to demonstrate areas

Sincerely,

Blake Read & Neil Marsh

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INDEX

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1. OVERVIEW

Accingo through discussions with regional WA local governments over the course of the last decade had identified there is potential value in undertaking an in depth, independent view of assets, from purchase to sale and how learnings and efficiencies adopted in industry can be applied to WeRoc.

Through valued discussions over the course of this time we do have a genuine understanding of the differences between private industry and local governments and take into account the individual nature of operations, rate payers and the towns requirements. We do however believe this work will provide positive action items for WeRoc executives to review and implement to improve current practices, ultimately for the financial benefit of the region.

Under scope and in this report we provide the following;

- Physical asset review
- Utilisation data / Purchasing / Selling
- Reporting & analysis of assets
- Additional revenue / cost reduction potential

Further to this report we look to continue to discuss in depth, where we can extract maximum value for WeRoc as we navigate what can be a complex area of managing assets to perform the most efficient method of completing required works within the region.

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2. ASSET AUDIT

Under scope of the asset audit was to review all assets >$2,000 in value to determine the ability for cost savings to be achieved through improved asset management. Firstly, verification of the asset register to physical assets was performed to ensure accuracy of asset registers. This was performed via physical inspection at site upon provision of asset list. Secondly, review of each asset register was performed to form the basis of the cost efficiency calculations as well as accuracy & timing of data capture.

This has been completed for all shires apart from Merredin (8 assets) where timing of Accingo resources & Merredin staff had not allowed for timely review. This will be completed post this report date and a revised report provided.

Accingo have photographed & entered details of all assets under scope into a secure selected asset management portal for future reference.

FINDINGS

Asset lists were found to be mostly accurate however some noted issues around timing of data entry for sales and purchase and required further investigation. This is highlighted further in the document under the reporting section with suggested actions.

3. UTILIZATION

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As part of the review, we set out to measure the degree to which each piece of equipment was being utilized ie availability versus actual hours worked. Now whilst we understand holding assets in a shire does not just come down to dollars and cents but is also about ongoing & critical works being satisfactorily performed. This being said, there should be an element of understanding of utilization and what can be potentially done to improve the financials of holding assets within a shire over their life cycle

Equipment utilization is a universal measurement for efficiency. It also assists in driving purchase & sale forecasts. This measure, when reported and used in management decisions will assist in driving the most efficient outcome financially, balancing ideal requirements of the shires ratepayers. As an additional by product of such a measure it can also play a part in managing staff whom operate the equipment and perform the works programs.

Equipment used to perform works such as in regional government have 4 main costs;

- Depreciation
- Financing cost / opportunity costs of where funds could better be spent
- Maintenance
- Operators (when looking at mobile equipment)

An underutilized asset represents an opportunity to attract savings in these costs noted above with minimal effort. In isolation, an increase in utilization may not seem worth the effort of amending current process or standards of management however when viewed across a fleet of assets, even small increments of utilization can have material effects on costs.

'Appendix A' graphically reflect the utilization across shires and asset types. We have looked here at the equipment that would have material enough effect to make consideration of any changes in process worthwhile.

In this review we have provided a benchmark utilization of 40% to be the target range. This means that of all 'available' hours a machine can operate, we believe a nominated achievable target of 40% which would provide a significant enough financial benefit to justify implementation of amended practices.

To provide some background to this target utilization rate, in a private company with similar equipment, a target of circa 65-70% is the target of effective equipment management. As noted, we understand that Local Government are not a private company and equipment is used to perform public services for ratepayers and

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members of the community. We also note that critical works that are seasonal or sometimes an urgent matter that requires readily available equipment & resources and these nuances must be considered when balancing up efficiencies versus minimum requirements

When looking at potential cost reductions through utilization increases we generally look at 2 ways in which this can occur. Either an increase in productivity through increased output of works programs with the same gear, or a reduction in equipment which comes from sharing equipment where is remains too inefficient to carry the same stock.

As part of our financial review we have attempted to highlight potential cost savings in dollar terms for incremental increases of utlisation. The calculation performed here is to look at total cost of ownership being depreciation, funding (or opportunity cost of alternative purchases) divided by the total hours in use. We then look at the costings at the nominated 40% rate. In normal situations we would also take into account maintenance however we feel this may complicate the initial review and calculations so should be looked at separately. Furthermore, at the 40% costing rate, the hourly / daily holding rate in most cases is very close to an external hire rate. This hire rate should also be used as an alternative costing method when weighing up hire vs buy decisions or to make a blend of both as part of the overall asset mix to perform works.

Findings:

As per graphical representation in Appendix A, the results showed a fair disparity between councils in terms of utilization rates. To understand where initial focus can be applied, we have dissected the results both by Product across WeRoc as a whole and by each Shire. We know that different classifications of equipment are used for different purposes and some are in more demand than others, i.e road grading. We also know that the size of the shire and the expected capital and maintenance works differs due to road and infrastructure network, critical works and maintenance works as requested by the ratepayers of the regions.
Therefore these numbers are only part of the story and are not meant to portray any shire or type of equipment as being a poorer performer than another, but a set of data to reflect how things could be looked at differently to be of financial benefit.
Important Note: Some hours have been materially affected due to process / timing issues in registering or deregistering assets onto the register. For example, where an asset is bought and perhaps used for some time before it makes its way onto the asset register. Its key measurement of hours performed over available hours can be materially impacted. As noted in a further section, the process of asset management requires considerable focus in some regions for improved reporting and basis for decision making.

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To summarise the results in Appendix A we observe the following

Understandably, Graders are the highest utilized assets across the shires at an average of **34.1%.** This is impacted by some older assets that are essentially used for back ups or winter grading only. When normalized, the grader fleet averages **43%** which is above the target range suggested.
We do believe there is still room for review as this is the largest capital expense with 14 assets at $3.3M across the 4 shires within the shown graphs. 4 assets were below 17% although the WDV of these assets was not high so a call would be made based on maintenance & holding costs.

The lowest utilization is across the 5 Graders in Bruce Rock at an average of 18%. In looking at the cost savings of increased utilization, a deeper understanding of maintenance costs would be required. Bruce Rock have an aged fleet in this area which means the holding costs are reduced however as noted we have not included maintenance costs which generally increase as fleet ages. Our discussions locally had identified that at times, utilization of Graders may at times be reduced due to operator availability however this hasn't been confirmed. The report received from Bruce Rock differed to the type of report provided by the other 3 therefore there may be a data reporting issue which may have impacted our calculations so further investigation is warranted.

Wheel Loaders when amalgamated came in at **20.0%** utilization from a much lower asset book value on average with the 15 Wheel Loaders in total worth $1.84m.
Consistently each shire had 1 Wheel Loader that was heavily impacting this number and strategically may have been available as a back up. Each of these recorded around **200 hours** for the year which is approximately 1 months work in a normal environment.

Rollers totaled 15 units at an asset value of $1.24m at a utilization rate of **18.5%.** Yilgarn recorded much higher utilization than the other shires at **42%** on their 3 assets.
Rollers were highlighted as being materially underutilized and we believe a review of the hours should be performed to ensure accurate recordings were received by us for the review. Should these hours be correct then a justification review of these assets should be performed.

Additional revenue / cost reduction

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Having underutilized assets represent an opportunity to improve the shires financial position in 2 ways;

- Reduce holding costs by reducing the amount of assets on the Balance Sheet
- Improve revenues by increasing contracted works to external parties.

Some shires had performed well in terms of maximizing equipment potential by increasing contracting opportunities and therefore allocating revenue through the particular machine(s).
Additionally there was evidence of cross hiring of equipment between regions to reduce overall costs of holding the assets. Where these shires adopted such principles, the P&L impact was evident.

There was no uniform level of focus between the shires on such opportunities however the general principal of seeking contract works for underutilized equipment &/or cross hiring equipment between WeRoc shires was accepted and in parts sought after.

When looking at potential cost savings, we worked on a benchmark of 40% utilization. The holding costs at this level were then balanced against market hire rates. The formula used to work out potential cost savings was;

{Asset Cost – Depreciation & Funding costs (nominal 5%) – less – hire rate or rate at 40% utilization = additional expense or saving }

Shire	Average utilization	* Potential saving at 40%
Kellerberrin	15.1%	$79,014
Bruce Rock	12.0%	$166,391
Westonia	22.0%	$69,173
Yilgarn	33.0%	$9,968
Total	**19.8%**	**$324,546**

- Saving is based on taking various actions to increase asset utilization to 40% or substitute under utilized assets with hire equipment.

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Suggestions

A review of individual assets that are < 40% utilization should be conducted to look for opportunities to improve financial position.
Opportunities to explore are;

- Sale of underutilized assets
- Cross hiring of underutilized assets between the shires
- Review of personnel operating machines i.e are there enough operators in the region
- Hire out to other Govt utilities and major local service businesses – Water Corp, DEFES, CBH Western Power, Local mines and others
- Review replacement forecast. Amending budgeted purchases where financial justification isn't met.
- Increase contracted works to generate revenue through increasing asset utilization this pertains to local works undertaken by contractors

REPORTING & ANALYSIS

To effectively manage assets there must be sufficient and accurate data in which to make decisions. Reporting starts with a system that provides the ability to adequately capture the information required and procedures to be followed to ensure information is timely and accurate.

The reports requested as part of this exercise were;

- Financials / Maintenance costs;
- Hours report; and
- Asset register

These reports were used to extract key data from and determine key criteria in which to focus the audit upon.

Findings

Upon receipt and analysis of these reports it was evident that there is no uniform method in system management, and use of such information is also varied depending on the shire.
The timing of inputs and the accuracy of information requires attention as the ability to obtain consistent data in which to conduct the audit was difficult and often assumptions had to be made due to inability of the system to provide accurate information. Some common issues located were;

- Assets purchased yet not entered onto the asset register for some time. In some cases this may have spanned over 2 financial years, where the asset revaluation may have been the common date of some of

these adjustments. The impact of this was a material impact to utilization rates over the life of the asset due to incorrect dates in the system.

- Depreciation of assets in the system in some cases was not evident and in some cases the calculations did not seem to reconcile accurately. One system had not reported any depreciation for over 18 months. The result of this is under depreciation expense to the P&L. A one off large expense must be recorded once rectified however an additional issue may be a loss on sale should the asset be sold. This issue was not picked up in the last financial audit as independently signed off on the audited statements. This should be reviewed for completeness.
- Depreciation rates differ materially between shires. Treatment of assets should follow a standardized and agreed set of rates which allows for a consistently applied unit of measurement and ultimately a uniform holding cost
- Maintenance of equipment was not consistently applied to individual machines. On the most part the asset codes were used and reports reflected such costs however an ability to transparently record maintenance costs per asset was limited.
- Hours reports were not uniformly measured or able to be supplied. This is required to be rectified should ongoing utilization be requested or desired as a unit of measurement

Suggested actions:

- Basic asset system training should be conducted for those administering the asset register.
- Uniform plant and asset naming conventions
- Tracking of the assets to person responsible and or GPS – can be very important if equipment hired out
- Productivity measures could be introduced if utilization was of concern, i.e km of road graded per day
- A standardized set of accounting rules on asset measurement such as depreciation.
- Additional sign offs for asset transactions such as buy & sell which ensures systems have been updated by the appropriate person

MISC COMMENTS

Technology solutions

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Many tools are available which assist control and reporting of assets in similar environments to LGA's. Improvements through technology could assist the shires to better manage assets through improved logistics, tracking, and ultimately providing the ability to migrate assets across regions and as direct revenue sources through contracting capabilities without additional staff resources

Potential Benefits

- Ease of migration of assets across shires / external contractors (revenue generating) where system tracks, records and even provides financial data for accounting system to accurately charge to internal cost centres or invoices
- Allow the 3 yearly revaluation to be performed more efficiently which will be an ongoing saving to WeRoc who could justify not only a better quality outcome but at a far cheaper rate
- Monthly reporting would be more seamless and accurate. Further in this response we highlight the issues around reporting accuracy and lack of process in some areas resulting in large financial impacts to the P&L and inaccurate data due to timing issues in information updates to the asset system
- Insurance savings – many industries recognize savings in their insurance programs when additional measures are introduced to reduce risk or exposure of theft or loss even when in practical terms this may not be perceived as a risk. Accingo currently work with clients to reduce insurance costs from multiple angles being brokering power and methods to reduce policy costs. Accingo would be happy to explore this on WeRoc's behalf to determine whether any realized savings could be achieved.

External contracted works

Part of our initial discussions with WeRoc executives focused on the material amount spent on external contractors (those residing in Perth or outside the WeRoc region).
An opportunity exists to look to utilize underutilized assets to either self perform additional works programs (understanding the people part of this equation requires further exploration)

SUMMARY

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Our findings in this report are to be used as a basis to justify further review and potential actions to be undertaken as a group collective within WeRoc. Assumptions made in lead up discussions with WeRoc executives which led to our engagement around asset utilization improvements with a view to improve financial position required justification through data and furthermore actions to be taken from our findings.

From the information collected and analysed, we strongly believe WeRoc is in a position to openly work through opportunities to improve the management of assets and the processes currently in place.

We thank you for the opportunity to work more closely with the shires and the staff who work within them. We are committed to continuing our relationship with WeRoc and would welcome the opportunity to discuss this report in more detail.

APPENDIX A

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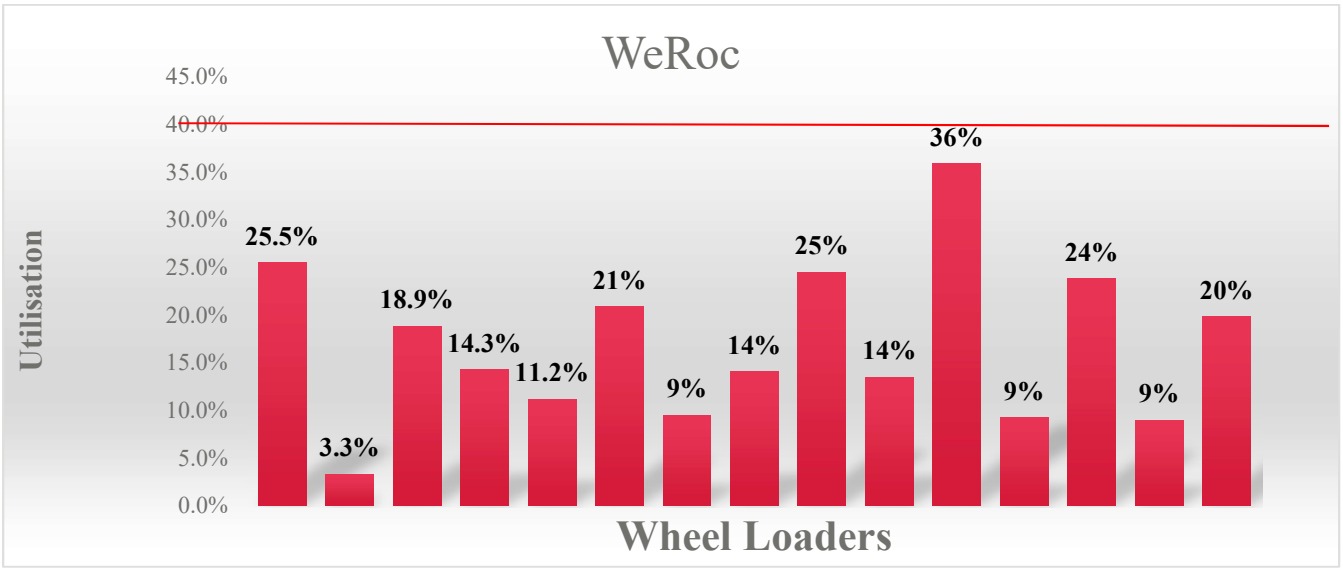

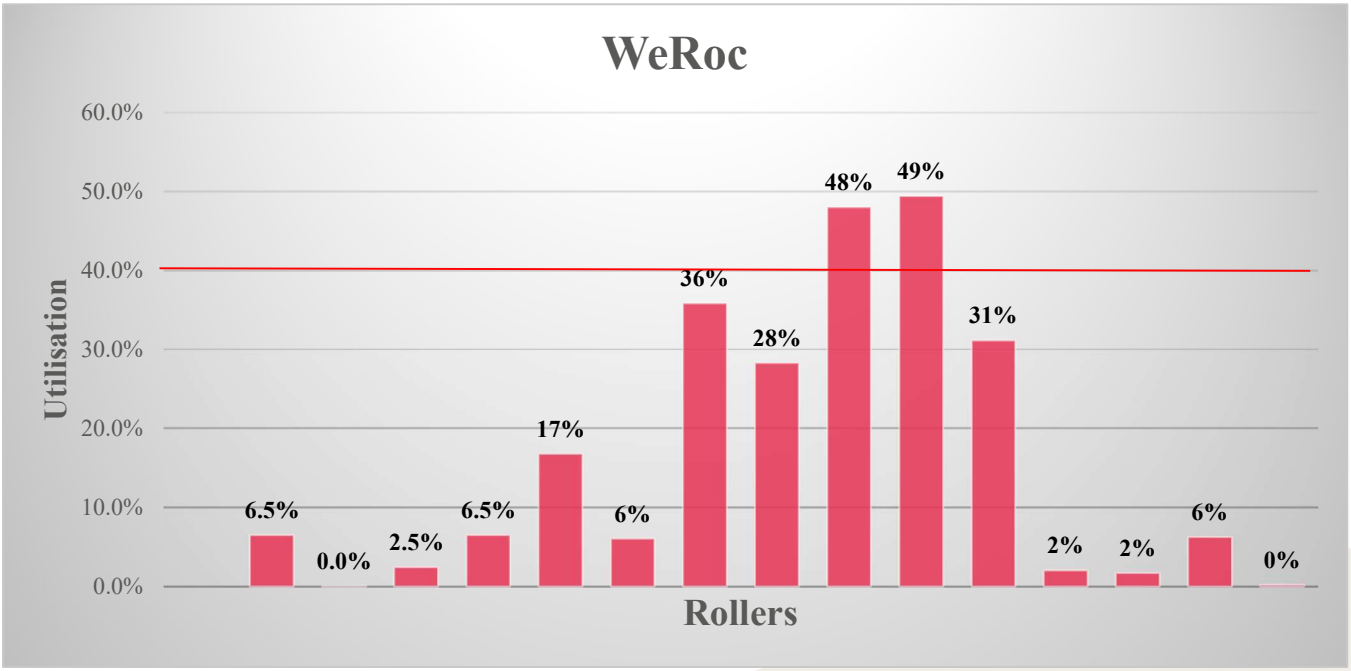

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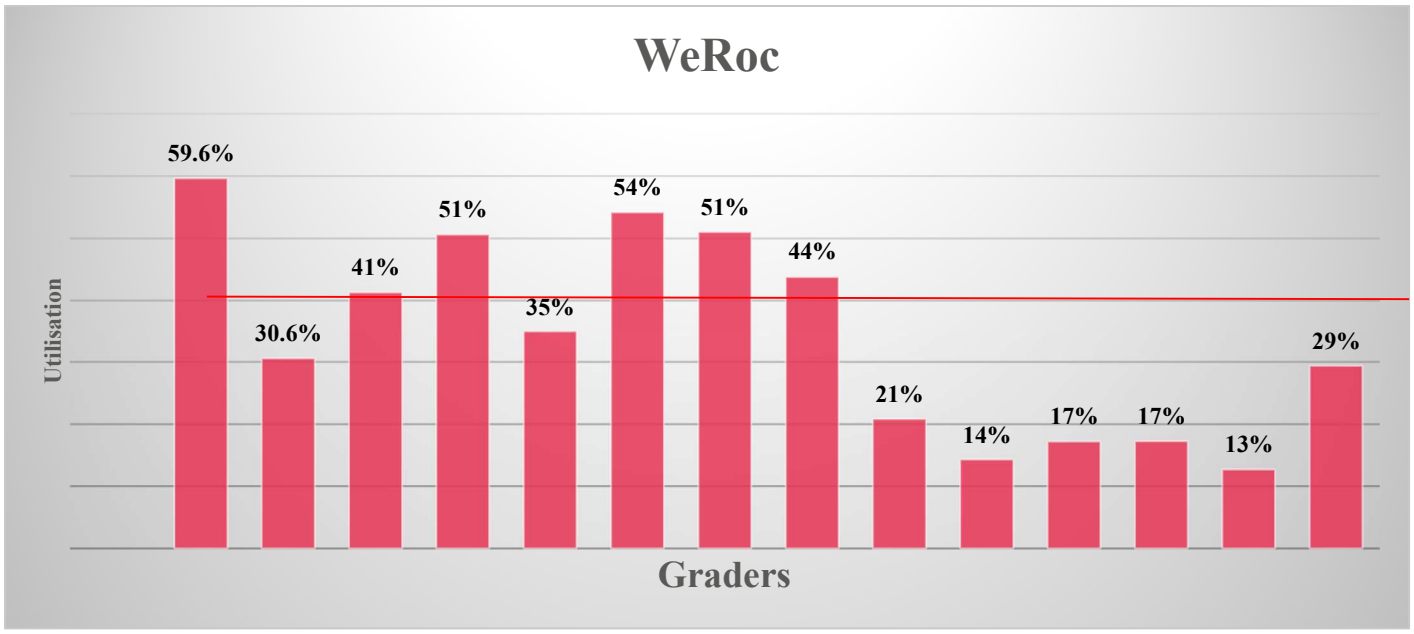

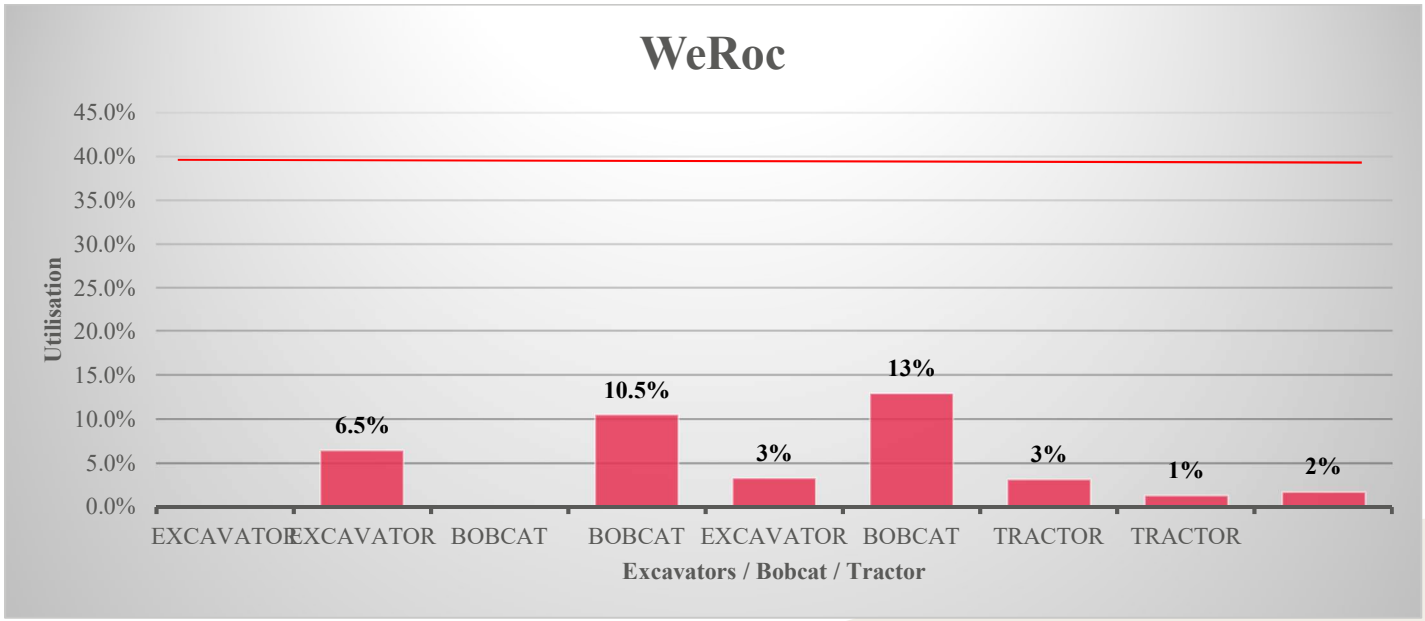

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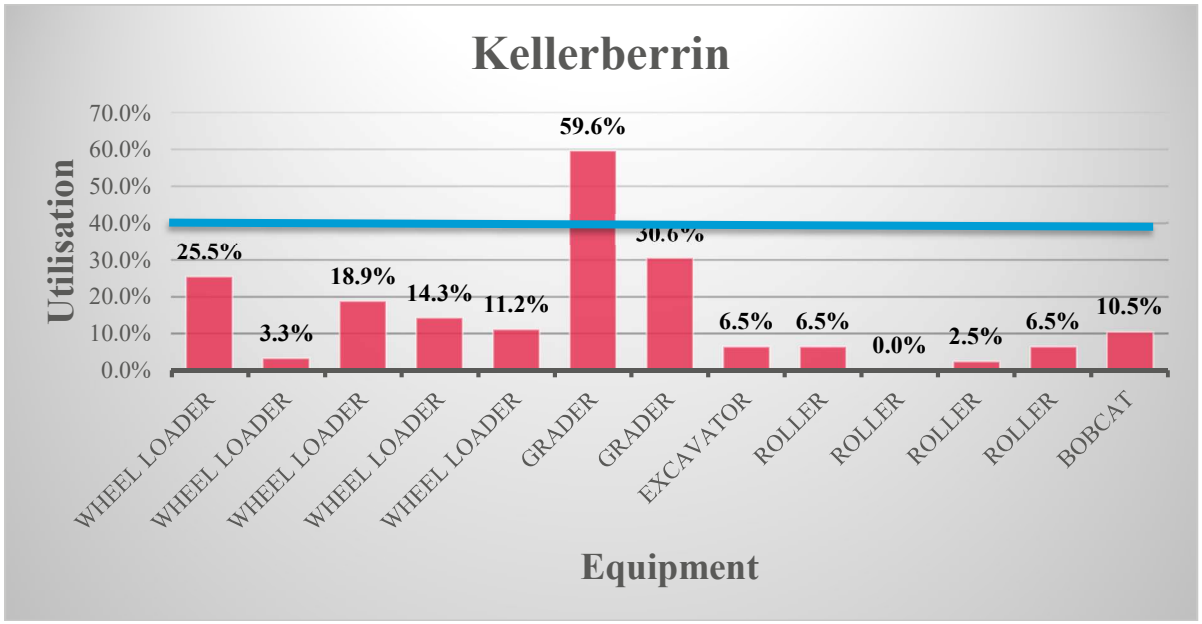

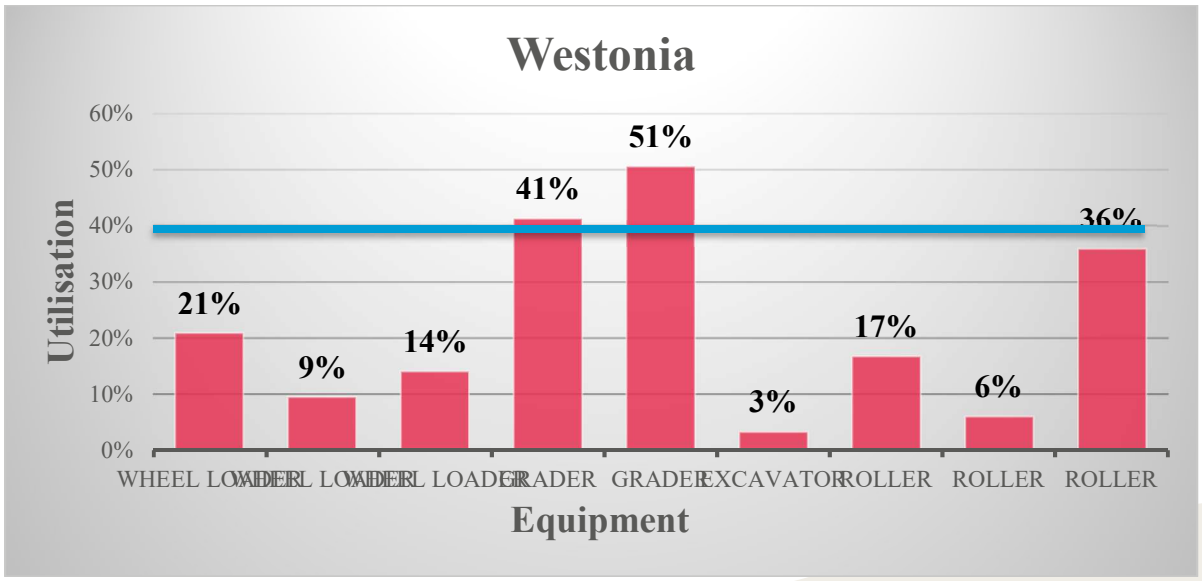

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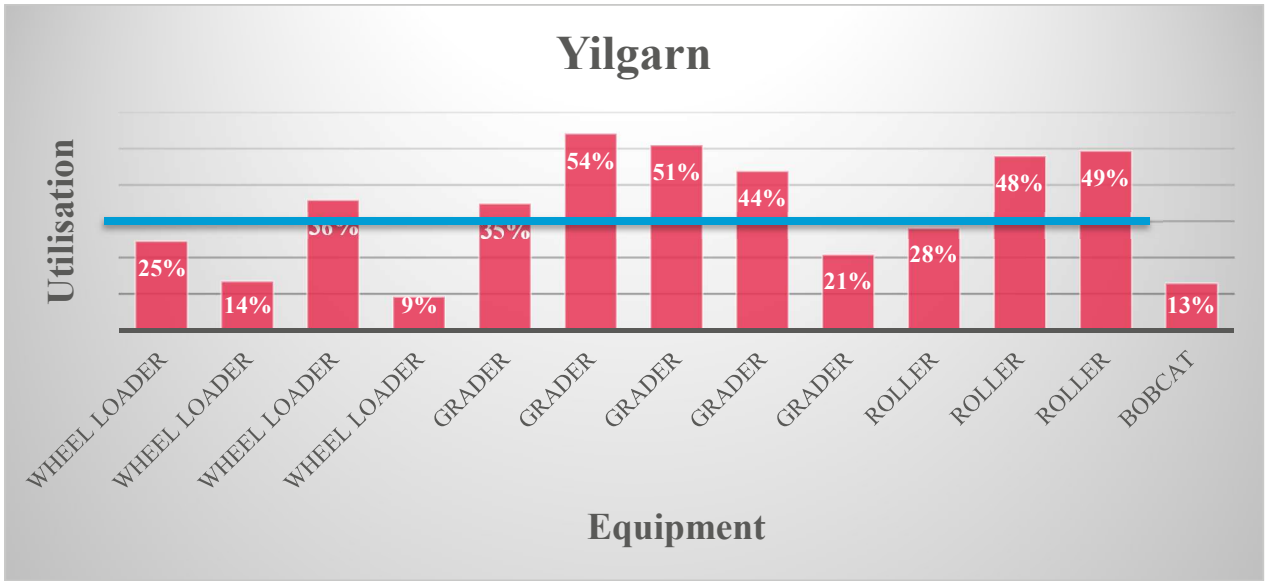

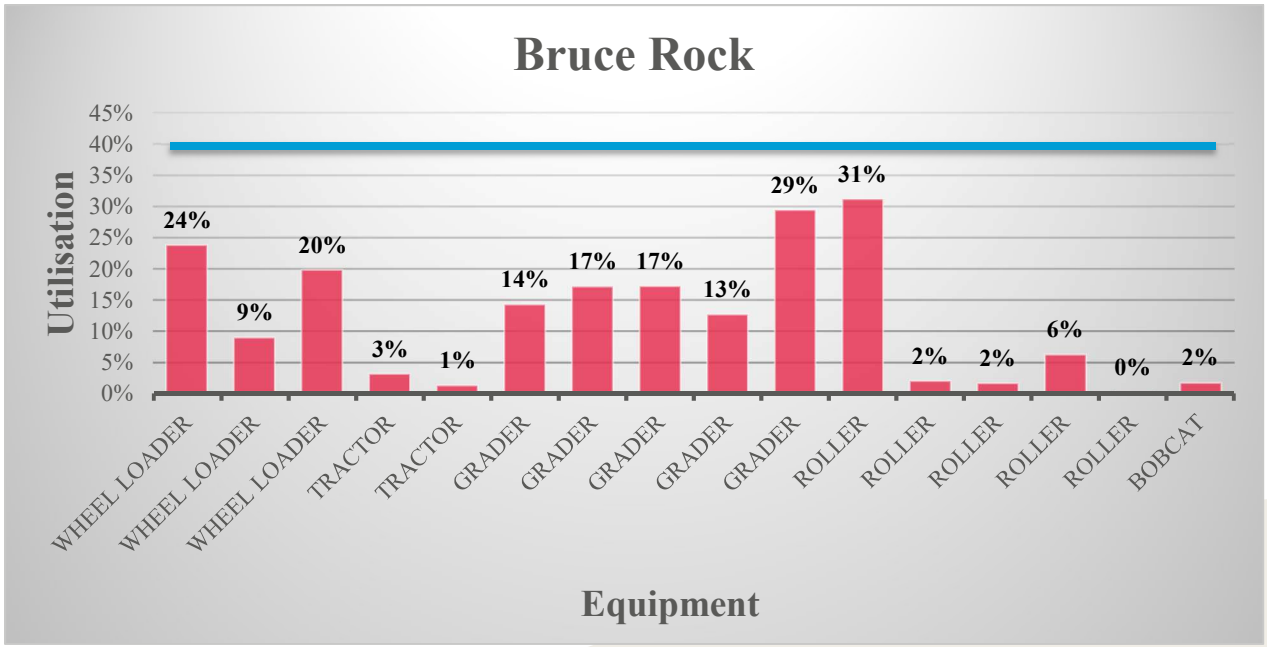

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Exploratory project in rural health partnership between Curtin Medical School students, Wheatbelt shires and local residents.

Curtin Wheatbelt Study Group, Curtin Medical School

Summary

This exploratory project has developed from the Wheatbelt Medical Student Immersion Program as a result of interest of a small group of Curtin medical students wanting to pursue their experience of rural health with added involvement in the Wheatbelt. The project involves five students conducting an interview on twelve Wheatbelt residents to elicit their health experience and concerns, studying their responses and then discussing the service implications with the local shires and residents. The question being asked is whether medical students through this interview process can add potentially to local rural health advocacy.

Background

The exposure of medical students to health inequities in the Western Australian Wheatbelt has stimulated interest in examining more closely local health concerns and opportunities for local social accountability. The health inequalities of rural and remote Australia are well recognized and a particular inequity in parts of the Wheatbelt is the limited access and availability of primary medical services. This exploratory project is designed to explore the potential value of medical students to the process of promoting advocacy for greater local service access. The proposal is for medical students under university supervision to collaborate with the shires of Merredin and Westonia in a process of documenting the perceived health problems and concerns of Wheatbelt residents. The outcome of interest is presentation to the shires of meaningful categories [or themes] of health problems and concerns perceived by residents and discussion with the shires of potential strategies for rural health advocacy.

Shires and residents in the Western Australian Wheatbelt and Rural Health West have been most supportive of community engaged medical education for Notre Dame and Curtin medical schools. The students have expressed a desire to reciprocate by contributing to health in Wheatbelt communities. In discussions with the Shire of Westonia and WE-ROC interest has been expressed in building on the educational collaboration which has been established to date.

The proposed project aims to explore whether medical students can assist in increasing the understanding of the perceived health needs and concerns of residents. There are four components to the project. The *first* is data collection of the views and health concerns of residents through open interviews. The *second* is a thematic analysis of the interviews to identify categories of perceived health problems and possible solutions. The *third* is a round table discussion of the problems and implications with the shire and the residents. The *final step* is an evaluative review by the shires, residents and students of the potential value of this type of exercise involving medical students.

The question the project aims to answer is; "*Does this collaborative process of documentation, analysis and review have the potential to make a positive contribution to local health in Wheatbelt communities?"*

Aims

1. To explore the potential utility of a process of resident health interviews, conducted by medical students, in identifying local rural health problems.
2. To build collaboration with the Wheatbelt to promote rural health and wellbeing.
3. To promote medical student social accountability in rural community health.

Ethics

Ethics approval is being sought through the Western Australian Aboriginal Health Ethics Committee. Participation is voluntary. The NHMRC ethics protocol is being followed. An information sheet and consent form will be signed prior to resident participation. All interview data will be de-identified to safeguard confidentiality.

The proposed collaborative process.

1. *Documentation*. The health experience and concerns of residents will be gathered through an open-ended semi-structured interview. The interview will be conducted to elicit subjective information on the residents' perspective of their functional health and wellbeing in the domains of ideas/feelings, personal fulfillment, mobility, independence/self-care, social relationships/attachment, activity level, community participation, access to services and support. Key informants will be interviewed on their perception of local community health issues and problems. Interviews of residents will be done by medical students in pairs under the supervision of a faculty member. Interviews of key informants will be a group interview conducted by the group of student interviewers. Recording will be by pen and paper.
2. *Analysis*. A thematic analysis will be conducted on the interview data to identify the categories of health concerns and problems perceived and experienced by the participants in various domains of their everyday life [listed above]. Suggested solutions will be identified. The analysis will be performed by the medical students under the supervision and direction of a faculty member.
3. *Round table discussion*. The results of the thematic analysis will be presented to a group representing the shire and residents. The discussion will address the nature and priority of the problems and possible solutions and health advocacy.
4. *Review*. All participants will be asked their view on the potential utility of this method of problem identification and whether it appears worthy of further consideration as a strategy to help rural health advocacy.

Methods

The *participants* will be: [1], four elderly residents of Westonia with chronic conditions, [2], four adult Aboriginal residents of Merredin with chronic conditions, [3], four youth aged between 18 and 25 who live in Merredin, and four key informants who are resident in either Westonia or Merredin. The key informants will be individuals who are long term Wheatbelt residents or professionals or officials with long term involvement with the Wheatbelt.

The *selection of the participants* will be done by the shires of Westonia and Merredin and the Aboriginal representative in Merredin. This will occur in consultation with the university. As

described in the ethics protocol participation is voluntary. Individuals will be selected from among residents interested in contributing to the project. This is likely to include some persons who have already experienced the Wheatbelt Medical Student Immersion Program.

Data gathering will be done by face-to-face interviews done by five Curtin medical students trained and supervised by the faculty. Recording will be in writing and not taped. Each participant will be interviewed for 1 to 1.5 hours on one occasion by a pair of students. The scheduling of the interviews will have three respondants being interviewed each morning and afternoon with a block of time allocated immediately following each set of three concurrent interviews for analysis of the data.

Data handling. Interview data will be de-identified upon completion of each interview. Data will be held securely from the time of collection for which Dr Harper will be responsible. Once back in Perth the data will be securely stored at Curtin University as regulated by the university.

The *instrument* will be an open-ended semi-structured interview focused on defined areas [domains as listed above] of self-perceived health and wellbeing.

Analysis will be a Thematic/Content Analysis as described above. Following each interview the data will be reviewed, initially by each pair of interviewers and then by the whole group of interviewers.

Round table discussion. See above. The minutes of the discussion will be taken by hand by the students.

The review of the whole exercise will take place at the time of the round table discussion.

A *final report* will be written by the students and circulated to the shires, the participants and to the Curtin Medical School.

The role of students in the project. The students are actively involved in all aspects of the project, planning, preparation, data gathering , analysis , review and reporting. .

Funding

Funding and support in kind is being sought from WE-ROC for; [1] Travel to and from the Wheatbelt for 5 students and 3 supervisors, ($600); [2] Accommodation for the students and supervisors in the Wheatbelt for 3 nights ($3600); and [3] Administrative support to set-up interviews, make general administrative arrangements and prepare the final report ($400).

Schedule of activities

May and June: Submission for funding and support to WE-ROC, Completion of protocol, Secure Curtin Medical School approval, Obtain Aboriginal cultural endorsement and WE-ROC support, Submission of Ethics application to WAAHEC, Confirmation of collaboration of the shires of Merredin and Westonia through WE-ROC.

June and July: Finalisation of interview protocol.

July and August: Complete administrative arrangements with the shires, Recruit participants.

August and September: Interview training of medical students, Schedule interviews and Round table discussion.

September: Conduct interviews, start analysis and possibly conduct Round table discussion and Review subject to logistics.

October to December: Complete Analysis of data, Round table discussion, Write and distribute report.

December 2019: Complete project.

Benefits.

The intended benefit *for the communities* is to demonstrate a possible mechanism to enhance the process of identification of local health problems for health advocacy.

The *educational benefits* for the students is a greater understanding of the impact of social environmental factors on health and wellbeing, practical experience with the concepts of health advocacy and social accountability in rural health.

For the Curtin Medical School there may be beneficial flow-on effects for the curriculum in rural and community health.

Relevance

The growing health care burden due to aging, chronic disease prevalence and scarce resources all make the patient's perspective of health and the patient's experience of living with a chronic condition increasingly relevant. Patients, families and carers need to be active participants in the process of health care. Consequently doctors and all health care providers need the skills, attitude and knowledge to respond effectively to the patient's perceptions and concerns. To achieve this end, improved strategies are required routinely *to elicit patient concerns* through observation and documentation, *to analyse and understand* these concerns and *to act* on the patient's priorities and circumstances. This project relates to each of these considerations.

Andrew Harper

Coordinator and Co-supervisor for the University Supervisor Dr Sally Kilburn

Bentley, May 2019.

worried about more than that, they're not just worried about Equinor, they're worried about the future of their communities," Mr Cole said.

"Surely out of the 31,000 submissions there was more than a dozen odd where they went 'oh yeah, that's relevant'.

"Overall they've made this submission process way too specific and they've used very confusing language, obviously in order to eliminate a lot of the objections or a lot of the submissions," Mr Cole said.

He joked that if the drilling went ahead, he might try paddling out into the Bight to lock himself onto the oil rig.

• Protesters, including Greens senator Jordon Steele-John, gathered outside Equinor's Perth office. *Photo supplied*

Last month a paddle-out protest was held at Cottesloe Beach opposing Equinor's plans.

Coastal Cleanup Crew founder Daisy Kermode attended the event, which was part of a national protest: "I really don't think that new oil drilling in the Bight is positive for the globe or the Southern Ocean environment, that's why I went to the protest," Ms Kermode said.

Last week's protest was timed to coincide with Equinor's annual general meeting and a delegation of opposition groups from Australia flew over to protest.

Contemptuous

Wilderness Society South Australia director Peter Owen flew to Norway to tell shareholders the company was contemptuous of Aussies, as it had released its environmental plan on the last possible day to avoid a government-regulated feedback process.

"Instead it ran its own sham feedback process and has dismissed almost all of the Australian public concerns represented by 30,000 unique submissions in just five weeks."

In its response, Equinor said it had rejected the majority of submissions because they dealt with the "political" debate over mining in the Bight rather than addressing specific issues with its environmental plan.

It said of the 1039 submissions considered, only 13 resulted in changes to its plan.

They include expanding the list of potential species affected by mining to include beaked whales, and revising underwater sound modelling so that the noise of transponders is considered.

Cyber attack spooks Baysy

A CYBERATTACK on Bayswater council has prompted it to consider hiring a cybersecurity officer and spending up to $165,000 on safety upgrades.

• See story page 3

on prolonged stress leave

The ad states "as an

during this period of renewal."

Cyber scare

• *from page 1*

City staff advised councillors that the cost of "not undertaking essential cybersecurity protection is immeasurable and has not been contemplated".

Last year the city's website was caught up in a clever hack that affected more than 4200 websites worldwide.

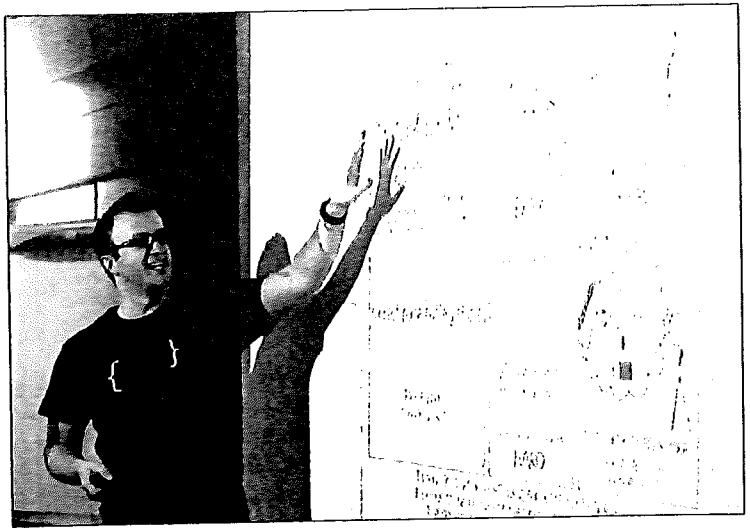
The hack inserted a script that used people's computers to generate the cryptocurrency Monero, with the cash being sent to the hacker's account.

Last year the city commissioned Deloitte to audit its cybersecurity and it awarded a rating of 1.5 out of 5.

The proposed cybersecurity upgrades in the 2019/20 budget would increase this rating to 3.

Upgrades include:

- $60,000 to identify and remove credit card numbers stored in old documents and emails
- A $5000 "IT vulnerability scan" to probe the existing system for weaknesses
- $80,000 to replace backup servers which are often targeted in data hostage hacks



• Cybersecurity expert Scott Helme. *Photo via his Twitter*

Government bodies have increasingly been the target of hackers in recent years.

The perpetrators have ranged from extortionists wanting payment in cybercurrency, to suspicions that a "state actor" could be behind some cyberattacks.

In October last year the WA government revealed that departmental websites had been subject to millions of intrusion attempts in the last couple of years, with 11 successful to some degree.

Some of those were as simple as hackers sending phishing emails to get people to provide their personal details, but one involved hackers tapping into North Metro TAFE systems and stealing staff account details, encrypted password files and students' details.

In the US, local governments including the City of Atlanta and the City of Baltimore have been paralysed by ransomware hackers holding their data hostage. These attacks infest the IT systems with viruses that lock users out, and can delete all data if the victim doesn't pay a ransom.

UK-based information security expert Scott Helme–who uncovered the global hack that affected Bayswater council last year–said at the time "there were ways the government sites could have protected themselves from this.

"It may have been difficult for a small website, but I would have thought on a government website we should have expected these defence mechanisms to be in place".

11.1 RAMELIUS RESOURCES – GREENFINCH CLEARING PROPOSAL

Responsible Officer:	Jamie Criddle, CEO	
Author:	Jamie Criddle, CEO	
File Reference:		
Disclosure of Interest:	Nil	
Attachments:	Nil	
Signature:	**Officer**	**CEO**

Purpose of the Report

☐ Executive Decision ☒ Legislative Requirement

Summary

Back in December 2017, Ramelius Resources, operators of Edna May Operations requested support in the approval process and logistical issues in relation to the commencement of the Greenfinch project.

Background

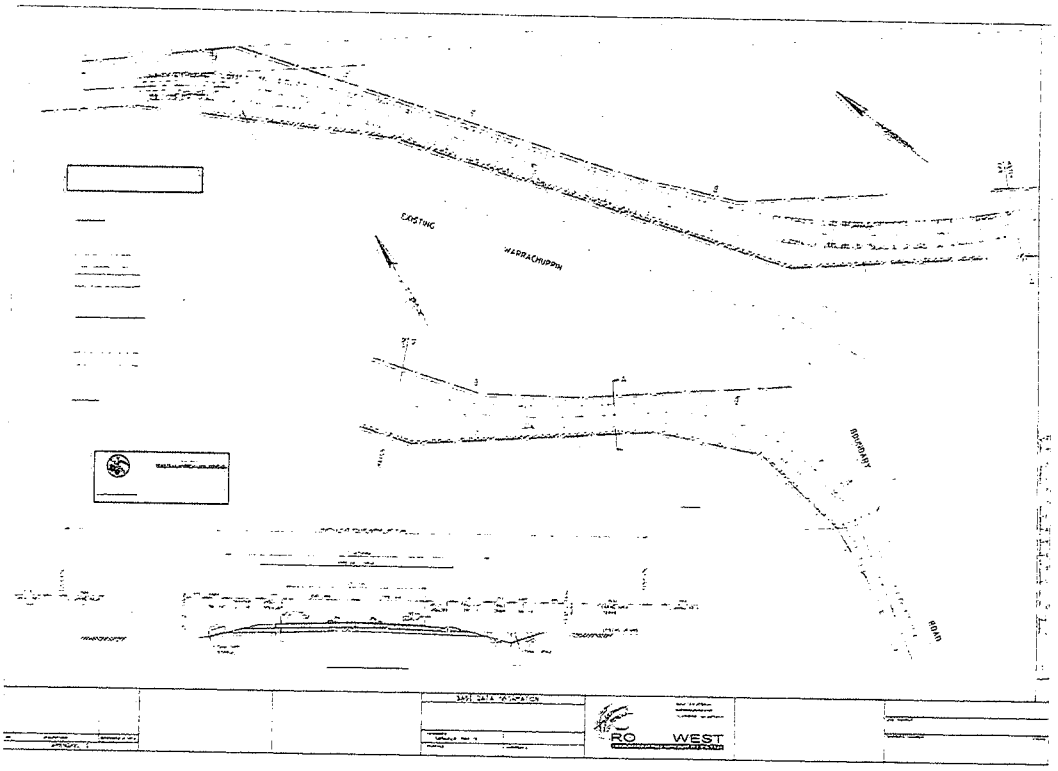
Development of the proposed Greenfinch Open Pit involves the excavation of an open pit, construction of a noise/abandonment bund, the extension of a waste rock landform, processing of circa 1.7Mt of ore and realignment of the Westonia Shire's Warrachuppin Road (and other associated infrastructure within the road corridor).

The project requires clearing of 62.3ha of vegetation, ~44ha of which is comprises of Eucalypt woodland/Mallee Woodland in good to very good condition and the remaining 18.3ha comprises of regrowth/cleared vegetation which is degraded.

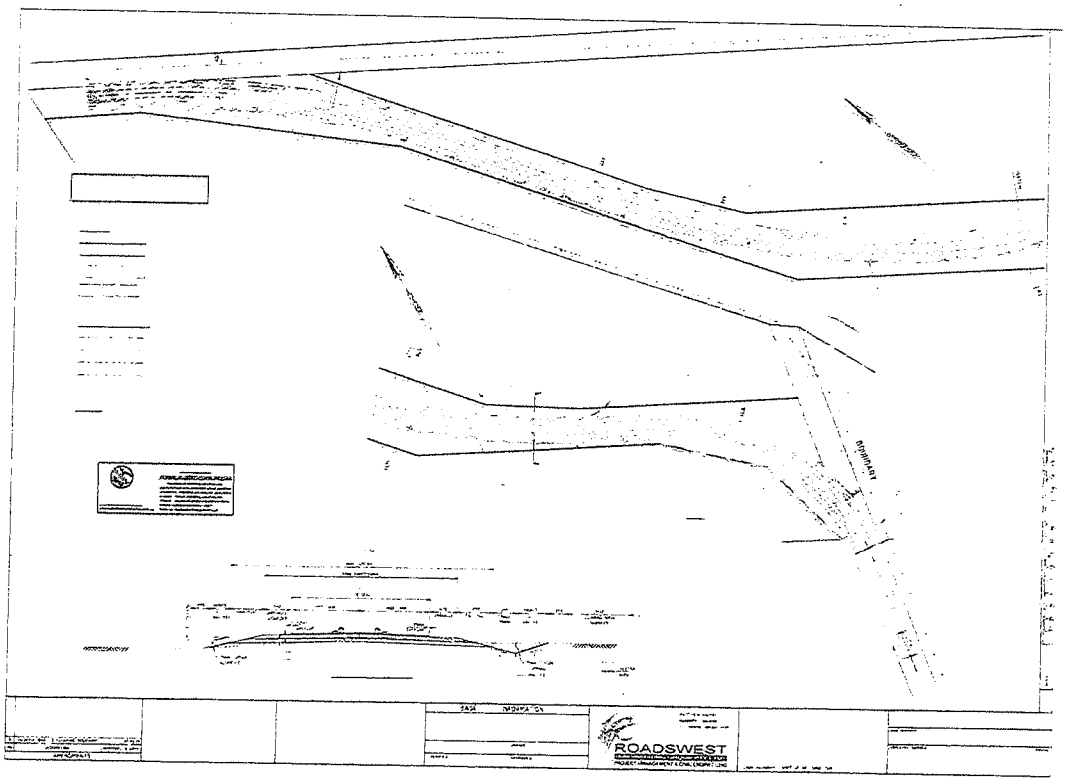
Approximately 39.1ha of the proposed clearing is located within a TEC (Federal) and PEC (WA) area, which represents an impact on only 1.8% of the local extent of the TEC/PEC within the local Westonia Common. The vegetation recorded within the clearing area is representative of the broader Beard vegetation association 536 (Medium woodland; Morrel (Eucalyptus longicornis) and Rough-fruited Mallee (Eucalyptus corrugata) which still occupies over 30% of its pre-European extent in Western Australia and in the Merredin subregion. Clearing will not reduce the extent of this vegetation association below the EPA's 30% threshold. Four plants of the Threatened Flora taxon, Eremophila resinosa which is listed under Federal and State legislation are located within the clearing area. There are sixteen known populations of E. resinosa (T) within a 20km radius of the Project, two of which occur within the Project area. These sixteen populations contain a total of 514 plants. Regionally there are a total of 26 natural populations of E. resinosa currently listed by DBCA (WAHERB, 2018). Multiple fauna surveys across the Project area have been completed and there has been no evidence of conservation significant fauna or short range endemic species within the area.

Offsets for the clearing have been proposed, including but not limited to, post-mining rehabilitation of cleared areas, revegetation of up to 70 ha of local farmland to provide/increase habitat corridors, protection and management of a 15ha remnant woodland block and a $10,000 annual contribution to local and regional environmental initiatives in the local Westonia Common. The Edna May Operation has to date planted some 4,000 Eremophila resinosa within the district and undertaken revegetation of some 101.6ha of existing farmland to the north of the mine.

The Greenfinch Project was then rejected by the PEC and as a result numerous redundancy have taken place at the minesite.



Original Clearing Application



Revised Clearing Application

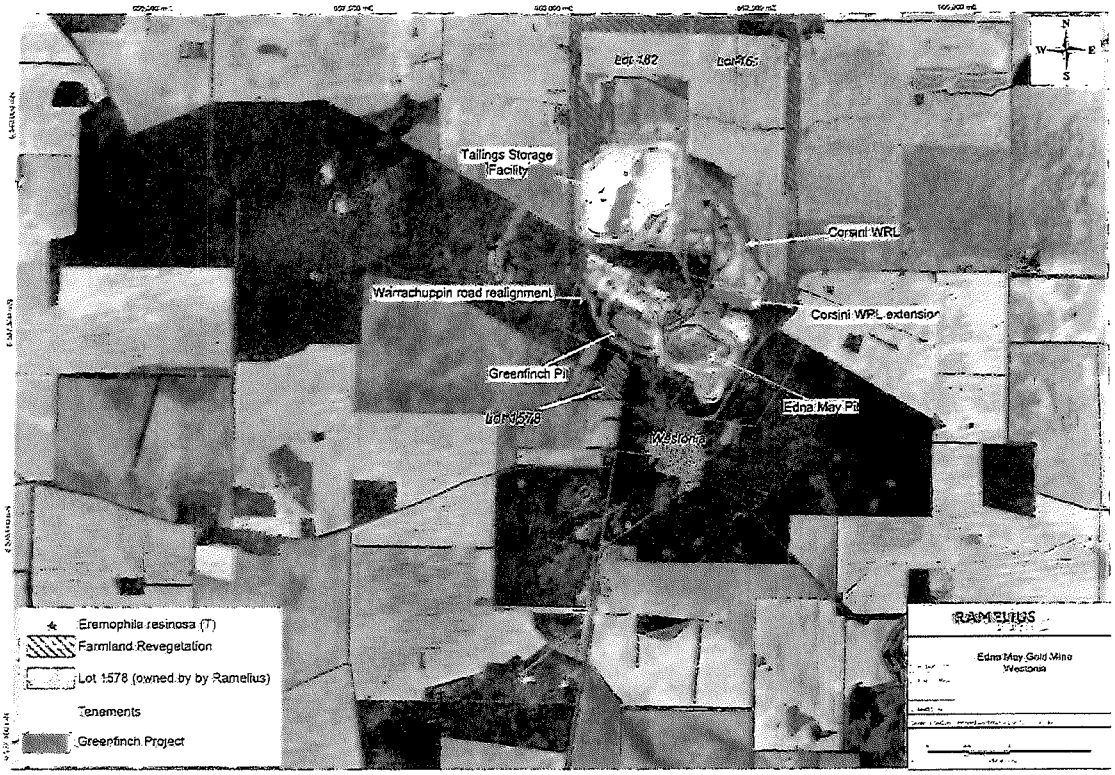


Figure 1 – Edna May mine, Westonia township and the proposed Greenfinch open pit

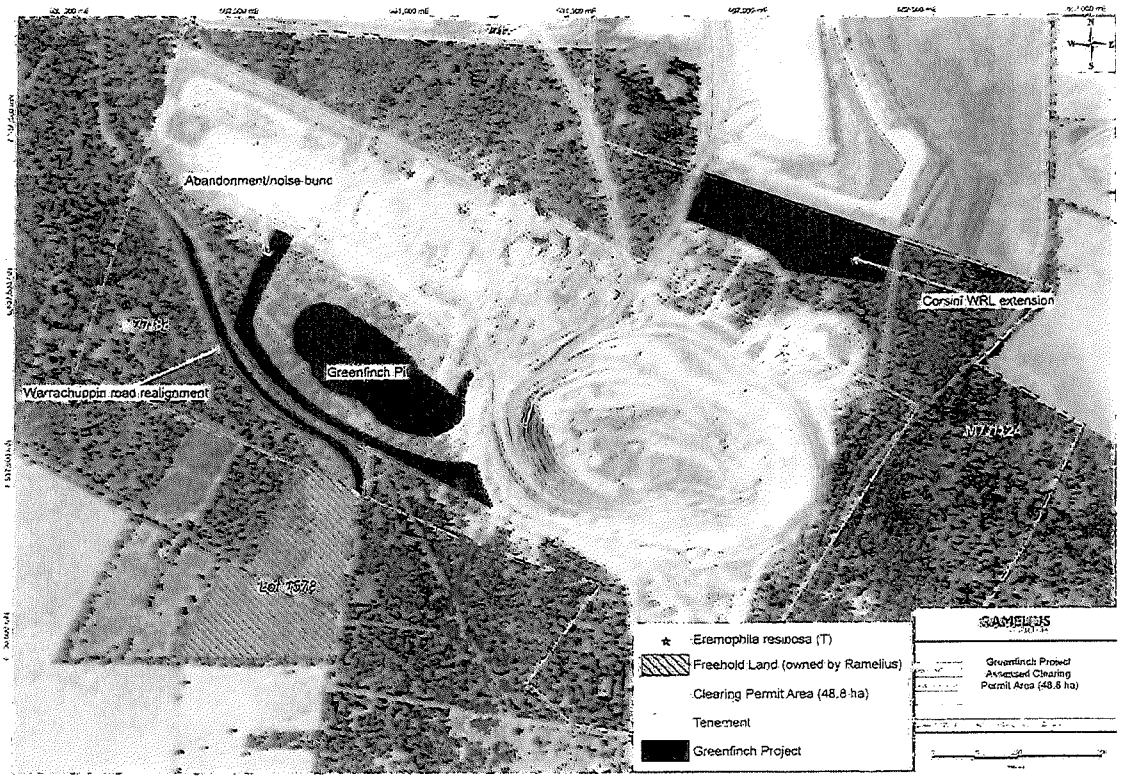


Figure 2 – 48.8ha Clearing Permit area assessed by DMIRS

Figure 3 – Eremophila Resinosa near road & Westonia Common woodland in background

Comment

Ramelius Resources have since appealed the decision and currently sits with the Appeals Convener, before a decision is finally made by the Minister for Environment, Hon Simon Dawson.

In order to assist in process, Ramelius will be resubmitting a revised clearing application with a reduction in clearing area (7,432m2) as listed below:

Previous total area of clearing = 32,326m2
Revised total area of clearing = 24,894m2
Reduction in clearing area = 7,432m2

Ramelius is now seeking Council approval of the proposed clearing area.

RE: SHIRE OF WESTONIA SUPPORT TO GREENFINCH PROJECT CLEARING APPEAL (CPS 8069/1)

As Chief Executive Officer of the Shire of Westonia, acting on behalf of the ratepayers, residents and wider Wheatbelt community, I would like to offer the Shire's full support to Edna May Operations Pty Ltd (a subsidiary of Ramelius Resources Ltd) in their effort to secure the approvals necessary for the Greenfinch Project at its Edna May mine, including its application for a native vegetation clearing permit (Greenfinch Project).

The "Common" as it is known, which surrounds the Westonia townsite, encompasses the mining tenement in question as well as several others, and is vested under the control of the Shire of Westonia which Council have effectively managed for more than 100 years through four different mining phases.

The Shire Council is entrusted in acting on the best interest of the wider community and does so via the four goals outlined in the Shire of Westonia Strategic Community Plan (2013-2023);
- Social and community wellbeing and capacity SOCIAL
- Economic diversity, innovation and prosperity ECONOMIC
- Infrastructure that meets the needs now and allows for growth ENVIRONMENT
- Leadership and financial sustainability GOVERNANCE

As listed below Westonia's Strategic Community Plan (2013-2023) highlights the ongoing economic viability of the mine as a major priority.
It is also a major consideration in the Wheatbelt Blueprint and Central East Sub-Regional Economic Strategy developed by the Wheatbelt Development Commission.

3.5 CHALLENGES FACING THE SHIRE OF WESTONIA
The Shire of Westonia faces a variety of challenges as it develops over the next 10 years. The critical challenges affecting the Shire have been identified through community engagement and Council workshop. The Strategic Community Plan will need to consider these and includes:
- Ongoing economic viability of the mine
- Attracting and retaining people, specifically young people and families as well as business into the community
- Increasing number of older residents
- Providing and maintaining infrastructure that meets the expectations of the community
- Lack of telecommunication infrastructure in the Shire
- Changes in technology
- The impact of the climate and weather conditions
- The policies of all levels of government and decision making that impacts at local level
- How to make the most of technology and be innovative
- Remaining relevant to the community and regional decision makers
- Attracting funding for local projects from national, state and regional organisations who prioritise regional projects

The ongoing viability of the existing Edna May mining and regional exploration activities and proposed future expansion through the Greenfinch project will sustain existing and create new employment opportunities (both direct and indirect) and support economic activity in the Westonia area, regionally, and Perth city suppliers.

The recent forced redundancies and terminations at Edna May have had a significant impact on our local economy first and foremost but have also felt the wave of impact in regional centres at Merredin, Southern Cross and Northam whom all support the Edna May Operations through direct employment, servicing, manufacturing and parts supply.

The impact is far more noticeable in a small community such as Westonia as the smallest variation in sales can have a large impact on the bottom line and staff numbers. This was first noticed when open pit mining was reduced to a single (day) shift operation due to delays in the environmental assessment process. As an example, shop sales at the community owned Cooperative reduced by 11% by reducing the nightshift. Workers would normally come in on a daily basis to purchase drinks, food, cigarettes and consumables. This dried up overnight and then was exacerbated at the completion of the Stage 2 cutback, making a total of 100 employees (72% reduction) in the workforce no longer contributing to the local economy. Sales reduced by 18% overall, with the shop reverting to shortened hours to minimalize operating costs. Three to six months of this reduction has been hard to manage, but cash surpluses have enabled operation to continue. Further reductions and reduced patronage of mine employees and commuting suppliers and contractors will have a disastrous effect on the bottom line of the shop and cause potential reduction in services, staff and opening hours or potential closure!!!

This Cooperative shop not only acts as the only food & grocery outlet in the district, it is also the Post Office, Café, Newsagency and Gas supplier.
This is an example of one business impacted by the reduction in staff at the Edna May Mine, impacts such as these in small communities have lasting and disastrous flow on effect to the whole district.

Company payments to numerous community groups via Memorandum of Understanding agreements (MOU) are also jeopardised as they rely on bed numbers in the mine camp situated in the town. These numbers have severely reduced which will result in up to a 60% reduction in MOU payments of $45,000 per annum that would normally be distributed to community projects via the Westonia Progress Association. There are numerous other similar agreements in place that would also be jeopardised as a result of the limited mining operations.

In weighing up Council's decision to fully support the Greenfinch project, Council took several factors into consideration in relation to the environmental impact to the town common.
The existing mining tenement M77/88 is located with the Westonia Town Common, and is vested with the Shire of Westonia which makes Council suitably qualified to comment on the proposed project.

The Shire has been over several years maintaining the Common Reserves that surround the Westonia townsite and have actively been rehabilitating, monitoring and baiting the reserves in order to preserve the area going forward. Council believes the overall environmental impact on the Westonia Common is relatively minor and manageable and looks forward to working with Ramelius Resources as highlighted in their vegetation clearing submission to conduct a variety of environmental projects to assist in preserving and enhancing the Westonia Common for the now and the future.
Ramelius (EMO) has shown a great ability previously to preserve and enhance threatened flora such as Eremophila Resinosa. Several successful translocation sites have been established in and around the Town Common, increasing the E. Resinosa populations within the district. There have also been various successful large-scale revegetation plantations immediately to the north of the existing mine using the same Eucalypt species that occur in the Town Common.

It should also be noted that the Greenfinch area has seen significant mining and exploration over the past 100 years with large scale vegetation disturbance and regrowth occurring on the site closest to the existing noise bund as the satellite imagery will suggest. I encourage you to visit the site and see for yourself how historical mining disturbance has impacted the Greenfinch footprint and the plans that Ramelius Resource are proposing will improve the area with net beneficial environmental outcomes.

In addressing the clearing potentially cutting the Town Common in two, the Shire of Westonia has been working with Ramelius in their plans to modify the original clearing permit application so that resident fauna (which are all common species) can continue to move throughout the Common through corridors maintained north and south of the proposal.

There is no way that the Shire of Westonia would put the economy before the environment, we are simply making an informed decision on behalf of its constituents and community to draw a balance between the two and ensure that preservation continues not just during this mining phase but in years to come. Westonia was founded upon mining over 100 years ago, farming has sustained the community since, but the community, district and Wheatbelt has only prospered during times of extended mining.

The significant benefits will not only be felt during the term of the Greenfinch Project, but beyond it, as it will facilitate the extension of the Edna May operations.
The multiplier effect of the increased and extended activity will bring additional benefits to communities and the authorities and governments that serve them, through rates and royalties, thereby providing a strong foundation for long-term viability and growth.

Please accept this correspondence as strong support the Greenfinch Project and urge the Western Australian Government and regulatory authorities to take such steps to conditionally approve and enable the progression of the Greenfinch Project.

We would welcome the opportunity to meet you to discuss the Shire's support for Greenfinch, as we believe it is important that this be taken into account as part of your consideration of the appeal.

Statutory Environment

Land Administration Act 1995
56. Dedication of land as road
(1) If in the district of a local government —
(a) land is reserved or acquired for use by the public, or is used by the public, as a road under the care, control and management of the local government; or
(b) in the case of land comprising a private road constructed and maintained to the satisfaction of the local government —
(i) the holder of the freehold in that land applies to the local government, requesting it to do so; or
(ii) those holders of the freehold in rateable land abutting the private road, the aggregate of the rateable value of whose land is greater than one half of the rateable value of all the rateable land abutting the private road, apply to the local government, requesting it to do so; or
(c) land comprises a private road of which the public has had uninterrupted use for a period of not less than 10 years, and that land is described in a plan of survey, sketch plan or document, the local government may request the Minister to dedicate that land as a road.
(2) If a local government resolves to make a request under subsection (1), it must —
(a) in accordance with the regulations prepare and deliver the request to the Minister; and
(b) provide the Minister with sufficient information in a plan of survey, sketch plan or document to describe the dimensions of the proposed road.
(3) On receiving a request delivered to him or her under subsection (2), the Minister must consider the request and may then —
(a) subject to subsection (5), by order grant the request; or
(b) direct the relevant local government to reconsider the request, having regard to such matters as he or she thinks fit to mention in that direction; or
(c) refuse the request.
(4) On the Minister granting a request under subsection (3), the relevant local government is liable to indemnify the Minister against any claim for compensation (not being a claim for compensation in respect of land referred to in subsection (6) in an amount equal to the amount of all costs and expenses reasonably incurred by the Minister in considering and granting the request.
(5) To be dedicated under subsection (3)(a), land must immediately before the time of dedication be —
(a) unallocated Crown land or, in the case of a private road, alienated land; and
(b) designated in the relevant plan of survey, sketch plan or document as having the purpose of a road.
(6) If land referred to in subsection (1)(b) or (c) is dedicated under subsection (3)(a), a person with an interest in that land (including a person who has the benefit of an easement created under section 167A of the TLA) is not entitled to compensation because of that dedication.

Policy Implications

Nil

Strategic Implications

Nil

Financial Implications

While there will be a cost to Council, it will be reimbursed by Ramelius Resources. Project is not expected to commence until 2018/19 financial year.

Appeal Number:
C016 of 2018

Environmental Protection Act 1986

Hon Stephen Dawson MLC
Minister for Environment

MINISTER'S APPEAL DETERMINATION

APPEAL AGAINST REFUSAL TO GRANT CLEARING PERMIT CPS 8069/1 EDNA MAY OPERATIONS PTY LTD – GREENFINCH PROJECT, AREA PERMIT, MINING LEASES 77/88, 77/124, SHIRE OF WESTONIA

Purpose of this document
This document sets out the Minister's decision on an appeal lodged under section 101A(1)(a) of the *Environmental Protection Act 1986* in objection to the above refusal. This document is produced by the Office of the Appeals Convenor for the Minister but is not the Appeals Convenor's own report, which can be downloaded from the Appeals Convenor's website at www.appealsconvenor.wa.gov.au.

Appellant:	Edna May Operations Pty Ltd
Applicant:	Edna May Operations Pty Ltd
Proposal description:	Refusal to grant a permit to clear up to 48.8 hectares of native vegetation for the expansion of the Edna May Gold Mine
Minister's decision:	The Minister dismissed the appeal
Date of decision:	13 May 2019

REASONS FOR MINISTER'S DECISION

Edna May Operations Pty Ltd (Edna May/the appellant) applied to the Department of Mines, Industry Regulation and Safety (DMIRS) for a permit to clear up to 62.3 hectares (ha) of native vegetation within mining leases M77/88 and M77/124 (on Crown Reserve R14983), Westonia (CPS 8069/1) in May 2018, and this was subsequently reduced to 48.8 ha in order to minimise environmental impacts. An offset proposal to address environmental impacts was also submitted, which proposed revegetation of nearby ex-farmland.

Through its assessment, DMIRS concluded that the proposed clearing was seriously at variance to clearing principle (c) and at variance to clearing principles (b), (d) and (e). On 1 November 2018, DMIRS refused to grant a clearing permit for the expansion.

Edna May appealed this decision, submitting that DMIRS failed to take into account the reduction in impacts with the revised proposal or the proposed offset. The appellant also submitted that DMIRS incorrectly assessed the proposed clearing in respect of threatened flora, threatened ecological communities and other biodiversity-related matters, and was inconsistent compared with previous clearing applications for the development of the Edna May Gold Mine.

The appeal was investigated by the Appeals Convenor on the Minister's behalf, which included a meeting with Edna May, as well as feedback from DMIRS, and a site visit.

As outlined in the Appeals Convenor's report, the appeal right in relation to a decision to refuse to grant a clearing permit considers the environmental merits of the assessment based on principles as set out in Schedule 5 of the *Environmental Protection Act 1986*, as well as other relevant matters.

In relation to threatened flora, DMIRS identified that the application area contains four *Eremophila resinosa* plants, along with habitat considered by DMIRS on advice of the Department of Biodiversity, Conservation and Attractions (DBCA) to be critical to the survival of this species. DMIRS also identified the potential for fragmentation of sub-populations as a result of the proposed clearing.

In the appellant's view, the impacts to this species have been minimised through the revised application, and that residual impacts can be counterbalanced through revegetation and translocation. Edna May also submitted that critical habitat for the species has not been formally mapped by DBCA.

While DBCA acknowledged the survival of translocated *E. resinosa*, it queried the long-term sustainability of translocated populations, stating that it is not appropriate to rely on regeneration of the species in non-natural disturbed areas, as this will not be sustainable in the longer term with respect to maintaining other supporting ecosystem processes. In coming to this view, DBCA noted that between 22 to 88 per cent of populations at each translocation site had been recorded as dead or lost.

Having regard to the information presented in relation to this matter, the Minister agreed with the Appeals Convenor that given the status of the species, and DBCA's advice on the potential impacts and questions around translocation, DMIRS was justified in concluding that the proposed clearing is seriously at variance to clearing principle (c).

In relation to fauna habitat values, the appellant submitted that fauna habitat and movement around the area is already affected by Warrachuppin Road and existing disturbance within the application area, and that fauna assessments identified the majority of fauna to comprise mobile bird species.

DMIRS advised that it considered the condition of the vegetation, habitat types, connectivity, and the partial overlap of the application area with the Westonia Common, and had regard for the findings of fauna assessments conducted in 2012 and 2014, in its assessment against clearing principle (b).

The Appeals Convenor considered that the available evidence supports DMIRS' view that the application area forms part of a significant habitat for fauna. On review of the information available in relation to this matter, the Minister agreed with this conclusion.

In relation to threatened ecological communities, DMIRS identified that the proposed clearing would impact approximately 33 ha of the Commonwealth-listed threatened ecological community 'Eucalypt Woodlands of the Western Australian Wheatbelt' (Wheatbelt Woodlands TEC), which the Minister noted is comprised of two State-listed priority ecological communities.

By the appeal, Edna May expressed the view that impacts to the TEC can be addressed through revegetation with appropriate species, and that as a result, DMIRS should not have found the proposed clearing to be at variance to clearing principle (d).

The decision report states that DBCA considered there is a risk of the revegetation not succeeding for a number of reasons, and protection and management of intact areas of the TEC are likely to provide better outcomes long-term.

On the basis of the information available to the Minister, and noting that the listing of the Wheatbelt Woodlands TEC post-dates previous clearing permit decisions in association with mining in the area, the Minister supported DMIRS' conclusion that the proposed clearing is at variance to clearing principle (d).

In relation to the significance of the remnant in an extensively cleared area, the Minister considered the concerns the appellant raised, along with advice of the Appeals Convenor and DMIRS, and consistent with his conclusion with respect to clearing principle (b), the Minister was of the view that the proposed clearing would result in severance of vegetation linkages between portions of the Westonia Common and could lead to impacts to adjacent vegetation. While Edna May submitted that the impact to connectivity can be addressed through revegetation, the Minister was of the view that there remains impacts to connectivity at least in the medium-term. Noting this, the Minister considered DMIRS' conclusion that the proposed clearing is at variance to clearing principle (e) was justified.

As to the concerns raised in the appeal in respect to offsets and consistency with other decisions, the Minister carefully considered the issues raised, and formed the view that DMIRS appropriately considered the issues, and the Minister adopted its conclusions accordingly.

It follows from the above that the Minister considered that DMIRS was justified in concluding that the proposal to clear 48.8 ha of native vegetation for the expansion of the Edna May mine and related purposes was seriously at variance to clearing principle (c), and was at variance to a number of other principles. Noting the identified values, and in particular the impacts to threatened flora as identified by DBCA, the Minister was of the view that the decision to refuse the permit was also justified, and the Minister dismissed the appeal on that basis.

The Minister noted that Edna May submitted a revised clearing proposal to the Appeals Convenor during the appeal investigation, which among other things reduced the extent of clearing to 26.3 ha. While it is open to him to consider a reduced area of clearing in his determination of the appeal, the Minister was of a view that as the modified proposal represents a substantial variation to the application considered by DMIRS (48.8 ha to 26.3 ha), the implications of the change warrant fresh assessment against the clearing principles and other relevant matters by DMIRS.

Note: this decision is published pursuant to the terms of section 110 of the *Environmental Protection Act 1986* and regulation 8 of the *Environmental Protection Regulations 1987*.

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Appeals Convenor

Environmental Protection Act 1986

REPORT TO THE MINISTER FOR ENVIRONMENT

APPEAL IN OBJECTION TO THE DECISION OF THE DEPARTMENT OF MINES, INDUSTRY REGULATION AND SAFETY TO REFUSE TO GRANT A CLEARING PERMIT

CPS 8069/1: EDNA MAY GOLDMINE EXPANSION AND GREENFINCH PROJECT, SHIRE OF WESTONIA

PROPONENT: EDNA MAY OPERATIONS PTY LTD

Appeal Number C016 of 2018

May 2019

Appeal Summary

This report relates to an appeal lodged by Edna May Operations Pty Ltd (applicant; appellant) in objection to a decision of the Department of Mines, Industry Regulation and Safety (DMIRS) to refuse to grant a clearing permit for its revised application CPS 8069/1 to clear 48.8 hectares (ha) of native vegetation within mining tenements M77/88 and M77/124, Westonia, for the purpose of development of mining activities.

On the basis of its assessment of clearing impacts, DMIRS identified that the revised application area contains native vegetation that is important for the survival of threatened flora and is within a significant remnant in an extensively cleared landscape, and that the proposed clearing would impact on fauna habitat, a wildlife corridor and approximately 33 ha of a threatened ecological community (TEC). DMIRS concluded that the proposed clearing is seriously at variance to clearing principle (c), is at variance to clearing principles (b), (d), and (e), may be at variance to clearing principles (a) and (h), is not likely to be at variance to clearing principles (g), (i) and (j), and is not at variance to clearing principle (f), and refused to grant a clearing permit.

The appellant submitted that DMIRS' decision to refuse to grant a clearing permit on the basis of its assessment is unreasonable and unjustified. Broadly, the appellant submitted that DMIRS failed to properly take into account the revised application and proposed offsets, incorrectly assessed the proposed clearing in respect of threatened flora, TECs and other biodiversity-related matters, and applied inconsistent decision-making compared with previous clearing applications for the development of the Edna May Gold Mine. The appellant is seeking for the Minister for Environment to allow the appeal and grant a clearing permit, subject to appropriate conditions including an offset package.

For the reasons stated in this report and based on the available evidence, the Appeals Convenor considered that DMIRS was justified in concluding that the proposal to clear 48.8 ha of native vegetation for the expansion of the Edna May mine and related purposes was seriously at variance to clearing principle (c), and was at variance to a number of other principles. Noting the identified values, and in particular the impacts to threatened flora as identified by DBCA, it is considered that the decision to refuse the permit was also justified.

The Appeals Convenor noted that the appellant submitted a modified footprint (26.3 ha) and offset for the proposed clearing, however, considered that this represented a substantial change that should be assessed as a fresh clearing permit application.

Recommendation

The Appeals Convenor recommended that the appeal be dismissed.

INTRODUCTION

This report relates to an appeal lodged by Edna May Operations Pty Ltd (applicant; appellant) in objection to a decision of the Department of Mines, Industry Regulation and Safety (DMIRS) to refuse to grant a clearing permit to clear 48.8 hectares (ha) of native vegetation within mining tenements M77/88 and M77/124, Westonia, to facilitate expansion of existing mining operations. The location of the proposed clearing is indicated in Figure 1.

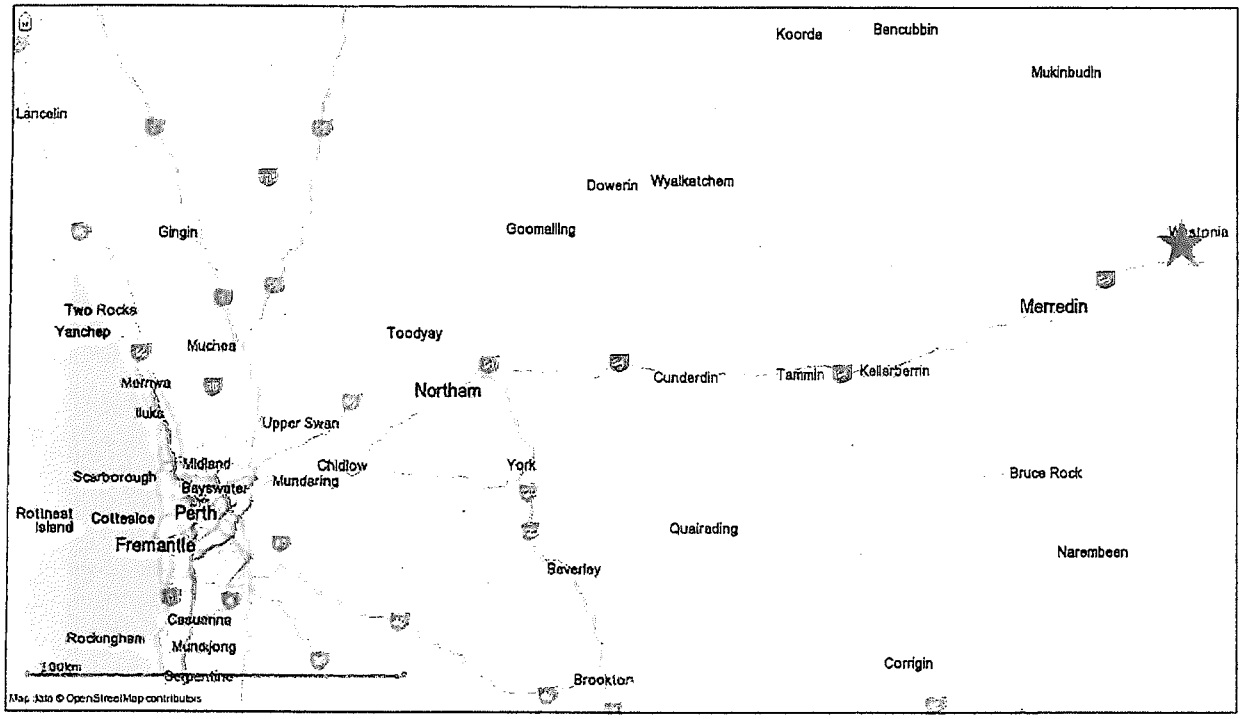

Figure 1: Location map (indicated by red star) *(Source: Whereis.com, December 2018)*

Background

In February 2018, a proposal to expand the Edna May Gold Project was referred to the Environmental Protection Authority (EPA). On 24 April 2018, the EPA determined not to assess the proposal, finding that the environmental issues raised by the proposal could be dealt with under Part V (clearing) of the *Environmental Protection Act 1986* (EP Act).[1]

In May 2018, a proposal to clear up to 43.9 ha of native vegetation within a 62.4 ha footprint for the expansion was referred under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). On 6 August 2018, the Commonwealth Department of the Environment and Energy (DotEE) determined that the proposal was a controlled action in relation to impacts to listed threatened species and communities, requiring assessment (EPBC 2018/8213).

Also in May 2018, DMIRS received an application for a permit to clear up to 62.3 ha of native vegetation within mining leases M77/88 and M77/124 (within a portion of Crown Reserve R14983), Westonia.[2] In support of the application, the applicant submitted an offset proposal to address environmental impacts through revegetation of nearby ex-farmland and the contribution of funds to local and regional conservation initiatives. The extent of the original application area (62.3 ha) is shown in Figure 2.

[1] Available at: http://www.epa.wa.gov.au/proposals/edna-may-gold-project-greenfinch-expansion
[2] Clearing applications associated with mining and petroleum activities are assessed by the Department of Mines, Industry Regulation and Safety under a delegation from the Department of Water and Environmental Regulation in accordance with the provisions of the EP Act.

Figure 2: Original application area (indicated by yellow shading) *(Source: DMIRS CPS 8069/1)*

The application was advertised for a 21-day public comment period and three submissions were received raising concerns about potential impacts to biodiversity, vegetation, flora, fauna and the reserve, and the clearing principles.[3]

On 6 August 2018, DMIRS notified the applicant that the proposed clearing will impact on a number of environmental values and was unlikely to be considered acceptable. These values included (among other things) the threatened flora *Eremophila resinosa* (*E. resinosa*), the Commonwealth-listed threatened ecological community (TEC) 'Eucalypt Woodlands of the Western Australian Wheatbelt' (Wheatbelt Woodlands TEC) (critically endangered; comprising two State-listed priority ecological communities (PEC)), remnant vegetation in an extensively cleared area, significant habitat for indigenous fauna, and ecological linkages.

In response, the applicant submitted a revised application reducing the extent of the proposed clearing from 62.3 ha to 48.8 ha, and proposed an additional revegetation offset. The extent of the revised application area (48.8 ha) is shown in Figure 3.

On 1 November 2018, DMIRS refused to grant a clearing permit for the revised application. In communicating the decision to the applicant, DMIRS concluded that the proposed clearing was seriously at variance to clearing principle (c) due to impacts to threatened flora, and at variance to clearing principle (b) significant habitat for fauna, (d) due to the presence of a TEC and (e) significant remnant in a highly cleared area. It was against this decision that the appeal was received.

[3] As listed in Schedule 5 of the EP Act and in accordance with section 51O of the EP Act.

Figure 3: Revised application area (indicated by yellow shading) *(Source: Appeal document)*

This document is the Appeals Convenor's formal report to the Minister for Environment under section 109(3) of the EP Act.

OVERVIEW OF APPEAL PROCESS

In accordance with section 106 of the EP Act, a report was obtained from DMIRS in relation to the issues raised in the appeal. During the appeal investigation, the Appeals Convenor consulted with DMIRS and the appellant in relation to issues raised in the appeal. The Appeals Convenor also undertook a site visit.

The appellant requested a copy of DMIRS' report on the appeal. The appellant made submissions in response to DMIRS' report, which included a further revision to the boundaries of the area to be cleared and a revised offset, with a reduction in clearing to 26.3 ha. The appellant requested that the Minister consider granting a clearing permit for the reduced area. As the modified footprint submitted by the appellant represents a substantial variation to the application considered by DMIRS (48.8 ha to 26.3 ha), it is considered that the implications of the change warrant fresh assessment against the clearing principles and other relevant matters. Further discussion relevant to this issue is provided later in this report.

The environmental appeals process is a merits-based process. For appeals in relation to a decision to refuse to grant a clearing permit, the Appeals Convenor normally considers the environmental merits of the assessment based on principles as set out in Schedule 5 of the EP Act, as well as other environmental factors. Questions of additional information not considered by DMIRS, technical errors and attainment of relevant policy objectives are normally central to appeals.

OUTCOME SOUGHT BY APPELLANT

The appellant is seeking for the Minister to allow the appeal and grant a clearing permit, subject to appropriate conditions including an offset package.

GROUNDS OF APPEAL

The appellant submitted that DMIRS' decision to refuse to grant a clearing permit for the revised application on the basis of its assessment is unreasonable and unjustified. The appellant's concerns are broadly summarised under the following grounds of appeal:

1. Threatened flora
2. Significant habitat for indigenous fauna
3. Threatened ecological communities
4. Significant remnant in an extensively cleared area
5. Offset of significant residual impacts
6. Consistency with other decisions.

The appellant sought to challenge DMIRS' findings with respect to its assessment of clearing principles in Schedule 5 of the EP Act generally. As the decision to refuse to grant the permit was based primarily on four principles (grounds 1 to 4 above), it is not considered necessary for this report to reach a concluded view on the alleged adequacy of DMIRS' consideration of principles that were not relevant to its final decision.

The appellant also raised concerns that DMIRS failed to adequately consider the reduced area of clearing and the objects of the EP Act. As the Minister is standing in the shoes of the original decision-maker in considering this appeal, the question as to whether or not the original decision-maker did or did not meet relevant legal requirements is not considered to be relevant to the Minister's decision on the appeal. These issues are considered under 'Other Matters' at the conclusion of this report.

GROUND 1: THREATENED FLORA

By this ground of appeal, the appellant submitted that DMIRS' findings that the proposed clearing is seriously at variance to clearing principle (c) is not supported because:

- the proposed clearing is unlikely to reduce critical habitat for *E. resinosa* nor result in habitat fragmentation and reduce cross-pollination between subpopulations;
- pre-stripping the soil seed bank is likely to result in a net environmental benefit for the conservation of the species; and
- translocations are an adequate replacement for maintaining the habitat and survival of the population, with translocations on ex-farmland being successful.

Consideration

At the time of DMIRS' assessment of the revised application, clearing principle (c) provided that 'native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora'.[4] 'Rare flora' has the same meaning as given in section 23F of the *Wildlife Conservation Act 1950.*[5]

[4] At the time of DMIRS' assessment of the revised application, clearing principle (c) in Schedule 5 of the *Environmental Protection Act 1986* referred to 'rare flora'. On 1 January 2019, provisions relating to threatened species under the *Biodiversity Conservation Act 2016* came into effect, replacing the previous provisions of the *Wildlife Conservation Act 1950.* This included replacement of 'rare flora' with 'threatened flora'. Because the decision the subject of this appeal predated the new provisions taking effect, the previous provisions are cited. In any event, the changes are considered to be of no substantive effect in respect to the status of *E. resinosa*, as the listing of that species as 'rare flora' in 2018 is carried forward as 'threatened flora' under the new Act (see regulation 169 *Biodiversity Conservation Regulations 2018).*
[5] Ibid.

In this case, DMIRS found that the revised application area contains four *E. resinosa* plants, listed as rare under the *Wildlife Conservation Act 1950* and is ranked as 'endangered' under World Conservation Union (IUCN 1994) Red List criterion C2a due to the population size being less than 2,500 mature individuals, with continuing decline observed and no subpopulation estimated to contain more than 250 mature individuals.[6]

DMIRS concluded that the proposed clearing was seriously at variance to clearing principle (c) based on its findings that, while only four plants are proposed to be cleared, the proposed clearing would result in the removal of a substantial area of habitat for the species, with consequent impacts from fragmentation.

Section 51O(2) of the EP Act requires the CEO (and Minister on appeal) to have regard to the clearing principles when considering a clearing application. On the basis of the above information, it is common ground that the proposed clearing will directly impact rare (threatened) flora, and as a result, clearing principle (c) is a relevant mandatory consideration in a decision as to whether or not to grant a permit.

In the decision to refuse the permit, the impacts to *E. resinosa* were cited by DMIRS as the primary reason for the decision. Thus, DMIRS determined that it should not exercise its discretion in favour of granting the permit on the basis that (among other things) the impact to *E. resinosa* could not be mitigated and posed a significant threat to a species already under threat.

As noted above, by this ground of appeal, the appellant submitted (in essence) that the impacts to *E. resinosa* from the clearing were overstated because:

- critical habitat fragmentation is unlikely; and
- stripping and reuse of the soil seed bank and translocations have been shown to be successful.

Habitat fragmentation

The appellant submitted that while critical habitat for this species has not yet been mapped by the Department of Biodiversity, Conservation and Attractions (DBCA), it is estimated that the proposed clearing would impact only approximately 1.9 per cent of the critical habitat as mapped by its environmental consultant.

The appellant also submitted that the proposed clearing is unlikely to result in habitat fragmentation or reduce cross-pollination between sub-populations on the basis of the small number of plants within the revised application area, the unsuitability of the vegetation for pollinators due to previous disturbance, and the extent of critical habitat outside of the revised application area.

In response to this element of the appeal, DMIRS noted that the Recovery Plan describes the habitat critical to the survival of the species as including the area of occupancy for extant populations, areas of similar habitat surrounding important populations (as is necessary to allow access for pollinators and population expansion), and potential habitat. DMIRS advised that it therefore considered that the revised application area contains critical habitat for this species.

In relation to fragmentation specifically, DMIRS considered that the proposed clearing will fragment the larger native vegetation remnant both to the north and south of the mine:

> Given there is already little connectivity to the north, it is the loss of the southern vegetation connection that will have the largest impact. Although the appellant has focussed on the loss of four plants, this figure illustrates how the habitat between Population 23a and Population 23c will be lost with the proposed clearing.

[6] http://www.environment.gov.au/biodiversity/threatened/recovery-plans/national-recovery-plan-resinous-eremophila-eremophila-resinosa (accessed 5 April 2019).

> Neither DMIRS nor the appellant were able to find published genetic studies on *E. resinosa*. Therefore, DMIRS relied on the expertise provided in the species recovery plan. Habitat fragmentation and reduced opportunity for pollinators was a possible explanation for the low levels of healthy seed in *E. resinosa* locules (Cochrane et al., 2002 in DEC, 2008).[7]

DMIRS also advised that a molecular analysis of vegetation function in fragmented Australian biomes[8] used the common and widespread species *Eremophila glabra* subsp. *glabra*. DMIRS considered that the applicability of the research on a rare species with restricted distribution, including in relation to pollinators of *E. resinosa*, is uncertain.

Pre-stripping and translocation

The appellant argued that translocations are an adequate replacement for maintaining the habitat and survival of the population and are consistent with the Recovery Plan. The appellant submitted that previous translocations on ex-farmland have been successful, and that there are no known factors to suggest that they would not be sustainable in the long-term with appropriate management. The appellant submitted that DMIRS failed to give sufficient weight to the ongoing research program, trials, results and environmental benefits of translocations.

The appellant also submitted that *E. resinosa* is referred to as a 'disturbance opportunist' and by recovering the soil (seed bank) and using it in rehabilitation, this will increase the potential for germination of any *E. resinosa* seed stored still available in the soil seed bank.

In response to this element of the appeal, DMIRS advised that the data from the translocation trials on agricultural sites[9] do not support the appellant's claim that translocations of *E. resinosa* on ex-farmland have been successful:

> ... Site 7 had patchy establishment with no obvious reasons as to why plants grew in some areas but not others. During 2017 it was recorded that there were 110 dead plants, with 260 alive. The number of dead plants had increased from 40 plants in 2016, to 110 plants in 2017, and some of the plants that were alive in 2017 were visibly stressed (Ramelius Resources, 2018). Site 8 was also patchy for unknown reasons although survival rates were higher (Ramelius Resources, 2018). Due to a lack of germination, Site 10 had not had a full survey undertaken at the time of the report (Ramelius Resources, 2018). Some of the plants in translocation sites 1-4 in native vegetation are in poor to moderate health and in decline (Ramelius Resources, 2018), which indicates that although there has been short to medium term success in native vegetation translocations, long term success and sustainability of populations had not been proven yet. The results provided in the translocation report support DBCA's (2018b) advice, and the conclusion reached in DMIRS decision report, that although the early stages of establishment of self-sustaining populations of the species has been demonstrated on disturbed natural areas, it is yet to be demonstrated on ex-farmland.[10]

DMIRS further advised that the suggestion that pre-stripping the topsoil prior to mining provides a net environmental benefit does not properly consider the critical habitat provided to the soil seed bank by the revised application area.

In advice to DMIRS, DBCA relevantly noted that while:

> ... many translocated *E. resinosa* plants have survived, translocations to areas of predicted inferred habitat are not an adequate replacement for maintaining the habitat and the survival of existing natural populations. The initial translocations have been basic in design, with some consisting of monocultures of *E. resinosa* plants growing in degraded sites with other native

[7] DMIRS response to Appeal C016/18, pages 7-9.
[8] As published in: Young, A., Broadhurst, L., Byrne, M., Coates, D., Yates, C., Field, D., Elliott, C., Llorens, T. and Nistelberger, H. (2009) *Molecular analysis of vegetation function in fragmented Australian biomes*. Land & Water Australia Project CPI 13, 30 June 2009. Commonwealth Scientific and Industrial Research Organisation and Department of Environment and Conservation, Western Australia.
[9] As published in: Ramelius Resources Limited (2018) *Edna May Operations – Eremophila resinosa Translocation Sites – 2017 Annual Report*. January 2018.
[10] DMIRS response to Appeal C016/18, pages 7-9.

> species cleared regularly (by brush cutting) from the sites to remove competition. While there is demonstrated success in germinating and establishing the species in the short to medium term, these translocations are intensively managed sites and in the absence of full reestablishment of natural ecological processes the goal of translocated populations becoming self-sufficient and viable in the long-term will not be achieved. In 2016 a new translocation proposal moved towards incorporating *E. resinosa* as part of a broader landscape rehabilitation project, which may assist in gaining an improved understanding of the long term effectiveness of translocation for this species.[11]

DBCA also noted that monitoring results conducted over translocation sites show that between 2010 and 2017, a substantial proportion of plants at each subpopulation were recorded as dead or lost (22% to 88%). DBCA suspected that the protection of the mine site may have contributed to altered fire regimes which could be resulting in natural senescence of the population:

> This again highlights the need for protection of habitat where the species previously occupied for the long term conservation of the population remaining around Edna May mine site. It is not appropriate to rely on regeneration of the species in non-natural disturbed areas, as this will not be sustainable in the longer term with respect to maintaining other supporting ecosystem processes.[12]

Taking the above into account, it is considered to be common ground that the proposed clearing is at variance to clearing principle (c). Furthermore, given the status of the species, and advice from DBCA about the potential risks posed by the proposed clearing and the lack of evidence that translocation will replace the ecological values of the revised application area, it is considered that DMIRS was justified in determining the proposed clearing was seriously at variance to principle (c).

GROUND 2: SIGNIFICANT HABITAT FOR INDIGENOUS FAUNA

By this ground of appeal, the appellant submitted that DMIRS' conclusion in relation to clearing principle (b) is incorrect on the basis that fauna movement is already affected by Warrachuppin Road, no conservation-significance or short-range endemic fauna have been recorded, and the majority of fauna observed comprise mobile bird species. The appellant submitted that DMIRS has given too much weight to the MWH Australia Pty Ltd fauna assessment, and that fauna corridors are not completely severed or significantly impacted.

Consideration

Clearing principle (b) provides that native vegetation should not be cleared if 'it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia'.

DMIRS' assessment in relation to clearing principle (b) found that the revised application area contains a large amount of leaf litter accumulation which could support short-range endemic invertebrate species, and is located within the Westonia Common which is documented to have a high conservation value for birds and to be important for vertebrate fauna diversity. DMIRS concluded that the revised application area comprises a significant habitat for indigenous fauna.

In response to the appeal ground, DMIRS advised that it:

> ... considered the condition of the native vegetation providing the habitat. Part of the application area was mapped as disturbed by the MWH (2014) fauna survey while other parts of the application area were mapped as the following broad fauna habitat types:
> - Mixed Woodland dominated by Red Morrel (*Eucalyptus longicornis*)
> - Mixed Woodland dominated by Gimlet (*Eucalyptus salubris*).[13]

[11] DBCA biodiversity advice to DMIRS in relation to original application CPS 8069/1, dated March 2018, pages 1-2.
[12] DBCA biodiversity advice to DMIRS in relation to revised application CPS 8069/1, dated October 2018, page 6.
[13] DMIRS response to Appeal C016/18, pages 5-6.

DMIRS advised that the report *Edna May Gold Project Clearing Permit (Purpose Permit) Application M77/88, M77/124 Native Vegetation Management Plan and Assessment of Clearing Principles*:[14]

> ... was provided for a clearing permit application of 20 hectares of native vegetation, of which 15 hectares was partially rehabilitated pre-disturbed land, directly adjacent to the existing mine (MBS, 2012). The DMIRS (2012) decision report for clearing permit CPS 4959/1 utilised the MBS (2012) report which stated that the application area for CPS 4959/1 comprises mostly disturbed, cleared or partially rehabilitated area with low habitat value. The decision report for CPS 4959/1 adds that fauna are likely to reside in undisturbed bush areas surrounding the mining operation rather than disturbed areas close to the pit. DMIRS contends that the majority of the application area for CPS 8069/1 is the undisturbed bush areas surrounding the mining operation that fauna would reside in. An aerial image of the application area for CPS 4959/1 is seen in Figure 2 of MBS (2012). The disturbance contrasts heavily with the less disturbed surrounding vegetation that constitutes part of the application area for CPS 8069/1. The vegetation of CPS 8069/1 extends past Figure 2, extending even further away from the existing operations.[15]

DMIRS noted that conservation-significant fauna is only a part of the assessment against clearing principle (b), and advised that:

> ... no conservation significant fauna species were recorded during the field assessment by MWH (2014) and the results of the targeted Carnaby's Cockatoo (*Calyptorhynchus latirostris*) habitat assessment suggest the application area is unlikely to represent an area of specific significance to the species (Harewood, 2018b). On balance however, DMIRS considered the importance of the habitat provided to native fauna by the application area still resulted in the proposal being at variance to Principle (b), despite the lack of conservation significant fauna recorded.[16]

In relation to the MWH Australia Pty Ltd fauna assessment, DMIRS advised that it:

> ... gave weight to the MWH (2014) fauna assessment that Edna May provided as supporting documentation to the application. The fauna assessment was undertaken by a qualified environmental scientist, with a specialty in zoology.
>
> DMIRS also gave weight to another biological survey conducted in the Westonia Common (McLellan, 2008) and research on the impacts of clearing and reduced habitat connectivity (Prober and Smith, 2009). A biological survey of the Westonia Common recorded a high proportion of bird species that are declining or remnant dependent (32 species or 63% of species recorded) (McLellan, 2008). This indicates that the Westonia Common has high conservation value for birds. Therefore, DMIRS considers that the vegetation proposed to be cleared represents a significant habitat for fauna indigenous to WA, and that the fragmentation that would result from the proposed clearing would have an unacceptable impact on the fauna habitat value of the Westonia Common.[17]

As noted above, clearing principle (b) is triggered where the native vegetation proposed to be cleared comprises the whole or part of a significant habitat for fauna. The available evidence supports the values of the Westonia Common as being significant habitat for fauna, and that as a result, the vegetation proposed to be cleared forms part of a significant habitat for fauna.

Noting the extent of the proposed clearing, the condition of the vegetation (habitat) within the revised application area and its contribution to connectivity within the broader remnant, and the documented importance of the broader remnant to avian species, it is considered that DMIRS' conclusion that the revised application area is at variance to clearing principle (b) is justified.

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[14] MBS Environmental (Martinick Bosch Sell Pty Ltd) (2012) *Edna May Gold Project Clearing Permit (Purpose Permit) Application M77/88, M77/124 Native Vegetation Management Plan and Assessment of Clearing Principles*. Unpublished report prepared for Evolution Mining, dated March 2012.
[15] DMIRS response to Appeal C016/18, pages 5-6.
[16] DMIRS response to Appeal C016/18, pages 5-6.
[17] DMIRS response to Appeal C016/18, pages 5-6.

GROUND 3: THREATENED ECOLOGICAL COMMUNITIES

By this ground of appeal, the appellant submitted that DMIRS' conclusion that the proposed clearing is at variance to clearing principle (d) is incorrect as the residual impacts may be addressed through revegetation with appropriate species, as (in the appellant's view) is supported by a flora assessment conducted by its environmental consultant which provides three years of monitoring data for rehabilitation of ex-farmland with TEC species and notes progression toward completion criteria.

Consideration

Clearing principle (d) provides that native vegetation should not be cleared if 'it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community'.

DMIRS' assessment in relation to clearing principle (d) found that approximately 33 ha (67.6 per cent) of the revised application area contains the Wheatbelt Woodlands TEC, representing approximately 1.5 per cent of the extent of the Wheatbelt Woodlands TEC within the Westonia Common. DMIRS concluded that the revised application area comprises the whole or a part of, and is necessary for the maintenance of, a TEC.

In response to this element of the appeal, DMIRS advised that:

> There was approximately 39.1 hectares of the TEC within the original application area and Edna May proposed to reduce the amount of woodland to be cleared to 33 hectares, approximately 1.5% of the TEC vegetation in the local area (Edna May Operations Pty Ltd, 2018a).
>
> The approved conservation advice for the TEC considers all patches that meet the criteria for the TEC, along with buffer zones, as critical to the survival of the community. This is due to the TEC occurring in a highly cleared and modified landscape (Department of the Environment, 2015). The TEC occurs mostly in small and highly fragmented patches. Remnants that are larger and spatially linked and act as wildlife corridors are even more important (Department of the Environment, 2015). The clearing permit application area is part of a larger remnant which is considered highly significant in the context of the conservation listing advice (DBCA, 2018b).
>
> The proposed clearing, even with the reduced area, would fragment the TEC and the remnant of native vegetation that it is located within. As well as clearing 33 hectares, the proposed clearing would endanger the remaining TEC within the remnant with the severing of an important wildlife corridor.
>
> Offsets are only considered for residual impacts, not when the proposal is unacceptable. The proposed clearing would impact a critical occurrence of the TEC, therefore, the proposed offset is not deemed appropriate.[18]

In forming its view that the proposed clearing is at variance to clearing principle (d), DMIRS had regard to the following advice from DBCA:

> The Botanica Consulting report utilises [DotEE's] very approximate mapping of the TEC and John Beard's very broadscale vegetation mapping of Vegetation Association 536 to support an assertion that the clearing represents a very small proportion of the TEC and the Beard vegetation unit in the local area. However, the [application] area is part of a larger remnant that occurs in a highly cleared matrix. These larger remnants are relatively uncommon and considered highly significant in the context of priority areas for conservation of the TEC (refer pages 22, 25 of [DotEE's] Approved Conservation Advice ...

As to whether the appellant's proposed revegetation would satisfactorily address the effect of the clearing on the Wheatbelt Woodlands TEC, DBCA advised that the:

> ... effectiveness of these proposed northern revegetation areas in increasing connectivity is questionable. The revegetation of pastured lands is also likely to be at high risk of not succeeding for a number of reasons including high weed load, and nutrient enrichment from fertiliser use that stimulates weed growth, in particular. In addition, on basic principles the shape of the proposed

[18] DMIRS response to Appeal C016/18, pages 9-10.

> northern revegetation areas is flawed as edge effects such as weed invasion, wind speeds, hydrological alterations and other edge effects are maximised in narrow strips of vegetation.
>
> The two southern areas proposed for post-mining revegetation would however help to re-establish the connectivity between the remaining areas of the TEC vegetation following mining. According to the EPBC offsets policy however, if post-mining revegetation is a standard requirement for mine proposals, then revegetation of mined areas could not be considered as part of the offset proposal. In addition, the substrate and other habitat characteristics such as hydrology would be altered by mining, and would increase the risk of revegetation being unsuccessful.
>
> The above issues indicate that the risk of revegetation not succeeding in the long-term for most of the proposed rehabilitation areas is likely to be high ...
>
> A further issue is that the proposed conservation covenants do not maximise tenure security for conservation management. Reservation and vesting of suitable nearby intact areas of the TEC in good condition with a land manager who will commit to long-term conservation management are likely to provide for far better offset outcomes in the longer term ...
>
> The proposed clearing application is likely to result in significant impacts to the [Wheatbelt Woodlands TEC] ...[19]

Noting the extent of the proposed clearing, the condition of the vegetation within the revised application area, and DBCA's advice regarding the Wheatbelt Woodlands TEC, it is considered that DMIRS' conclusion that the revised application area comprises, and is necessary for the maintenance of, a TEC was justified. DMIRS' assessment in relation to clearing principle (d) found that approximately 33 ha (67.6%) of the revised application area contains the Wheatbelt Woodlands TEC, representing approximately 1.5 per cent of the extent of the TEC within the Westonia Common.

GROUND 4: SIGNIFICANT REMNANT IN AN EXTENSIVELY CLEARED AREA

By this ground of appeal, the appellant disputed DMIRS' conclusion that the native vegetation proposed to be cleared was at variance to clearing principle (e) on the basis that there is a high degree of disturbance and edge effects from weeds, and the adjacent Westonia Common contains vegetation in 'Good' condition, therefore the proposed clearing is not likely to further reduce ecological values, or result in significant fragmentation. The appellant submitted that the proposed clearing is also not likely to cause the current extent of the mapped vegetation association to fall below the 30 per cent recommended threshold for conservation.[20] The appellant also submitted that the residual impacts may be addressed through revegetation.

Consideration

Clearing principle (e) provides that native vegetation should not be cleared if 'it is significant as a remnant of native vegetation in an area that has been extensively cleared'.

DMIRS' assessment in relation to clearing principle (e) found that the proposed clearing will sever vegetation (ecological/fauna) linkages between the north-western and south-eastern portions of the Westonia Common and could increase edge effects, thereby reducing the ecological value of the broader remnant. DMIRS concluded that the revised application area is significant as a remnant of native vegetation in an area that has been extensively cleared.

In response to this element of the appeal, DMIRS advised that the available aerial imagery and vegetation extent statistics provide evidence of the large remnant and surrounding highly cleared landscape within which the revised application area is located. DMIRS also advised:

> The proposed clearing will sever vegetation linkages between the northern and southern halves of the remnant [and] will create two smaller remnant vegetation blocks, at least temporarily. The northern portion is proposed to be revegetated while the southern section will only be partly

[19] DBCA biodiversity advice to DMIRS in relation to revised application CPS 8069/1, dated October 2018, page 7.
[20] As outlined in: Environmental Protection Authority (2008) *Environmental Guidance for Planning and Development.* Guidance Statement No. 33, dated May 2008. Government of Western Australia.

> revegetated (Edna May Operations Pty Ltd, 2018b). To minimise the loss of connectivity, Edna May (2018a) proposed to reduce the clearing permit boundary from 62.3 hectares to 48.8 hectares [which] would reduce the severing of the vegetation corridor to the north of the application area; however, the southern linkage would still be severed. Edna May further proposed to revegetate cleared farmland to the south of the application area. The proposed measures were considered by DMIRS to be insufficient to offset the loss of remnant vegetation.
>
> The fragmentation of a large remnant of vegetation could reduce connectivity for fauna and increase edge effects. This would reduce the ecological value of the remnant vegetation in a region which is already highly fragmented. Fragmentation and isolation of populations of flora and vegetation from each other can impact the survival of populations, species and even ecosystems (Environmental Protection Authority, 2016). Therefore, DMIRS considers that the vegetation proposed to be cleared represents a significant remnant of native vegetation in an area that has been extensively cleared.[21]

The Department of Water and Environmental Regulation's (DWER) *A guide to the assessment of applications to clear native vegetation*[22] (Guide to Assessment) states that clearing principle (e):

> ... aims to maintain sufficient native vegetation in the landscape for the maintenance of ecological values. It also recognises the need to protect ecological communities that have been extensively cleared and to retain a representation of each ecological community in local areas throughout its pre-European range. It is in this principle that the cumulative impacts of clearing within a particular area should be considered.
>
> The *National Objectives and Targets for Biodiversity Conservation 2001–2005* recognise that the retention of 30 per cent or more of the pre-clearing extent of each ecological community is necessary if Australia's biological diversity is to be protected. This is the threshold level, below which species loss appears to accelerate exponentially and loss below this level should not be permitted. This level of recognition is in keeping with the targets recommended in the review of the *National Strategy for the Conservation of Australia's Biological Diversity* and in EPA Position Statement No.2 on Environmental Protection of Native Vegetation in Western Australia.[23]

The Guide to Assessment provides examples of certain circumstances in which an extent greater than the 30 per cent threshold may be considered extensively cleared. These include naturally rare or restricted ecological communities, highly fragmented landscapes, vegetation required to maintain ecological processes or natural systems and degraded systems where there is less than 30 per cent of pre-European native vegetation in good condition (such as rangelands).

In this case, the decision report outlines that the mapped vegetation association within the revised application area retains approximately 35 per cent of its pre-European extent within the bioregion. While this statistic in itself is not below the recommended threshold outlined above, it is understood that DMIRS also took into account the likely impacts of the proposed clearing on the environmental values identified through its assessment (in particular against clearing principles (a), (b), (c), (d) and (h)), and the extent of clearing in the broader landscape as determined from available imagery, in assessing the application against clearing principle (e).

Noting the above, it is considered that DMIRS' conclusion that the revised application area is significant as a remnant in an area that has been extensively cleared is reasonable and supported by the available evidence.

GROUND 5: PROPOSED OFFSET OF RESIDUAL IMPACTS

By this ground of appeal, the appellant submitted that DMIRS has failed to consider that conditions are available to adequately address the significant residual impacts of the proposed clearing, and thereby improperly denied the appellant an opportunity to negotiate an appropriate offset. The

[21] DMIRS response to Appeal C016/18, pages 10-11.
[22] Available at: https://www.der.wa.gov.au/our-work/clearing-permits/48-guidelines-clearing-permits.
[23] Guide to Assessment pages 18-19.

appellant also submitted that DMIRS did not properly apply the WA Environmental Offsets Policy and Guidelines,[24] and did not properly consider the benefits of translocation.

Consideration

Under section 51I(2)(b) of the EP Act, a clearing permit can be issued with a condition requiring the permit holder to 'establish and maintain vegetation on land other than the land cleared under the permit in order to offset the loss of the cleared vegetation'.

The WA Environmental Offsets Policy and Guidelines provide that offsets may be applied to counterbalance significant residual impacts that remain after avoidance and mitigation measures have been undertaken, but are not appropriate for all projects (determined on a case-by-case basis).

In this case, it is understood DMIRS invited the appellant to demonstrate how the environmental impacts of the original application (62.3 ha) would be avoided or minimised. Consequently, DMIRS considered the appellant's revised application (48.8 ha), including mitigation measures and the acceptability of the remaining environmental impacts, prior to assessing the suitability of the appellant's proposed offset.

DMIRS' assessment identified that the significant residual impacts of the revised application include:

- approximately 35.5 ha of native vegetation in 'Very Good' to 'Good' condition;
- four individuals and likely seed bank of, and critical habitat for, *E. resinosa*;
- approximately 33 ha of the Wheatbelt Woodland TEC; and
- severance of vegetation linkages between the north-western and south-eastern portions of the Westonia Common, potentially resulting in reduction in connectivity for fauna, increased edge effects and isolation of sub-populations of threatened flora, thereby reducing the ecological value of the broader remnant.

The appellant proposed the following offset package to counterbalance the above impacts:

- revegetation of ex-farmland with the aim of establishing a woodland in 'Good' or better condition, and establishment of a conservation covenant, over:
  - 70 ha on Lots 161 and/or 162 on Plan 202017 (north of the revised application area); and
  - 15 ha on Lot 1578 (south of the revised application area) to re-establish the southern linkage;
- improvement of 15 ha of red morrel woodland on Lot 161, and establishment of a conservation covenant over this area;
- contribution of up to $10,000 per annum to local and regional environmental initiatives to protect and conserve local 'like for like' bushland to that proposed to be cleared; and
- maintenance or improvement of the biological diversity and ecological integrity of:
  - flora and vegetation protected under the EPBC Act; and
  - fauna and fauna habitats, in particular Carnaby's cockatoo, in the project area.[25,26]

In response to the appeal, DMIRS advised that it reviewed the offset proposal and noted the following:

> - The revegetation of farmland appeared to be a proposed offset for the Eucalypt woodland community, not specifically for *E. resinosa*. The success of revegetation for this Threatened species would include re-establishment of other ecosystem processes necessary for its long term survival, including the maintenance of pollinator species in the area. While the early stages of establishment of self-sustaining populations of the species has been demonstrated on disturbed natural areas, it is yet to be demonstrated on ex-farmland (DBCA, 2018b).

[24] Available at: http://www.epa.wa.gov.au/policies-guidance/wa-environmental-offsets-policy-2011-and-guidelines
[25] Application for a clearing permit, page 4.
[26] Applicant response to DMIRS' letter of 6 August 2018, dated 28 August 2018.

- There will be a time-lag and uncertainty in revegetating the southern farmland to provide habitat for *E. resinosa*, the TEC, and a wildlife corridor. During the period of revegetation there certainly will be fragmentation.
- DBCA (2018b) questioned the effectiveness of the proposed northern revegetation area to offset the impact to the TEC. The revegetation of pastured lands is likely to be at high risk of not succeeding for a number of reasons including high weed load and nutrient enrichment from fertiliser use that stimulates weed growth. In addition, on basic principles the shape of the proposed northern revegetation area is flawed as edge effects such as weed invasion, wind speeds, hydrological alterations and other edge effects are maximised in narrow strips of vegetation.
- ... the permanent disturbance footprint to the south has an oval outline for a pit and a red line surrounding it for the abandonment and noise bund. This will be a high pile of competent rocky material designed to prevent inadvertent access following the cessation of mining. Between the pit and the abandonment bund there is also a zone of pit instability. Although there is a small area of native vegetation left uncleared between the two red areas, it is designed to be inaccessible and it may collapse into the pit, in effect clearing the vegetation. The amount of clearing to be offset should consider the zone of pit instability.
- The additional southern offset farmland proposes 15 hectares of revegetation. This is substantially less than the impact of the habitat of the Threatened Flora.

... The decision report outlines how the proposed offset was regarded and deemed inappropriate due to the size and nature of the impact of the proposed clearing.[27]

As a result of these findings, DMIRS concluded that the impact of the proposed clearing was such that an offset could not be justified and therefore the clearing permit was refused.[28]

In relation to the translocation specifically, DMIRS advised that it:

> ... sought expert DBCA advice on the further information provided, including the revised offset. Most importantly, DBCA (2018b) confirmed its previous advice (DBCA, 2018a) that the area under application is considered to contain habitat important to the survival of the Threatened Flora species *E. resinosa*. DMIRS considered the threat posed by the proposed clearing is more than 'significant residual impact' as suggested by the appellant.[29]

The WA Environmental Offsets Policy defines an environmental offset as:

> ... an offsite action or actions to address significant residual environmental impacts of a development or activity.[30]

Offsets are intended to apply only to significant residual impacts, not minor impacts. They are also not applicable to all projects, and their application will be determined on a case-by-case basis.[31]

In relation to flora and vegetation, 'significant residual impacts' are defined to 'include those that affect rare and endangered plants and animals (such as declared rare flora and threatened species that are protected by statute).'[32]

In this case, DMIRS found the clearing to be at variance to multiple clearing principles, including being seriously at variance to clearing principle (c). In the consideration (above) of the appeal in relation to clearing principle (c), it was concluded that DMIRS was justified in finding that the clearing was seriously at variance to that principle, noting the species is listed as endangered and the advice of DBCA about its current status and the success of re-established populations. Given the significance of the impact under principle (c) alone, it is considered that DMIRS was justified in forming the view that the impacts identified in this case were incapable of being offset.

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[27] DMIRS response to Appeal C016/18, pages 14-16.
[28] Decision report for clearing application CPS 8069/1, pages 14-16.
[29] DMIRS response to Appeal C016/18, pages 17-18.
[30] WA Environmental Offsets Policy, 2011, page 2.
[31] WA Environmental Offsets Policy, 2011, principle 2.
[32] WA Environmental Offsets Guidelines, 2014, page 8.

GROUND 6: CONSISTENCY WITH PREVIOUS DECISIONS

By this ground of appeal, the appellant submitted that DMIRS was inconsistent in its assessment of the revised application compared with previous clearing applications for the development of the Edna May Gold Mine, in particular adjacent Clearing Permit CPS 4959/1 and its amendments for which the appellant submitted that the identified environmental impacts are not significantly different.

Consideration

The following permit decisions are relevant to this ground of appeal:

- Clearing Permit CPS 4959/1 – granted by the former Department of Mines and Petroleum (DMP) in June 2012, authorising the applicant to clear up to 20 ha of native vegetation within Mining Lease 77/88 and 77/124 for the purpose of mineral production. An appeal was received against the grant, concerned about destruction of local bushland, cumulative impacts, and lack of rehabilitation success. The then Minister for Environment dismissed the appeal.
- Amended Clearing Permit CPS 4959/2 – amended by DMP in August 2013, authorising the applicant to clear a further 6.4 ha (cumulative total 26.4 ha). An appeal was received against the amendment, concerned about inconsistency with the clearing principles, and risk of flooding. The then Minister dismissed the appeal.
- Amended Clearing Permit CPS 4959/3 – amended by DMP in April 2016, authorising the applicant to clear a further 0.78 ha (cumulative total 27.18 ha). No appeals were received.

The consolidated footprint of the area authorised to be cleared under the above amended permit is shown cross-hatched black in Figure 4.

Figure 4 – Area approved to clear CPS 4959/3

It is noted that during the assessments for the above permit and amendments, DMP found that the condition of the vegetation within the overall clearing footprint ranged from 'Good' to 'Completely Degraded', and that the proposed clearing was at variance to clearing principle (c) for impacts to a total of 323 individuals of *E. resinosa*, may have been at variance to clearing principles (a), (e) and (f), and was not likely to be at variance to the remaining clearing principles.[33]

In response to this appeal ground, DMIRS advised that there is no inconsistency between its decision to refuse the application the subject of this appeal, and its earlier decisions in respect to CPS 4959:

> The nearby Edna May clearing permits were reviewed by the assessing officer during the assessment of clearing permit CPS 8069/1. There was a notable similarity between the permits, being the presence of Threatened Flora *E. resinosa*; however, there were more significant differences between the application areas that lead to the different decisions.
>
> Clearing permit CPS 4959/1 authorised the clearing of 20 hectares of native vegetation within an application area of approximately 20 hectares. Approximately 15 hectares of the 20 hectares applied to clear was partially rehabilitated pre-disturbed land including historic waste rock dumps. The remaining 5 hectares was native vegetation (MBS, 2012a). The original application area for CPS 8069/1 contained 43.9 hectares of native vegetation in good to very good condition (Botanica Consulting, 2018a). This is almost nine-fold the amount of native vegetation in CPS 4959/1. Even with Edna May's reduction in the amount of clearing proposed under CPS 8069/1, the revised amount of clearing (48.8 hectares) remains significantly larger than CPS 4959/1. The amendments to CPS 4959/1 were each relatively minor, with CPS 4959/3 approving a cumulative total of 27.18 hectares of clearing.
>
> The flora and vegetation surveys for CPS 4959/1 and its amendments did not record any TECs or Priority Ecological Communities ... and the permits were granted prior to the listing of 'Eucalypt woodlands of the Western Australian Wheatbelt' as a TEC. That is the reason why this application was at variance to Clearing Principle (d) while the previous permits were not likely to be at variance to Clearing Principle (d). The proposed clearing of approximately 39.1 hectares, or the reduced 33 hectares, of the TEC is a substantial difference between the permits.[34]

DMIRS advised that due to the larger extent of proposed clearing for the revised application (up to 48.8 ha), and for other reasons outlined in the earlier decision reports, it does not consider its decision to be inconsistent with its decision on other clearing applications at the site.

DMIRS also noted the following decisions of DWER in respect to two clearing permit applications:

- Application CPS 6908/1 – proposal to clear 65 ha for pasture and grazing in the Wheatbelt, reduced to 45 ha in response to concerns raised by DWER during the assessment. DWER considered the reduced clearing extent was still a significant size in a highly cleared and fragmented landscape, and refused to grant a clearing permit. The decision was appealed, and the then Minister dismissed the appeal.
- Application CPS 7516/1 – proposal to clear 14 ha for a sand mine, for which DWER refused to grant a clearing permit. Similarities with the revised application include location within a highly cleared IBRA bioregion and landscape, provision of an ecological linkage and habitat for conservation-significant flora and community, and previously disturbed areas of important vegetation. The decision was appealed, and the then Minister dismissed the appeal.[35]

Taking into account the above, it is considered that DMIRS has had regard for the similarities and differences of the revised application area with the findings of previous assessments for adjacent clearing permits and other clearing applications with similar environmental impacts, and considered the environmental impacts of the revised application on its merits. This included taking into account contemporary knowledge about the environmental values of the native vegetation proposed to be cleared, including its status as part of a TEC which was unlisted at the time of the earlier decisions.

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[33] Decision reports for clearing applications CPS 4959/1, CPS 4959/2 and CPS 4959/3.
[34] DMIRS response to Appeal C016/18, pages 16-17.
[35] Clearing applications and permits available at: ftp://ftp.dwer.wa.gov.au/permit/

FURTHER MODIFICATION OF CLEARING AREA

As noted above, the appellant submitted a proposal to reduce the clearing to 26.3 ha during the appeal investigation. The appellant advised that the reduced footprint considered various design options to identify the most acceptable re-alignment of Warrachuppin Road and to minimise the environmental impacts of the proposed clearing. The extent of the modified footprint is shown in Figure 5. The modified footprint purports to reduce the extent of proposed clearing by approximately 46 per cent. The majority of this modification appears to be attributable to narrowing areas of clearing adjacent to Warrachuppin Road and the mine abandonment bund.

As the modified footprint submitted by the appellant represents a substantial variation to the application considered by DMIRS (48.8 ha to 26.3 ha), it is considered that the implications of the change warrant fresh assessment against the clearing principles and other relevant matters. For example, an understanding of the likelihood that vegetation proposed to be retained between the bund and proposed mine pit will persist in the longer term would need to be considered, as well as consideration of the effect of the revised footprint on linkages and genetic transfer.

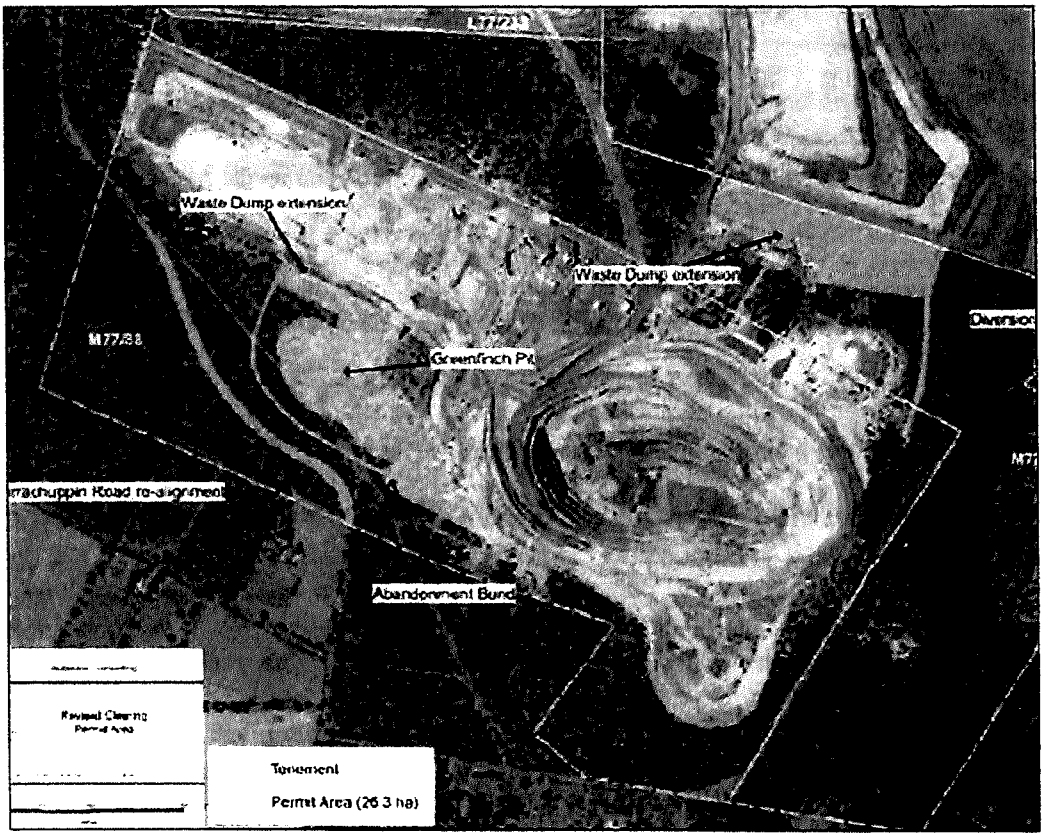

Figure 5: Modified footprint (indicated by yellow shading) *(Source: Appellant)*

It is open to the appellant to lodge a fresh application to clear with DMIRS for assessment, which will be considered on its merits. Any decision of DMIRS to grant or refuse to grant a permit over a smaller area will be open to appeal by any person in the normal way.

OTHER MATTERS

The appellant raised other objections to DMIRS' decision-making process, including that it failed to take into account relevant matters, specifically measures to avoid, minimise and mitigate the impacts of the proposed clearing and a proposal to offset the vegetation proposed to be cleared.

The appellant also submitted that DMIRS has failed to take into account the objects of the EP Act which provides for:

> ... the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing.

The appellant referred to the EP Act definitions of 'environment' and 'social surroundings' in this regard, and submitted that there will be adverse economic and social consequences for the local community if a permit is not granted for the revised clearing application.

In responding to these issues, DMIRS advised that it took into account the revised application as well as all relevant considerations. In relation to the economic consequences of the decision, DMIRS advised that it:

> ... determined that the economic benefits of the mine were not materially relevant to the decision.
>
> It should be noted that the proposed Greenfinch mine pit ... will only provide a 20 months extension to existing mining operations. Ramelius have also stated publicly that they are planning to expand the mine via alternative means, i.e underground mining.[36]

Appeals in objection to a refusal to grant a clearing permit under the EP Act are 'merits' appeals and while matters relating to questions of law and process issues can be raised in appeals, in general, the focus of investigations is on the substantiative environmental matters raised in respect to the decision. In relation to the appellant's concerns regarding relevant matters, the appellant has, through the appeal process, had the opportunity to have the merits of DMIRS' decision considered afresh, and through this process it is considered that the appellant has been afforded procedural fairness.

In any event, the available information confirms DMIRS had regard to the revised application in its assessment, and took into account the reduced impacts associated with the revised application.

As to the application of the object of the EP Act by DMIRS, this is a legal question and not one which forms part of the Minister's appeal jurisdiction. Nonetheless, in investigating this appeal, the Office of the Appeals Convenor has considered the object of the EP Act, the guiding principles, and the requirements of section 51O in the context of the issues raised in the appeal.

CONCLUSION AND RECOMMENDATION

After considering the information provided in the appeal, additional information provided by the appellant, relevant guidelines and the advice of DBCA provided to DMIRS as part of the assessment, it is considered that DMIRS' assessment of the application had appropriate regard to the environmental values of the area proposed to be cleared, and in particular of impacts to the threatened flora *E. resinosa*, Wheatbelt Woodlands TEC, the significance of the application area as a remnant, and impacts to the environmental values of conservation areas.

The revised application area contains a large portion of vegetation in 'Good' or better condition that includes an occurrence of the Wheatbelt Woodlands TEC, four individuals of and important habitat for *E. resinosa*, contributes to connectivity between adjacent remnant vegetation, and is partly located within the Westonia Common. If left undisturbed the application area will also continue to provide a buffer between the existing mine development and adjacent remnant vegetation, including occurrences of Wheatbelt Woodlands TEC and *E. resinosa* habitat, against edge effects and indirect impacts.

[36] DMIRS response to Appeal C016/18, pages 17-18.

It follows that DMIRS was justified in concluding that the proposal to clear 48.8 ha of native vegetation for the expansion of the Edna May mine and related purposes was seriously at variance to clearing principle (c), and was at variance to a number of other principles. Noting the identified values, and in particular the impacts to threatened flora as identified by DBCA, it is considered that the decision to refuse the permit was also justified.

It is open to the proponent to submit a fresh application to clear with DMIRS for the reduced area it provided through the appeal investigation, which will be considered on its merits.

Emma Gaunt
APPEALS CONVENOR

Investigating Officer:
Emma Bramwell, Senior Environmental Officer
Jean-Pierre Clement, Deputy Appeals Convenor

GOVERNMENT OF WESTERN AUSTRALIA

BOTANIC GARDENS & PARKS AUTHORITY

Eremophila translocation

Project title: Propagation and Translocation of *Eremophila resinosa* (Declared Rare Flora) for Evolution Mining

Dates: 2003 - 2014

Funding: Evolution Mining

Location: Edna May Mine, Westonia, 350 km east of Perth, Western Australia

View image slideshow

Research themes

- tissue culture and seed propagation
- genetic diversity and genetic material
- severely degraded sites management and weed control
- self sustaining ecosystems

Project description

Initially five clones of Declared Rare Flora *Eremophila resinosa* were grown by tissue culture and planted on site at Westonia in 2004. With seed collected from the mine site, a further planting of seedlings in 2005 substantially increased plant numbers on the enlarged site. All plants were watered for the first few years with the reticulation system removed in 2008.

The plants are growing well, survival rates are high (74% for the tissue cultured plants and 93% for the seedlings) and most plants have produced flowers and contributed large amounts of seed to the soil seed bank. By November 2010 three new seedling recruits had been found on site.

Two more translocation sites were established and planted in 2009 with plants raised from seed, and planting continued into 2010. In 2011, one of these sites was extended to include a further planting of over 600 eremophilas, and over 600 local eucalypts (many bare rooted). At present six sites are managed, the last planted in winter 2014. The sites are now successfully established with over 4000 *Eremophila* plants and present survival rates (including all experiments) are about 80%. Original tissue cultured clones are in cryostorage and over 2,000,000 fruit are in long term storage.

The cost of translocating rare species is very high therefore the most appropriate methods have to be used to ensure survival of the plants, for example, planting without regular watering is a gamble in our drying climate. In 2009 a small non-irrigated trial worked well with a 68% survival rate, in 2010 a similar trial using over 100 plants resulted in every plant dying within 4 months of planting.

Past experience with bushland management, environmental weed control and other translocations, innovative scientific and experimental horticultural techniques and on-going adequate funding have been the successful drivers of this project.

Key staff

Bob Dixon, Kings Park Volunteer Master Gardeners

Collaborators

Dr Eric Bunn, Dr Shane Turner

Publications

Dixon B (2012) Control of Wards weed *Carrichtera annua* on rare species translocation sites at Westonia in the eastern Wheatbelt of Western Australia. 18th Australian Weed Conference, Melbourne 8-10 Oct 2012. Pub. Weed Soc. Victoria: 57.

Dixon B (2010) Translocation of the resinous *Eremophila*, from test tube, to a degraded bushland site in the wheatbelt of Western Australia. Soorae, P.S. (ed). Global re-introduction perspectives: Additional case-studies from around the globe. IUCN/SSC Re-introduction Specialist Group, Abu Dhabi, UAE: 311-315.

Presentations

Dixon B (2012) Can soil wetters assist germination rates in degraded ecosystems and improve seedling survival in dry environments. SERA, Perth WA Nov 28-30: 50.

Dixon B (2010) Translocation of *Eremophila resinosa*, is it working and have we improved our cultural practices. Proceedings Ecological Society of Australia Conference, Canberra 6-10 Dec: 292.

Resinous Eremophila

(*Eremophila resinosa*)

RECOVERY PLAN

Department of Environment and Conservation
Kensington

Australian Government

Western Australia

Department of Environment and Conservation

Our environment, our future

FOREWORD

Interim Recovery Plans (IRPs) are developed within the framework laid down in Department of Conservation and Land Management (CALM) Policy Statements Nos. 44 and 50. Note: the Department of CALM formally became the Department of Environment and Conservation (DEC) in July 2006.

IRPs outline the recovery actions that are required to urgently address those threatening processes most affecting the ongoing survival of threatened taxa or ecological communities, and begin the recovery process.

DEC is committed to ensuring that Threatened taxa are conserved through the preparation and implementation of Recovery Plans (RPs) or IRPs, and by ensuring that the conservation action commences as soon as possible and, in the case of Critically Endangered (CR) taxa, always within one year of endorsement of that rank by the Minister.

This IRP will operate from April 2008 to March 2013 but will remain in force until withdrawn or replaced. It is intended that, if the taxon is still ranked CR in Western Australia, this IRP will be reviewed after four years and the need for a full RP assessed.

This IRP was approved by the Director of Nature Conservation on 30 April 2008. This IRP was prepared with financial support from the Australian Government to be adopted as a National Recovery Plan under the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

This plan was written and endorsed as an IRP in Western Australia and is treated as the National Recovery Plan for this species under the EPBC Act.

Information in this IRP was accurate as of April 2008.

IRP PREPARATION

This IRP was prepared by: Craig Douglas[1], Wendy Johnston[2] and David Jolliffe[3]

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[3] District Nature Conservation Officer, Yilgarn District, DEC, PO Box 332, Merredin WA 6415.

ACKNOWLEDGEMENTS

The following people have provided assistance and advice in the preparation of this IRP:

Andrew Crawford	Technical Officer, Threatened Flora Seed Centre, DEC
Joel Collins	Former Flora Conservation Officer, Yilgarn District, DEC
Andrew Brown	Threatened Flora Coordinator, Species and Communities Branch, DEC
Bob Dixon	Manager of Biodiversity and Extensions, Botanic Gardens and Parks Authority
Luke Sweedman	Curator of the Western Australian Seed Technology Centre, Botanic Gardens and Parks Authority

Thanks also to the staff of the W.A. Herbarium for providing access to Herbarium databases and specimen information, and DEC's Species and Communities Branch for assistance.

Cover photograph by Joff Start.

CITATION

This Recovery Plan should be cited as:

Department of Environment and Conservation (2009). Resinous Eremophila (*Eremophila resinosa*) Recovery Plan, Department of Environment and Conservation, Western Australia.

SUMMARY

Scientific Name:	***Eremophila resinosa***	**Common Name:**	Resinous Eremophila
Family:	Myoporaceae	**Flowering Period:**	Periodic: mainly October-November
DEC Region:	Wheatbelt	**DEC District:**	Yilgarn
Shire:	Westonia, Mukinbudin, Nungarin, Koorda, Mt Marshall, Wyalkatchem	**Recovery Team:**	Yilgarn District Threatened Flora Recovery Team

Illustrations and/or further information: Atkins, K. (2008) *Declared Rare and Priority Flora List for Western Australia.* Department of Environment and Conservation, Western Australia; Brown, A., Thomson-Dans, C. and Marchant N. (1998). *Western Australia's Threatened Flora.* Department of Conservation and Land Management, Western Australia. pp 86; Hopper, S.D., Leeuwen, S., Brown, A. and Patrick, S. (1990). *Western Australia's Endangered Flora.* Department of Conservation and Land Management, Western Australia. pp 56. DEC (2007a) *Western Australian Herbarium FloraBase 2 – Information on the Western Australian Flora.* Department of Environment and Conservation, Perth, Western Australia. Accessed 2007. http://www.calm.wa.gov.au/science/

Current status: *Eremophila resinosa* was declared as Rare Flora in 1982 under the Western Australian *Wildlife Conservation Act 1950* and is currently ranked as Endangered (EN) under World Conservation Union (IUCN 1994) Red List criterion C2a due to population size being less than 2500 mature individuals, with continuing decline observed and no subpopulation estimated to contain more than 250 mature individuals. The main threats are road, rail and firebreak maintenance, farming operations including grazing and fence maintenance, weeds, degradation of habitat through activities such as traffic and rubbish dumping, inappropriate fire regimes, low seed set and poor recruitment. *Eremophila resinosa* is listed as Endangered (EN) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Eremophila resinosa is known from 26 natural populations and 1418 plants in the central eastern Wheatbelt of Western Australia.

Fourteen populations and twelve subpopulations of *Eremophila resinosa* occur on road reserves (Populations 3, 5-12, 15, 18-20 and 22; Subpopulations 1a-c, 2a-c, 4b, 14a-b, 16b, 17a-b), one subpopulation on rail reserve (Subpopulation 4a), one population on private property (Population 21) and three populations and one subpopulation on shire reserves (Population 13, 23 and 24; Subpopulations 16a).

Description: *Eremophila resinosa* is a spreading shrub 40 to 80 cm tall by 60 to 100 cm wide with branches that are densely covered in short white woolly hairs and sprinkled with resinous wart-like projections. The leaves are 4 to 8 mm long by 2 to 3 mm wide, alternate, obovate, obtuse with a minute point, rather thick and flat with a greyish layer of very short, closely interwoven star shaped hairs on both sides. The peduncles are axillary, solitary and exceedingly short. The calyx-segments are linear-lanceolate. The corolla is 15 mm long, funnel-shaped, the tube scarcely exceeding the calyx, the throat is dilated with five free lobes, each 5 mm long, all pointed, the upper ones recurved, the lower ones spreading, all sprinkled outside with short star shaped woolly hairs. The throat is covered in long sparse hairs with a ring of numerous hairs occurring at the base. The flowers are blue or purple with white spots inside. There are four stamens not exceeding the length of the corolla. The ovary is densely covered in short woolly hairs and is four celled with one ovule in each cell (Bentham 1870; Ewart *et al.* 1908; Brown 2005).

Habitat requirements: *Eremophila resinosa* occurs on soil types from sandy loams to loams and clays in open mallee woodland with a mixed *Acacia* scrub understorey.

Habitat critical to the survival of the species, and important populations: Given that *Eremophila resinosa* is ranked as Endangered and is known from only 26 populations, it is considered that only known habitat for extant wild and translocated populations is critical to its survival, and that all extant wild and translocated populations are important populations. Habitat critical to the survival of *E. resinosa* includes the area of occupancy of extant populations, areas of similar habitat (i.e. sandy loams, clays, and loams supporting open mallee woodland with mixed *Acacia* scrub understorey) surrounding important populations (this is necessary to allow access for pollinators and population expansion) and additional occurrences of similar habitat that may contain the species or be suitable for future translocations.

Benefits to other species or ecological communities: Recovery actions implemented to improve the quality or security of the habitat for *Eremophila resinosa* will also improve the status of associated native vegetation. One other threatened flora species (*Cyphanthera odgersii* subsp. *occidentalis*) is located in the vicinity of *Eremophila resinosa*.

International obligations: This plan is fully consistent with the aims and recommendations of the Convention on Biological Diversity, ratified by Australia in June 1993, and will assist in implementing Australia's responsibilities under that convention. *Eremophila resinosa* is not listed under any specific international treaty however, and therefore this IRP does not affect Australia's obligations under any other international agreements.

Role and interests of indigenous people: The Department of Indigenous Affairs Aboriginal Heritage Sites Register records no sites of Aboriginal significance that are known at or near populations of the species covered by this IRP. However, the involvement of the Indigenous community is currently being sought to determine whether there are any issues or interests identified in the Plan. If no role is identified for indigenous communities in the recovery of this species, opportunities may exist through cultural interpretation and awareness of the species.

The advice of the South West Aboriginal Land and Sea Council (SWALSC) and Department of Indigenous Affairs is being sought to assist in the identification of potential indigenous management responsibilities for land occupied by threatened species, or groups with a cultural connection to land that is important for the species' conservation.

Continued liaison between DEC and the indigenous community will identify areas in which collaboration will assist implementation of recovery actions.

Social and economic impact: The implementation of this recovery plan is unlikely to cause significant adverse social and economic impacts. However, as some of the populations of *Eremophila resinosa* occur on, or adjacent to, private property their protection may potentially affect farming activities. Populations on road and rail reserves, and mining tenements, will require protection during management activities, and hence the occurrence of *Eremophila resinosa* in those areas may have an impact on those land managers. Actions will involve continued liaison and cooperation with all stakeholders with regard to these areas.

Affected interests: Stakeholders potentially affected by the implementation of this plan include the Shires of Westonia, Mukinbudin, Nungarin, Koorda and Mt Marshall, Main Roads WA, WestNet Rail and owners of private property.

Evaluation of the plan's performance: DEC in conjunction with the Yilgarn District Threatened Flora Recovery Team (YDTFRT) will evaluate the performance of this IRP. In addition to annual reporting on progress and evaluation against the criteria for success and failure, the plan will be reviewed following four years of implementation.

Completed Recovery Actions

1. Land managers including private land owners, Main Roads WA, WestNet Rail and Shires with populations on land under their management have been made aware of the threatened nature of this species, its location and their legal obligations to protect it.
2. Declared Rare Flora (DRF) markers have been installed at Populations 3, 5-7, 9, 11-12, 15, 18-20 and 22 and Subpopulations 1bc, 2c, 4ab, 14b, 16b and 17ab.
3. Six plants have been propagated from part of Population 23 (mining lease), and successfully translocated. Seed was collected from parent plants prior to their taking.
4. Collections of seed from several populations have been stored at the Botanic Gardens and Parks Authority (BGPA) and DEC's Threatened Flora Seed Centre (TFSC).
5. Rubbish dumped in Subpopulation 16a has been removed by the Shire of Westonia and measures taken to restrict vehicle access.

Ongoing and future recovery actions

6. The YDTFRT is overseeing the implementation of this IRP and will include it in their annual report to DEC's Corporate Executive and funding bodies.
7. Staff from DEC's Yilgarn District office are monitoring all known populations.

IRP objective: The objective of this IRP is to abate identified threats and maintain or enhance viable *in situ* populations to ensure the long-term preservation of the species in the wild.

Recovery criteria

Criteria for success: The number of populations have increased and/or the number of mature individuals have increased by ten percent or more over the five year term of the plan.

Criteria for failure: The number of populations have decreased and/or the number of mature individuals have decreased by ten percent or more over the five year term of the plan.

Recovery actions

1. Coordinate recovery actions
2. Conduct further surveys
3. Liaise with land managers
4. Install DRF markers
5. Conduct further translocations
6. Monitor populations
7. Undertake weed control
8. Fencing
9. Obtain biological and ecological information
10. Collect seed
11. Promote awareness
12. Map habitat critical to the survival of *Eremophila resinosa*
13. Review the plan and need for further recovery actions

1. BACKGROUND

History

Eremophila resinosa was described in 1839 as *Pholidia resinosa* based on specimens collected in 1835 (Endlicher and Fenzl 1839). Ferdinand Mueller later moved the species into the genus *Eremophila* (Mueller 1859). In 1908 Alfred Ewart not realizing that it had already been named, invalidly described the species as *Eremophila kochii*, after the collector Max Koch (Ewart *et al.* 1908).

In 2003 Westonia Mining Ltd. conducted a floristic survey during which a population of 441 *Eremophila resinosa* plants were found on land under their lease. The following year the company developed a translocation proposal as five plants were to be taken during mining operations. At this time seed was collected from those plants. 321 plants were subsequently raised by the Botanic Gardens and Parks Authority (BGPA) and planted into the translocation area. In winter 2005 a further 257 plants were raised by BGPA and planted in the same area (B. Dixon pers. comm.). As at 2006 the translocated population numbered 509 individuals.

Eremophila resinosa is known from 26 natural populations and 1418 plants in DEC's Yilgarn District. Populations 7, 19 and 20 are now presumed extinct.

Description

Eremophila resinosa is a spreading shrub 40 to 80 cm tall by 60 to 100 cm wide with branches that are densely covered in short white woolly hairs and sprinkled with resinous wart-like projections. The leaves are 4 to 8 mm long by 2 to 3 mm wide, alternate, obovate, obtuse with a minute point, rather thick and flat with a greyish layer of very short, closely interwoven star shaped hairs on both sides. The peduncles are axillary, solitary and exceedingly short. The calyx-segments are linear-lanceolate. The corolla is 15 mm long, funnel-shaped, the tube scarcely exceeding the calyx, the throat is dilated with five free lobes, each 5 mm long, all pointed, the upper ones recurved, the lower ones spreading, all sprinkled outside with short star shaped woolly hairs. The throat is covered in long sparse hairs with a ring of numerous hairs occurring at the base. The flowers are blue or purple with white spots inside. There are four stamens not exceeding the length of the corolla. The ovary is densely covered in short woolly hairs and is four celled with one ovule in each cell (Bentham 1870; Ewart *et al.* 1908; Brown 2005).

Distribution and habitat

Eremophila resinosa is confined to the central eastern Wheatbelt of Western Australia.

Habitat is sandy loams and clays in open mallee woodland with a mixed *Acacia* scrub understorey. Species associated with *Eremophila resinosa* include *Eucalyptus salubris*, *E. salmonophloia*, *E. longicornis*, *E. transcontinentalis*, *Acacia acuminata*, *A. erinacea*, *A. hemiteles* and *Eremophila oppositifolia*.

Summary of population land vesting, purpose and manager

Pop. No. & Location	DEC District	Shire	Vesting	Purpose	Manager
1a N of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
1b N of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
1c N of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
2a NW of Mukinbudin	Yilgarn	Mukinbudin	Unvested Reserve	Road Reserve	Shire of Mukinbudin
2b NW of Mukinbudin	Yilgarn	Mukinbudin	Unvested Reserve	Road Reserve	Shire of Mukinbudin
2c Cowcowing	Yilgarn	Wyalkatchem	Unvested Reserve	Road Reserve	Shire of Wyalkatchem
3 SW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
4a NW of Nungarin	Yilgarn	Nungarin	Public Transport Authority	Rail Reserve	WestNet Rail
4b NW of Nungarin	Yilgarn	Nungarin	Minister for Transport	Road Reserve	MainRoads WA
5 NW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
6 SW of Westonia	Yilgarn	Westonia	Minister for Transport	Road Reserve	MainRoads WA
7 NW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
8 NW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
9 NW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
10 NW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
11 NW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
12 SW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
13 Westonia	Yilgarn	Westonia	Unvested Reserve	Recreation-Race track	Shire of Westonia
14a S of Koorda	Yilgarn	Koorda	Unvested Reserve	Road Reserve	Shire of Koorda
14b S of Koorda	Yilgarn	Koorda	Unvested Reserve	Road Reserve	Shire of Koorda
15 NW of Westonia	Yilgarn	Nungarin	Unvested Reserve	Road Reserve	Shire of Nungarin
16a Westonia	Yilgarn	Westonia	Unvested Reserve	Shire Reserve – proposed hospital site	Shire of Westonia
16b Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
17a NW of Nungarin	Yilgarn	Nungarin	Unvested Reserve	Road Reserve	Shire of Nungarin
17b NW of Nungarin	Yilgarn	Nungarin	Unvested Reserve	Road Reserve	Shire of Nungarin
18 NW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
19 NW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
20 NW of Westonia	Yilgarn	Westonia	Unvested Reserve	Road Reserve	Shire of Westonia
21 NW of Westonia	Yilgarn	Westonia	Freehold	Private property	Landholders
22 E of Kalannie	Yilgarn	Mt Marshall	Minister for Transport	Road Reserve	MainRoads WA
23 NW of Westonia	Yilgarn	Westonia	Shire of Westonia	Common - mining	Westonia Mines
24 N of Westonia	Yilgarn	Westonia	Shire of Westonia	Common - mining	Westonia Mines
25 N of Westonia	Yilgarn	Westonia	Shire of Westonia	Road reserve	Shire of Westonia
26 N of Westonia	Yilgarn	Westonia	Freehold	Private property	Landholders

Populations in **bold text** are considered to be Important Populations

Biology and ecology

Richmond and Coates (1995) concluded that *Eremophila resinosa* is highly flammable but based on the concentration of starch grains within the roots, mature plants are likely to resprout from underground stock post fire. However, they also concluded that young seedlings (1 to 2 years old) are likely to be fire sensitive and may be killed even by low intensity spring fires.

Cochrane *et al.* (2002) conclude that only 31.5% of *Eremophila resinosa* locules contained at least one healthy seed. This low result has several plausible explanations including habitat fragmentation which may be reducing pollination through lack of habitat connectivity and permeability and lack of resources for pollinators. Inbreeding may also be a cause, however many species in the transitional rainfall zone of Western Australia have developed diverse genetic system responses to inbreeding in order to cope with long periods of small population size imposed on them (Hopper *et al.* 1996).

Healthy *Eremophila resinosa* seed was found to have a germination rate of 77% for fresh seed and 67% for seeds kept for one year under standard storage conditions (Cochrane *et al.* 2002). Cochrane *et al.* 2002 found *E. resinosa* had the broadest range of germination times amongst twelve *Eremophila* species with first germination recorded at 10 days and last germination at 74 days for fresh seed. This range is reduced for stored seed with initial germination recorded at 14 days and last germination at 35 days.

Richmond and Coates (1995) recorded a grafting strike rate of 100% for *Eremophila resinosa* and cutting survival rate of 1%.

Flowering of *Eremophila resinosa* appears to occur all year round with the main flowering time being between October-November. Fruits mainly develop between December to January with records of limited fruiting occurring in November and March.

Threats

The main threats are road, rail and firebreak maintenance, farming operations including grazing and fence maintenance, weeds, degradation of habitat through activities such as traffic and rubbish dumping, inappropriate fire regimes, low seed set and poor recruitment.

- **Road, rail and firebreak maintenance.** Ten populations and thirteen subpopulations of *Eremophila resinosa* occur on road (Shire and MainRoads WA) and rail (WestNet Rail) reserves. Relevant authorities have been informed of their location so that appropriate protective actions can be implemented, as part of action 3.
- **Farming operations.** Populations of *Eremophila resinosa* bordering private property are threatened by fence maintenance, spray drift and grazing. Liaison is ongoing and covered by action 3.
- **Weeds** are a significant threat to eight populations and four subpopulations of *Eremophila resinosa*. Weeds complete for resources and reduce germination success. In areas where introduced and native grasses produce large fuel loads intense fires could damage the subterranean stock of *E. resinosa* (Richmond and Coates 1995).
- **Degradation of habitat through recreational activities, traffic and rubbish dumping** threatens one population and one subpopulation of *Eremophila resinosa*. Since 1993 the number of plants in Subpopulation 16a has been substantially reduced following these activities and recruitment has ceased. Land managers have been made aware of the threatened nature of the species, its location and their legal obligations to protect it. Liaison is continuing as part of action 3.
- **Mining activities** has the potential to impact population 23, which is one of the largest populations. A number of plants have been removed, and the potential exists for additional plants to be removed during mine expansion.
- **Inappropriate fire regimes.** Because seedlings of this species are likely to be killed by fire 1 to 2 years following germination, frequent fire has the potential to affect all populations. Liaison with land managers is continuing to prevent this from happening. See action 3.
- **Low seeds set.** *Eremophila resinosa* is recorded as producing low numbers of healthy seeds.
- **Poor recruitment.** No populations have shown signs of recruitment since 1993.

Summary of population information and threats

Pop. No. & Location	Land Status	Year/No. plants	Current Condition	Threats
1a N of Westonia	Shire Road Reserve	1993 37 [1]* 2003 14* 2005 7 2008 7	Moderate	Road maintenance, weeds, farm operations-grazing, fence maintenance
1b N of Westonia	Shire Road Reserve	1993 37 [1]* 2003 14* 2005 4 2008 5	Moderate	Road maintenance, weeds, farm operations-grazing, fence maintenance
1c N of Westonia	Shire Road Reserve	1993 37 [1]* 2003 14*	Moderate	Road maintenance, weeds, farm operations-grazing, fence maintenance

Pop. No. & Location	Land Status	Year/No. plants	Current Condition	Threats
		2005 2 2008 2		
2a NW of Mukinbudin	Shire Road Reserve	2003 9 2005 3 2008 4	Moderate	Road maintenance
2b NW of Mukinbudin	Shire Road Reserve	2003 6 2008 4	Healthy	Road maintenance
2c Cowcowing	Shire Reserve	1991 14 2003 5 2005 3 2006 4	Moderate	Road maintenance
3 SW of Westonia	Shire Road Reserve	1989 44 [2] 2000 30 2008 13	Poor	Road maintenance, weeds
4a NW of Nungarin	WestNet Rail reserve	1991 4* 1994 3 2005 5* 2008 4	Moderate	Rail maintenance, spraying, grazing by 'moving' stock
4b NW of Nungarin	Main Roads WA reserve	1991 4* 1994 1 2005 5* 2008 0	Disturbed	Road maintenance
5 NW of Westonia	Shire Road Reserve	1993 2 2005 2 2008 2	Disturbed	Road maintenance, weeds
6 SW of Westonia	Main Roads WA reserve	1992 15 2005 3 2008 26	Disturbed	Road maintenance
7 NW of Westonia	Shire Road Reserve	1991 4 2003 0 2008 0		Road maintenance
8 NW of Westonia	Shire Road Reserve	2000 0 2008 2	Unknown	Unknown
9 NW of Westonia	Shire Road Reserve	1992 12 2003 7 [5] 2008 5	Poor	Road maintenance, farming operations-soil erosion, grazing
10 NW of Westonia	Shire Road Reserve	1992 9 2005 3 2006 2 [1] 2008 1	Disturbed	Road maintenance, farming operations-soil erosion, wind blown medic seed
11 NW of Westonia	Shire Road Reserve	1992 1 2003 1 2008 1	Moderate	Road maintenance, weeds
12 SW of Westonia	Shire Road Reserve	1993 37 [3] 2005 19 2008 34	Moderate	Road maintenance, farming operations-grazing & fence maintenance, soil erosion, weeds
13 Westonia	Shire Reserve – Race Track	1993 214 (1) 2006 53 2008 53	Moderate	Vehicle traffic, rubbish dumping
14a S of Koorda	Shire Road Reserve	1992 100 (1) 1999 100 2003 82 2008 57	Disturbed	Road maintenance, farming operations-grazing & fence maintenance, weeds, soil erosion and spray drift
14b S of Koorda	Shire Road Reserve	2003 4 2005 10 2008 8	Disturbed	Road maintenance, farming operations-grazing & fence maintenance, weeds, soil erosion and spray drift
15 NW of Westonia	Shire Road Reserve	1995 5 2003 2 2008 1	Moderate	Road maintenance
16a Westonia	Shire Reserve – proposed hospital site	1993 120 (30) 2003 21 [1] 2008 21	Moderate	Recreation

Pop. No. & Location	Land Status	Year/No. plants	Current Condition	Threats
16b Westonia	Shire Road Reserve	2005 6 2008 6	Healthy	Road maintenance, farming operations-grazing & fence maintenance, weeds
17a NW of Nungarin	Shire Road Reserve	1993 1 1995 1 2008 1	Moderate	Road maintenance
17b NW of Nungarin	Shire Road Reserve	1993 1 1995 1 2008 1	Moderate	Road maintenance
18 NW of Westonia	Shire Road Reserve	1994 2 2006 1 2008 1	Poor	Road maintenance – grading and spoon drain maintenance
19 NW of Westonia	Shire Road Reserve	1994 1 1999 0 2008 0	Moderate	Farm maintenance-grazing & fence maintenance, road maintenance, weeds
20 NW of Westonia	Shire Road Reserve	1994 1 2006 0 2008 0	Moderate	Farm maintenance-grazing & fence maintenance, road maintenance, weeds
21 NW of Westonia	Private Property	1996 1 2008 3	Moderate	Farm operations-grazing
22 E of Kalannie	Main Roads WA reserve	2001 13 2008 13	Moderate	Road maintenance, weeds
23 NW of Westonia	Shire Reserve and Mining Lease	2003 441 2004 426 [15 removed] 2008 1133	Healthy	Mining
24 N of Westonia	Shire Reserve	2005 571 2006 509 [62] 2008 ?	Healthy	Weeds and annual grasses
25 N of Westonia	Shire Road Reserve	2008 1	Moderate	Road works, weeds
26 N of Westonia	Private Property	2008 5	Healthy	Weeds

Populations in **bold text** are considered to be Important Populations, Note: * = total for all subpopulations, ( ) = number of seedlings, [ ] = number dead

Guide for decision-makers

The above table provides details of current and possible future threats. Proposed actions in the immediate vicinity of populations or within the defined habitat critical to the survival of *Eremophila resinosa* require assessment for the potential for a significant level of impact.

Habitat critical to the survival of the species, and important populations

Given that *Eremophila resinosa* is ranked as Endangered, but is known from 24 locations, some of which have few or no recently recorded plants, it is considered that all known habitat for extant wild and translocated populations is critical to the survival of the species, and that extant wild and translocated populations are important populations. Important populations, which also contain habitat critical to the survival of the species, are identified in the above table. Populations not considered important are 7, 8, 19 and 20 which have not recently had any extant plants recorded. Habitat critical to the survival of *E. resinosa* includes the area of occupancy of extant populations, areas of similar habitat (i.e. sandy loams, clays, and loams supporting open mallee woodland with mixed *Acacia* scrub understorey) surrounding important populations (this is necessary to provide habitat for pollinators and future population expansion) and additional occurrences of similar habitat that may contain the species or be suitable for future translocations.

Benefits to other species or ecological communities

Recovery actions implemented to improve the quality or security of the habitat for *Eremophila resinosa* will also improve the status of associated vegetation. One other threatened flora species is located in the area of

Eremophila resinosa (see table below).

Conservation-listed flora species occurring in habitat of *Eremophila resinosa*

Species name	Conservation Status (Western Australia)	Conservation Status (EPBC Act)
Cyphanthera odgersii subsp. *occidentalis*	DRF, Critically Endangered	Endangered

DRF – Declared Rare Flora.

International obligations

This plan is fully consistent with the aims and recommendations of the Convention on Biological Diversity, ratified by Australia in June 1993, and will assist in implementing Australia's responsibilities under that convention. *Eremophila resinosa* is not listed under any specific international treaty however, and therefore this Interim Recovery Plan does not affect Australia's obligations under any other international agreements.

Role and interests of indigenous people

The Department of Indigenous Affairs Aboriginal Heritage Sites Register lists no sites of Aboriginal significance at or near populations of the species covered by this IRP. However, the involvement of the Indigenous community is currently being sought to determine whether there are any issues or interests identified in the plan. If no role is identified for indigenous communities in the recovery of this species, opportunities may exist through cultural interpretation and awareness of the species.

The advice of the South West Aboriginal Land and Sea Council (SWALSC) and Department of Indigenous Affairs is being sought to assist in the identification of potential indigenous management responsibilities for land occupied by threatened species, or groups with a cultural connection to land that is important for the species' conservation.

Continued liaison between DEC and the indigenous community will identify areas in which collaboration will assist implementation of recovery actions.'

Social and economic impact

The implementation of this recovery plan is unlikely to cause significant adverse social and economic impact. However, as some populations of *Eremophila resinosa* occur on, or adjacent to, private property the protection of them may potentially affect farming activities. Populations on road and rail reserves, and mining tenements, will require protection during management activities, and hence the occurrence of *Eremophila resinosa* in those areas may have an impact on those land managers. Actions will involve continued liaison and cooperation with all stakeholders with regard to these areas.

Affected interests

Stakeholders potentially affected by the implementation of this plan include the Shires of Westonia, Mukinbudin, Nungarin, Koorda and Mt Marshall, Main Roads WA, WestNet Rail and owners of private property.

Evaluation of the plan's performance

The Department of Environment and Conservation (DEC), in conjunction with the Yilgarn District Threatened Flora Recovery Team (YDTFRT) will evaluate the performance of this IRP. In addition to annual reporting on progress and evaluation against the criteria for success and failure, the plan will be reviewed within five years of implementation.

2. RECOVERY OBJECTIVE AND CRITERIA

Objectives

The objective of this IRP is to abate identified threats and maintain or enhance viable *in situ* populations to ensure the long-term preservation of the species in the wild.

Criteria for success: The number of populations have increased and/or the number of mature individuals have increased by ten percent or more over the five year term of the plan.
Criteria for failure: The number of populations have decreased and/or the number of mature individuals have decreased by ten percent or more over the five year term of the plan.

3. RECOVERY ACTIONS

Completed recovery actions

Land managers, including private landowners, the Shires of Westonia, Wyalkatchem, Mukinbudin, Nungarin and Koorda, Main Roads WA and WestNet Rail have been made aware of the threatened nature of the species, its location and their legal obligations to protect it.

Declared Rare Flora (DRF) markers have been placed at most road verge populations.

In 2004 expanded operations at Westonia Mines necessitated the taking of five *Eremophila resinosa*. Cuttings and seed collected were used to establish a translocated population.

In January 1997 and 2004 the BGPA collected seed from six populations of *Eremophila resinosa* and currently hold 275.5g of seed in their seed store. DEC's TFSC have 2774 seeds collected from Populations 3, 12, 14, 23 and Subpopulation 16a.

Car bodies dumped on a Shire Reserve occupied by Subpopulation 16a have been removed and measures taken to restrict vehicle access.

Ongoing and future recovery actions

The Yilgarn District Threatened Flora Recovery Team (YDTFRT) is overseeing the implementation of this IRP and will include information on progress in their annual reports to DEC's Corporate Executive and funding bodies.

Staff from DEC's Yilgarn District office monitor all populations.

Where recovery actions are implemented on lands other than those managed by DEC, permission has been or will be sought from the appropriate land managers prior to actions being undertaken. The following recovery actions are roughly in order of descending priority, influenced by their timing over the term of the plan. However this should not constrain addressing any of the priorities if funding is available for 'lower' priorities and other opportunities arise.

1. Coordinate recovery actions

The YDTFRT is coordinating the implementation of recovery actions for *Eremophila resinosa* and will include information on progress in their annual reports to DEC's Corporate Executive and funding bodies.

Action: Coordinate recovery actions
Responsibility: The YDTFRT

Cost: $1,600 per year

2. Conduct further surveys

Expanded surveys of remnant bushland in the area of existing populations is recommended. It is suggested that surveys be conducted with the help of volunteers from the local community, wildflower societies and naturalist clubs during the species' flowering period between October and November.

Action: Conduct further surveys
Responsibility: DEC (Yilgarn District) through the YDTFRT
Cost: $1,900 in year 2 and 3

3. Liaise with land managers

Staff from DEC's Yilgarn District will continue to liaise with appropriate land owners and managers to ensure that populations are not accidentaly damaged or destroyed. Input and involvement will also be sought from Aboriginal groups that have an active interest in areas that are habitat for *Eremophila resinosa*.

Action: Liaise with land managers
Responsibility: DEC (Yilgarn District) through the YDTFRT
Cost: $1,200 per year

4. Install DRF markers

Declared Rare Flora (DRF) markers are required at Populations 6 and 7 and at Subpopulations 1a, 2a-c, 4ab and 14a .

Action: Install DRF Markers
Responsibility: DEC (Yilgarn District) through the YDTFRT
Cost: $3,300 in the first year

5. Conduct further translocations

Translocation has been deemed desirable for the conservation of this species as surveys have failed to locate any substantial new populations and many existing populations are small and on narrow road reserves or in areas subject to mining. In 2004 Westonia Mining Ltd. developed a translocation proposal and 321 plants were subsequently raised by the Botanic Gardens and Parks Authority (BGPA) and planted into the translocation area. In winter 2005 a further 257 plants were raised by BGPA and planted in the same area. As at 2006 the translocated population numbered 509 individuals. Further supplementary translocation will be conducted during the timeframe of this plan.

Information on the translocation of threatened plants and animals in the wild is provided in DEC's Policy Statement No. 29 *Translocation of Threatened Flora and Fauna* (CALM 1995), and follow the national translocation protocols (Vallee et al., 2004). All translocation proposals require endorsement by DEC's Director of Nature Conservation. Monitoring of translocations is essential and will be included in the timetable developed for the Translocation Proposal.

Action: Conduct further translocations
Responsibility: DEC (Yilgarn District) and BGPA through the YDTFRT
Cost: $2,500 in years 3 and 5

6. Monitor populations

Monitoring of weed encroachment, habitat degradation, population stability (expansion or decline), pollination activity, seed production, recruitment, and longevity is essential.

Action: Monitor populations
Responsibility: DEC (Yilgarn District) through the YDTFRT
Cost: $1,400 in years 1,3,and 5.

7. Undertake weed control

As weeds are a major threat to several populations, the following actions will be implemented.

1. Select appropriate herbicides after determining which weeds are present.
2. Control invasive weeds by hand removal or spot spraying around *Eremophila resinosa* plants when weeds first emerge.
3. Schedule weed control to include spraying at other threatened flora populations within the district.

The tolerance of associated native plant species to herbicides at the site of *Eremophila resinosa* is not known and weed control programs will be undertaken in conjunction with research.

Action: Undertake weed control
Responsibility: DEC (Yilgarn District, Science Division) through the YDTFRT
Cost: $1,500 per year

8. Fencing

Population 7 on Private Property requires an extension of protective fencing.

Action: Fencing
Responsibility: DEC (Yilgarn District) through the YDTFRT
Cost: $600 in the first year

9. Obtain biological and ecological information

Research designed to increase understanding of the biology and ecology of the species will provide a scientific base for management of *Eremophila resinosa* in the wild. Research will include:

1. Pollination biology of the species and the requirements of pollinators.
2. Seed dispersal mechanisms.
3. Role of disturbance in reproduction of *E. resinosa*.
4. Response of *E. resinosa* to fire intensity and frequency.
5. Response of *E. resinosa* to applications of various herbicides.

Action: Obtain biological and ecological information
Responsibility: DEC (Science Division, Yilgarn District) through the YDTFRT
Cost: $7,500 in years 2 and 3.

10. Collect and store seed

Collection of seed is essential to guard against extinction if wild populations are lost. Some seed has been collected and stored by DEC's TFSC and the BGPA, however additional collections should be made from a wider range of populations. The "Germplasm Conservation Guidelines for Australia" produced by the

Australian Network for Plant Conservation (ANPC) should be used to guide this process (Offord & Meagher 2009).

Actions: Collect and store seed
Responsibility: DEC (Yilgarn District, TFSC), and BGPA through the YDTFRT
Cost: $2,300 in years 1, 3 and 5.

11. Promote awareness

The importance of biodiversity conservation and the protection of *Eremophila resinosa* will be promoted to the public. This will be achieved through an information campaign using the local print and electronic media and by setting up poster displays. An A4 sized information sheet, which includes a description of the plant, its habitat type, status, threats, management actions and photos, will be developed for *Eremophila resinosa* and distributed to local land owners, relevant authorities and volunteer organizations, libraries and schools. Formal links with local naturalist groups and interested individuals are encouraged. It is hoped that these actions will result in the discovery of new populations.

Action: Promote awareness
Responsibility: DEC (Yilgarn District, Species and Communities Branch (SCB) and Strategic Development and Corporate Affairs Division) through the YDTFRT
Cost: $1,600 in the first year, $1,000 in years 3 and 5.

12. Map habitat critical to the survival of *Eremophila resinosa*

Although habitat critical to the survival of the species is mentioned in Section 1, the areas described have not been fully mapped and this will be addressed under this action. If additional populations are located, habitat critical to their survival will also be determined and mapped.

Action: Map habitat critical to the survival of *Eremophila resinosa*
Responsibility: DEC (Yilgarn District) through the YDTFRT
Cost: $2,000 in the first year

12. Review the plan and need for further recovery actions

At the end of its five-year term this IRP will be reviewed and the need for further recovery actions assessed.

Action: Review the need for further recovery actions
Responsibility: DEC (Yilgarn District, Species and Communities Branch) through the YDTFRT
Cost: $1,500 in the fourth year.

Summary of recovery actions

Recovery Actions	Priority	Responsibility	Completion date
Coordinate recovery actions	High	YDTFRT	Ongoing
Conduct further surveys	High	DEC (Yilgarn District) through the YDTFRT	2011
Liaise with relevant land managers	High	DEC (Yilgarn District) through the YDTFRT	Ongoing
Install DRF markers	High	DEC (Yilgarn District) through the YDTFRT	2009
Conduct further translocations	High	DEC (Yilgarn District) and BGPA through the YDTFRT	
Monitor populations	High	DEC (Yilgarn District) through the YDTFRT	Ongoing
Undertake weed control	High	DEC (Yilgarn District, Science Division) through the YDTFRT	Ongoing
Fencing	Medium	DEC (Yilgarn District) through the YDTFRT	2009
Obtain biological and ecological information	Medium	DEC (Science Division, Yilgarn District) through the YDTFRT	2011

Collect and store seed	Medium	DEC (Yilgarn District, TFSC), and BGPA through the YDTFRT	2013
Promote awareness	Medium	DEC (Yilgarn District, Species and Communities Branch (SCB) and Strategic Development and Corporate Affairs Division) through the YDTFRT	2013
Map habitat critical to the survival of *Eremophila resinosa*	Medium	DEC (Yilgarn District) through the YDTFRT	2009
Review the plan and need for further recovery actions	Medium	DEC (Yilgarn District, Species and Communities Branch) through the YDTFRT	2013

4. TERM OF PLAN

Western Australia

This IRP will operate from April 2008 to March 2013 but will remain in force until withdrawn or replaced. If *Eremophila resinosa* is still ranked EN after five years, this IRP will be reviewed and, if necessary, further recovery actions put in place.

Commonwealth

In accordance with the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* this adopted recovery plan will remain in force until revoked.

The recovery plan must be reviewed at intervals of not longer than five years.

5. REFERENCES

Atkins, K. (2008) *Declared Rare and Priority Flora List for Western Australia.* Department of Environment and Conservation, Western Australia.

Australian Network for Plant Conservation. (1997). *Germplasm Conservation Guidelines for Australia, An introduction to the principles and practices for seed and germplasm banking of Australian Species.* Canberra, Australian Network for Plant Conservation Germplasm Working Group.

Bentham, G. (1870). Flora Australiensis: A description of the plants of the Australian Territory. London, L. Reeve and Co. **5**: 11-12.

Brown, A., Thomson-Dans, C. and Marchant, N. (1998) *Western Australia's Threatened Flora*. Department of Conservation and Land Management, Western Australia. pp 86.

Brown, A. (2005). *A Field Guide to the Eremophilas of Western Australia*. In draft.

Cochrane, A., Brown, K. and Kelly, A. (2002). Low temperature and low moisture storage of seed of the endemic Australian genus *Eremophila* R Br (Myoporaceae). *Journal of the Royal Society of Western Australia*. **85**: 31-35.

Department of Conservation and Land Management (1992) Policy Statement No. 44 *Wildlife Management Programs*. Department of Conservation and Land Management, Western Australia.

Department of Conservation and Land Management (1994) Policy Statement No. 50 *Setting Priorities for the Conservation of Western Australia's Threatened Flora and Fauna*. Department of Conservation and Land Management, Western Australia.

Department of Environment and Conservation (2007a) *Western Australian Herbarium FloraBase 2 – Information on the Western Australian Flora*. Department of Environment and Conservation, Western Australia. Accessed 2007. http://www.calm.wa.gov.au/science/

Department of Environment and Conservation (2007b) *Declared Endangered Flora Database (DEFL)*. Species and Communities Branch, Department of Environment and Conservation, Western Australia. Accessed 2007.

Endlicher, S.L. and Fenzl, E. (1839). *Novarum Stirpium Decades*. **6**: 50-51

Ewart, A.J., White, J. and Tovey, J.R. (1908). Contributions to the flora of Australia. *Journal and Proceedings of the Royal Society of New South Wales*. **42**: 186-187.

Hopper, S.D., Leeuwen, S., Brown, A. and Patrick, S. (1990). *Western Australia's Endangered Flora*. Department of Environment and Conservation, Western Australia. pp 56.

Hopper, S., Chappill, J., Harvey, M. and George, A. (1996). *Gondwanan Heritage: past present and future of the Western Australian biota*. Australia, Surrey Beatty and Sons. pp 7 and 16.

IUCN (1994). *IUCN Red List Categories: Version 2.3*. Prepared by the IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK.

Mueller, F. (1859). On the Genus Eremophila. *Proceedings of the Royal Society of Tasmania*. pp 291-7.

Offord, C.A. and Meagher, P.F. 2009. Plant germplasm conservation in Australia: strategies and guidelines for developing, managing an utilizing ex situ collections. Australian Network for Plant Conservation Inc., Canberra.

Richmond, G. and Coates, D. (1995). *Population dynamics, seed biology and conservation of six endangered Eremophila species*. Department of Environment and Conservation. Unpublished Report. pp 1-3, 16-20.

Vallee L, Hogbin T, Monks L, Makinson B, Matthes M and Rossetto, M (2004). *Guidelines for the Translocation of Threatened Plants in Australia - Second Edition*. Australian Network for Plant Conservation. Canberra

6. TAXONOMIC DESCRIPTION

Excerpt from: Bentham, G. (1870). *Flora Australiensis: A description of the plants of the Australian Territory*. London, L. Reeve and Co. 5: 11-12; Ewart, A.J., White, J. and Tovey, J.R. (1908). Contributions to the flora of Australia. *Journal and Proceedings of the Royal Society of New South Wales*. 42: 186-187 and; Brown, A. (2005). *The Eremophila of Western Australia*. In Press.

Spreading *shrub* 40-80 cm tall, 60-100 cm wide. *Branches* densely covered in short white tomentum (short woolly hairs) and sprinkled with resinous tubercles. *Leaves* 4-8 mm long by 2-3 mm wide; alternate, obovate, obtuse with a minute point, rather thick, flat, hoary with stellate hairs on both sides. *Peduncles* axillary, solitary, exceedingly short. *Calyx-segments*, linear-lanceolate. *Corolla* 15 mm long, funnel-shaped, the tube scarcely exceeding the calyx, the throat dilated with 5 free lobes, each 5 mm long, all pointed, the upper ones recurved, the lower ones spreading, all sprinkled outside with stellate tomentum; *throat* covered in long sparse hairs with a ring of numerous hairs occurring at the base. *Flowers* blue or purple, spotted inside; when young corolla is white. Four *stamens* not exceeding the length of the corolla. *Ovary* densely tomentose, 4 celled, with 1 ovule in each cell.

SUMMARY OF RECOVERY ACTIONS AND COSTS

	Year 1			Year 2			Year 3			Year 4			Year 5		
Recovery action	DEC	Other	Ext.	DEC	Other	Ext.	DEC	Other	Ext.	DEC	Other	Ext.	DEC	Other	Ext.
Coordinate recovery actions	1,000	500	100	1,000	500	100	1,000	500	100	1,000	500	100	1,000	500	100
Conduct further surveys				1,300	300	300	1,300	300	300						
Liaise with relevant managers	800		400	800		400	800		400	800		400	800		400
Install / Replace DRF markers			3,300												
Conduct further translocations							1000	5000					1000	5000	
Monitor populations	800	300	300				800	300	300				800	300	300
Fence populations	500		100												
Undertake weed control and follow up with regular monitoring and additional control if required	800	500	200	800	500	200	800	500	200	800	500	200	800	500	200
Obtain biological and ecological information				1,000	2,500	4,000	1,000	2,500	4,000						
Collect seed and other material to preserve genetic diversity	1,300		1,000				1,300		1,000				1,300		1,000
Promote awareness	1,000		600						1,000						1,000
Map habitat critical to the survival of *Eremophila resinosa*.	1,300		700												
Review the need for further recovery actions										1,500					
Total	7,500	1,300	6,700	4,900	3,800	5,000	8,000	9,100	7,300	4,100	1,000	700	5,700	6,300	3,000
Yearly Total		**15,500**			**13,700**			**24,400**			**5,800**			**15,000**	

Ext. = External funding (funding to be sought), Other = funds contributed by in kind contribution and BGPA

Total DEC:	$ 30,200
Total Other:	$ 21,500
Total External Funding:	$ 22,700
Total Costs:	**$ 74,400**

Jamie Criddle

From: Eleanor McKechnie <EleanorMcKechnie@rameliusresources.com.au>
Sent: Thursday, 16 May 2019 2:22 PM
To: Jamie Criddle; R & K Day
Subject: FW: Mediaportal Alert - Ramelius Resources

Robin Scott MP from Kalgoorlie has declared 'WAR'

The top 2 articles are today's – just click on the links
But these are all the articles so far ☺

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RAMELIUS

MEDIAPORTAL ALERT
Mediaportal Alert - Ramelius Resources

(10 items)

FLOWER POWER
16 May 2019 • West Australian, Perth (General News)
by Stuart Mckinnon Josh Chiat

Full text (399 words / ~2 mins to read) • Article PDF

Brief: Ramelius Resources - Press • ASR: AUD 4,979 • Page 6 • 399 words • Photo: Yes • Type: News Item • Size: 284.00 cm² • Region: WA • Market: Australia • Item ID: 1121429954 • Sentiment: Negative

Keywords: Mark(2), Ramelius(5), Ramelius'(1), Zeptner(1)

Audience: 135,996 circulation

Fury at move to save plants
16 May 2019 • Kalgoorlie Miner, Kalgoorlie (General News)
by Josh Chiat

Full text (441 words / ~2 mins to read) • Article PDF

Brief: Ramelius Resources - Press • ASR: AUD 1,185 • Page 8 • 441 words • Photo: Yes • Type: News Item • Size: 453.00 cm² • Region: WA • Market: Australia • Item ID: 1121454973 • Sentiment: Negative

Keywords: Mark(1), Ramelius(5), Zeptner(1)

Audience: 2,826 circulation

Just four plants put jobs, $100m of gold, 100 jobs on hold

16 May 2019 06:54 AM • West Australian

The West Australian revealed yesterday that gold miner Ramelius Resources had been refused permission to clear 48.8ha of land adjacent to the 110-year-old Edna May mine near Westonia because of potential disturbance to the rare native eremophila...

Read on source site

Brief: Ramelius Resources - Internet • ASR: AUD 19 • 361 words • Market: Australia • Item ID: 1121644279 • Sentiment: Neutral

Keywords: Mark Zeptner(1), Previous(2), Ramelius(6), subject(1)

Audience: 9,910 unique daily visitors • 68 average story audience

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Ramelius plans at Edna May blocked by environmental watchdog

16 May 2019 06:14 AM • Australian Mining

Ramelius Resources' proposed expansion of its Greenfinch open pit operation at the Edna May gold mine has been rejected by the Western Australian Environment Minister Stephen Dawson.
The rejection was motivated by the removal of four threatened native...

Read on source site

Brief: Ramelius Resources - Internet • ASR: AUD 955 • 264 words • Market: Australia • Item ID: 1121632376 • Sentiment: Negative

Keywords: latest(1), Mark Zeptner(1), Ramelius(5), subject(1)

Audience: N/A unique daily visitors • N/A average story audience

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Flower woes delay small expansion for Ramelius

15 May 2019 09:38 AM • MiningNews.net

WESTERN Australia's environment minister Stephen Dawson has delayed the expansion of Ramelius Resources' Edna May mine to protect four endangered flowering plants.

Read on source site

Brief: Ramelius Resources - Internet • ASR: AUD 143 • 25 words • Market: Australia • Item ID: 1121164482 • Sentiment: Negative

Keywords: Ramelius Resources(1)

Audience: N/A unique daily visitors • N/A average story audience

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RAMELIUS RESOURCES: BUNGLE BLAMED FOR GREENFINCH DELAY

15 May 2019 09:14 AM • Mining Business Media

Perth, May 15 Australian miner Ramelius blames a bureaucratic bungle for the 6 month delay it faces in getting approval for the proposed Greenfinch openpit development alongside its Edna May gold mine. WA Environment Minister Stephen Dawson rejected...

Read on source site

Brief: Ramelius Resources - Internet • ASR: AUD 383 • 118 words • Market: Australia • Item ID: 1121157599 • Sentiment: Negative

Keywords: Mark Zeptner(1), RAMELIUS(3)

Audience: N/A unique daily visitors • N/A average story audience

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Rare flower kills hope of Ramelius Resources' $115m Edna May gold

15 May 2019 07:21 AM • amrtimes.com.au
by Josh Chiat

Bigger scale mining is required to keep the Edna May drive-in, drive-out camp full. Josh Chiat

Wednesday, 15 May 2019 12:49AM

Environment Minister Stephen Dawson has rejected Ramelius Resources' expansion of a Wheatbelt gold mine worth an estimated...

Read on source site

Brief: Ramelius Resources - Internet • ASR: AUD 1,447 • 396 words • Market: Australia • Item ID: 1121124948 • Sentiment: Negative

Keywords: Mark Zeptner(1), Ramelius(6)

Audience: N/A unique daily visitors • N/A average story audience

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Rare flower kills hope of Ramelius Resources' $115m Edna May gold

15 May 2019 06:57 AM • West Australian
by Josh Chiat

On Monday, Mr Dawson dismissed Ramelius' appeal against a Department of Mines, Industry Regulation and Safety decision to reject a clearing permit at Edna May mine near Westonia.
The Greenfinch pit has been stuck in development hell because of the...

Read on source site

Brief: Ramelius Resources - Internet • ASR: AUD 18 • 344 words • Market: Australia • Item ID: 1121117238 • Sentiment: Negative

Keywords: Mark Zeptner(1), Ramelius(5)

Audience: 9,910 unique daily visitors • 68 average story audience

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Morning Headlines

15 May 2019 06:48 AM • BN Western Australia
by Cameron Drummond

Kidman resisting Wesfarmers' bid Perth-based conglomerate Wesfarmers could be forced to lift the price of its $776 million takeover bid for Kidman Resources, with shareholders in the target said to be holding out for a higher price. The Aus Tariff war ...

Read on source site

Brief: Ramelius Resources - Internet • ASR: AUD 2,604 • 1186 words • Market: Australia • Item ID: 1121127752 • Sentiment: Neutral

Keywords: add(1), Headlines(1), next(1), Ramelius Resources(2)

Audience: N/A unique daily visitors • N/A average story audience

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The broad spectrum at Penny West

01 May 2019 • Paydirt, National (General News)
by Mark Andrews

Full text (1284 words / ~7 mins to read) • Article PDF

Brief: Ramelius Resources - Press • ASR: AUD 6,736 • Region: National • Market: Australia • Item ID: 1121519888 • Sentiment: Negative

Keywords: Ramelius(1)

Audience: 4,837 circulation

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