



Report and recommendations of the Environmental Protection Authority



Exploration Drilling E70/2227 Feral Prospect

Hermitage Holdings Pty Ltd
(on behalf of the Devereaux syndicate)

Report 1549

May 2015

Public Environmental Review Environmental Impact Assessment Process Timelines

| Date | Progress stages | Time (weeks) |
|----------|--|--------------|
| 7/07/14 | Level of assessment set | |
| 27/08/14 | Final Environmental Scoping Document (ESD) approved | 7 |
| 1/12/14 | Public Environmental Review (PER) document released for public review | 14 |
| 12/01/15 | Public review period for PER document closed | 6 |
| 30/03/15 | Final proponent Response To Submissions report received | 11 |
| 16/04/15 | EPA meeting | 2 |
| 20/05/15 | EPA report provided to the Minister for Environment | 5 |
| 25/05/15 | Publication of EPA report (three working days after report provided to the Minister) | 3 days |
| 8/06/15 | Close of appeals period | 2 |

Timelines for an assessment may vary according to the complexity of the project and are usually agreed with the proponent soon after the level of assessment is determined.

In this case, the Environmental Protection Authority met its timeline objective in the completion of the assessment and provision of a report to the Minister.



Dr Paul Vogel
Chairman

20 May 2015

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Contents

| | Page |
|--|-----------|
| 1. Introduction..... | 1 |
| 2. Background..... | 2 |
| 3. The proposal | 3 |
| 4. Key environmental factors..... | 7 |
| 4.1 Flora and Vegetation..... | 7 |
| 4.2 Terrestrial Fauna..... | 11 |
| 4.3 Rehabilitation and Decommissioning | 13 |
| 4.4 Offsets..... | 14 |
| 5. Conditions | 16 |
| 5.1 Recommended conditions..... | 16 |
| 5.2 Consultation | 16 |
| 6. Recommendations..... | 17 |

Tables

| | |
|---|---|
| Table 1: Summary of key proposal characteristics..... | 3 |
| Table 2: Proposal elements | 3 |

Figures

| | |
|---|----|
| Figure 1: Regional location and Koolanooka System Threatened Ecological Community | 5 |
| Figure 2: Proposal location and Development Envelope | 6 |
| Figure 3: Location of the identified <i>Lepidosperma</i> sp. Koolanooka (K.R. Newbey 9336) individuals in the proposal area..... | 9 |
| Figure 4: Location of the identified Malleefowl mounds in the proposal area. | 12 |

Appendices

1. List of Submitters
2. References
3. Summary of Identification of Key Environmental Factors and Principles
4. Identified Decision-Making Authorities and Recommended
Environmental Conditions
5. Summary of Submissions and Proponent's Response to Submissions

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1. Introduction

This report provides the advice and recommendations of the Environmental Protection Authority (EPA) to the Minister for Environment on outcomes of the EPA's environmental impact assessment of the proposal by Hermitage Holdings Pty Ltd (HHPL) to undertake exploration drilling on the Perenjori Hills. HHPL is acting on behalf of the Devereux Syndicate which comprises: Devereux Nominees Pty Ltd, Hermitage Holdings Pty Ltd, Pinecroft Pty Ltd, and Paloma Holdings Pty Ltd.

The Department of Mines and Petroleum referred the proposal to the EPA on 19 September 2013. The proponent provided further information to inform the decision on whether to assess the proposal on 27 June 2014. The EPA set the level of assessment at Public Environmental Review (PER) with a four-week public review period on 7 July 2014. The Environmental Scoping Document (ESD) for the proposal was approved on 27 August 2014 and the PER was released for public review from 1 December 2014 to 12 January 2015 (an additional two weeks was added to the public review period as it was over the Christmas period).

Section 44 of the *Environmental Protection Act 1986* (EP Act) requires that the EPA prepare a report on the outcome of its assessment of a proposal and provide this assessment report to the Minister for Environment. The report must set out:

- what the EPA considers to be the key environmental factors identified in the course of the assessment; and
- the EPA's recommendations as to whether or not the proposal may be implemented, and, if the EPA recommends that implementation be allowed, the conditions and procedures to which implementation should be subject.

The EPA may also include any other information, advice and recommendations in the assessment report as it thinks fit.

The aims of environmental impact assessment and the principles of environmental impact assessment considered by the EPA in its assessment of this proposal are set out in the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2012*.

Key environmental factors and principles

The EPA identified the following key environmental factors during the course of its assessment:

- (a) Flora and Vegetation;
- (b) Terrestrial Fauna;
- (c) Rehabilitation and Decommissioning; and
- (d) Offsets.

Further details of the proposal are presented in Section 3 of this report. Section 4 discusses the key environmental factors identified by the EPA and its assessment of the proposal's impact on those factors, if the proposal were to be implemented. The EPA considered the principles and objectives set out in section 4A of the EP Act and has summarised these in Appendix 3. The conditions to which the proposal should be subject, if the Minister determines that it may be implemented, are summarised in Section 5 and set out in Appendix 4. Section 6 presents the EPA's recommendations.

Appendix 5 contains a summary of submissions from the public review period and the proponent's Response to Submissions (on CD at the back of this report and at www.epa.wa.gov.au). It is included for information only and does not form part of the EPA's report and recommendations. Relevant significant environmental issues identified from this process have been taken into account by the EPA during its assessment of the proposal.

2. Background

The Banded Iron Formation (BIF) ranges of the Yilgarn Craton are isolated and elevated ancient ranges of distinct geology, set in a predominantly flat, semi-arid landscape. Although forming a very small proportion of each bioregion, these unique island-like environments display high levels of species endemism, rare and geographically restricted species, and high levels of species turnover among ranges.

Each BIF range tends to be biologically distinct, hosting different ecological communities and, in several cases, endemic species. BIF ranges are also distinct landform features in the regional landscape of the Midwest region.

The Koolanooka System (made up of the Koolanooka Hills and the Perenjori Hills) is part of the Karara/Mungada/Koolanooka cluster of BIF ranges, which has been identified as supporting some of the highest level biodiversity and landscape conservation values of the BIF ranges in the Yilgarn Craton.

The ranges that make up this cluster host a significant number of plant taxa that only occur on (are endemic to) BIF ranges, BIF specialist taxa that only occur on a single range or range system, and a number of threatened and Priority listed plant taxa. The 2007 Strategic review of the conservation and resource values of the banded iron formation of the Yilgarn Craton (BIF Strategic Review) identified the Koolanooka and Perenjori Hills as being partly mined, with scope to conserve a substantial part of the remaining area.

Since the 2007 BIF Strategic Review was published, a more recent synthesis of scientific data from surveys of BIF ranges in the Yilgarn Craton in Gibson et al. (2012) has confirmed the Karara/Mungada/Koolanooka cluster of ranges as a "hotspot" for significant conservation values in the Yilgarn Craton.

3. The proposal

HHPL (on behalf of the Devereux Syndicate) proposes to undertake exploration drilling on part of the Perenjori Hills known as the Feral Prospect.

The proposal area is located approximately nine kilometres (km) north-east of the town of Perenjori in the Midwest region of Western Australia (Figure 1). The proposal is located on BIF landforms of the Perenjori Hills, and within plant assemblages of the Koolanooka System TEC (ranked Vulnerable). The BIF landform on which the proposal is located is surrounded by operating agricultural farms.

The proposed exploration drilling would be undertaken on the inner, eastern BIF ridge of the Perenjori Hills. The proposal is for resource definition and requires clearing of native vegetation in order to drill 23 reverse circulation holes and two diamond drill holes. The proposed exploration drilling program requires an access track 1.36 km long, 12 short drill site access tracks, and 12 paired drill pads of 20 metres (m) by 60 m. The proponent has advised that the single drill hole would be undertaken on an existing track and does not require clearing. The proposal location and development envelope showing the location of drill pads and access tracks are shown in Figure 2.

The maximum area of clearing is 3.24 hectares (ha). The exploration program is expected to take six weeks.

The main characteristics of the proposal are summarised in Tables 1 and 2 below. A description of the proposal is provided in Section 5 of the PER document (HHPL on behalf of the Devereux Syndicate, 2014).

Table 1: Summary of key proposal characteristics

| | |
|--------------------------|--|
| Proposal Title | Exploration Drilling E70/2227 Feral Prospect |
| Short Description | The proposal is for an exploration drilling program which involves disturbance and clearing for access tracks and drill pads, and fencing, on banded iron formation ranges of the Perenjori Hills. |

Table 2: Proposal elements

| Element | Location | Proposed Extent |
|--------------------------|---|--|
| Clearing and Disturbance | Figures 2, 3 and 4 of Schedule 1 and geographic coordinates as defined in Schedule 2. | Clearing of no more than: <ul style="list-style-type: none">• 1.8 ha for access tracks; and• 1.44 ha for paired drill pads, within a 48.63 ha development envelope. |

The potential impacts of the proposal on the environment identified by the proponent in the PER document (HHPL on behalf of the Devereux Syndicate, 2014) and their proposed management are summarised in Tables 2 and 3 (Summary) in the PER document.

Three agency submissions and two public submissions were received during the public review period. Matters raised include:

- the further impact to BIF landforms associated with the Koolanooka System and the values it hosts;
- the further impact to the Koolanooka System TEC flora and vegetation;
- the significant impact to the endemic flora species *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336);
- that specific information on rehabilitation methods will be required;
- that due to the distinct values and restricted range of the Koolanooka System, the loss or degradation of areas cannot be directly mitigated off-site; and
- the proposal area may contain aboriginal heritage sites not currently recorded, and the proponent should verify that the proposal will not impact any new sites.

Issues raised were addressed by the proponent in its Response to Submissions document received by the EPA on 30 March 2015 (Appendix 5).

In assessing this proposal, the EPA notes that the proponent has sought to avoid, minimise, and rehabilitate environmental impacts associated with the proposal.

The proponent has provided the following information and management measures to be implemented to reduce impacts of the proposal:

- cut and fill is not required for drill pad construction;
- a rubber-tyred, jack-mounted drill rig is to be used;
- existing tracks will be preferentially used;
- exploration and related activities will be undertaken in dry soil conditions;
- an onsite botanist will be used during track and drill pad construction;
- Malleefowl mounds will be avoided;
- as many Priority flora species and York gums as possible will be avoided;
- drill holes will be capped and buried;
- waste products will be removed and disposed of off-site;
- vehicle hygiene measures will be undertaken;
- any compacted ground will be ripped; and
- mulch will be re-spread over rehabilitation areas.

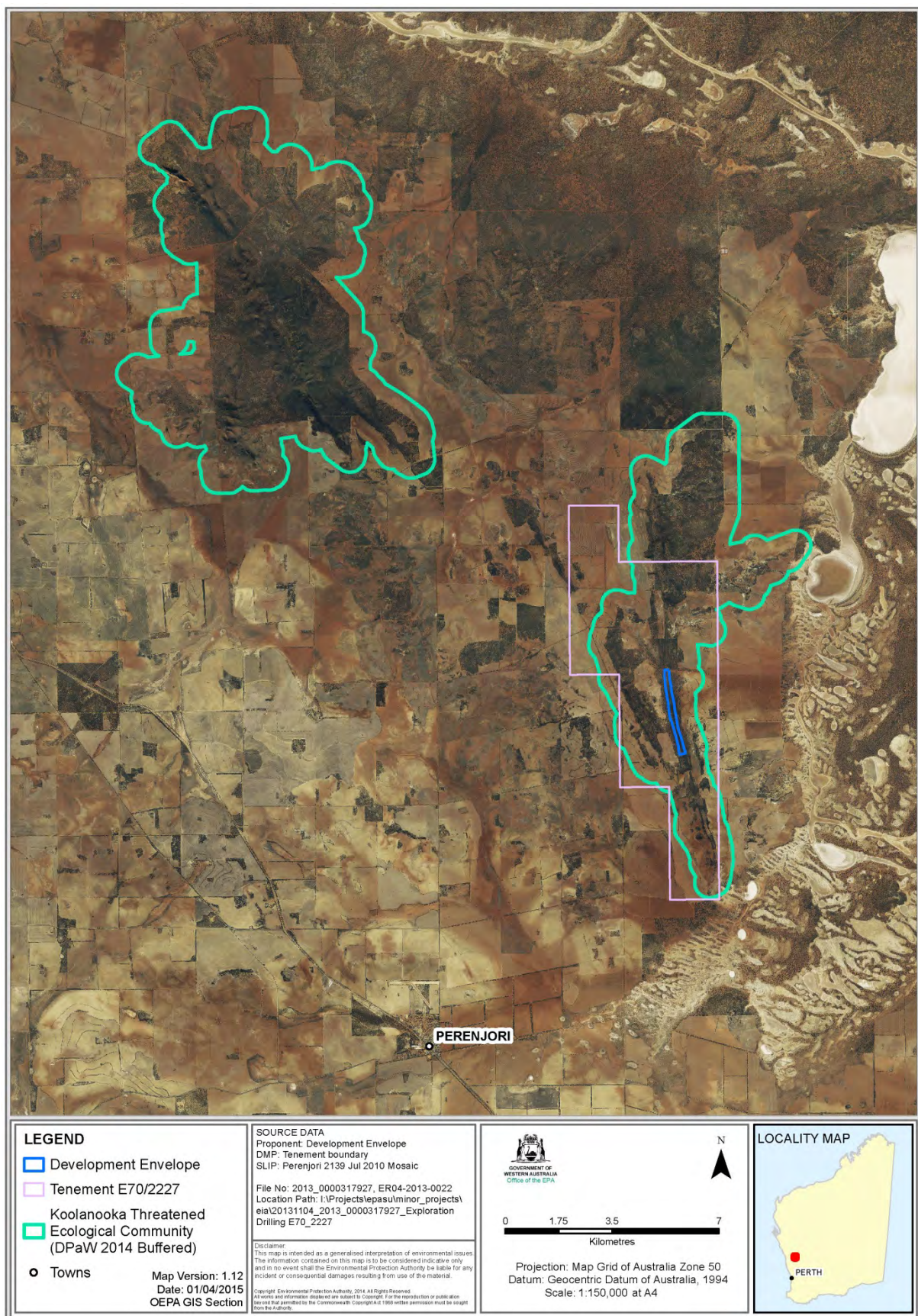


Figure 1: Regional location and Koolanooka System Threatened Ecological Community



Figure 2: Proposal location and Development Envelope

4. Key environmental factors

A number of environmental factors were examined by the proponent and outlined in the PER document that was released for public review. In identifying the key environmental factors for this proposal, the EPA had regard to the PER document, public and agency comments, the proponent's response to submissions and the EPA's own inquiries. The EPA has identified the following key environmental factors during the course of its assessment of the proposal:

- (a) **Flora and Vegetation** – direct impacts from clearing of flora and vegetation for access tracks and drill pads;
- (b) **Terrestrial Fauna** – disruption of Malleefowl breeding/nesting;
- (c) **Rehabilitation and Decommissioning** – restoration and rehabilitation of areas disturbed and cleared for access tracks and drill pads; and
- (d) **Offsets** – in the event that the rehabilitation is not successful, and a significant residual impact remains.

Appendix 3 contains the environmental factors identified through the course of the assessment and the EPA's evaluation of whether an environmental factor is a key environmental factor for the proposal.

The EPA's assessment of the proposal's impacts on the key environmental factors is provided in Sections 4.1 - 4.4. These sections outline the EPA's conclusions as to whether or not the proposal can be managed to meet the EPA's objective for a particular factor and, if so, the recommended conditions and procedures that should apply if the proposal is implemented (Appendix 4).

In preparing this report and recommendations, the EPA has had regard for the object and principles contained in s4A of the EP Act. Appendix 3 summarises the EPA's consideration of the principles during its assessment of the proposal.

The EPA has also considered how the proponent has applied the mitigation hierarchy (avoid, minimise, rehabilitate and offset) to the proposal. The extent to which the proponent has applied the mitigation hierarchy for the key environmental factors for the proposal is reflected in the recommended environmental conditions for the proposal.

4.1 Flora and Vegetation

The EPA's environmental objective for this factor is *to maintain representation, diversity, viability and ecological function at the species, population and community level.*

The Koolanooka Hills and Perenjori Hills are located in the Merredin Interim Biogeographic Regionalisation for Australia sub-region, are isolated from each other with a separation distance of less than 10 km, and the majority of native

vegetation between and surrounding the two areas has been cleared for agricultural purposes. The vegetation of the Koolanooka System TEC is restricted with 20.98% of the pre-European extent remaining in the Merredin sub-region, and only 1.38% reserved for conservation (Government of Western Australia, 2013).

The proponent has stated that the maximum clearing required to implement the proposal would be 3.24 ha, comprising 1.8 ha for access tracks and 1.44 ha for drill pads, over a six-week period.

The PER and response to submissions document describes the proponent's management measures to avoid and minimise the impact on flora and vegetation. These include the use of 'raking' to clear vegetation which leaves rootstock in the ground, and undertaking clearing under the supervision of an on-site botanist (who would identify Priority flora species in order to avoid these through access track realignment), as well as avoiding York gums, and ensuring vehicle hygiene measures are undertaken.

The proponent undertook a Level 2 flora and vegetation survey between 2012 and 2014. There is some disturbance at the northern end of the proposal area from the development of stock watering dams and in-flow channels, and from past stock grazing. However, as identified in the proponent's flora and vegetation survey report (Mattiske, 2014); the condition of the vegetation in the proposal area is considered to be Very Good to Excellent.

Of the nine floristic communities types (FCT) identified in the proposal area, five will be impacted by the proposal. All five FCTs host Priority flora species.

Based on the currently available information, there are four Priority flora species that will be impacted by this proposal. The most significant impact is on the Priority 1 *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336) in the survey area (Figure 3). This taxon is endemic to the Koolanooka System and is also a BIF specialist species with a restricted range of 15 km east-west and 20 km north-south. This species is known from 14 records from the Department of Parks and Wildlife database within its known range, and 42 individuals identified during the proponent's flora surveys in the proposal area.

The predicted impact from the track alignment in the PER is considered high as it would result in the loss of 22 individuals from the 42 individuals recorded; this equates to 52.4% of the recorded population in the proposal area.

The EPA considers that the predicted level of impact on this taxon (52.4%) is unacceptably high, at both a local and regional scale. Given the degree of flexibility that is available in exploration activities, the EPA notes that the percentage impact on this taxon could be avoided through further refinement of access tracks and/or drill pad locations. Further survey effort may also identify additional individuals or populations within the proposal area and surrounds.

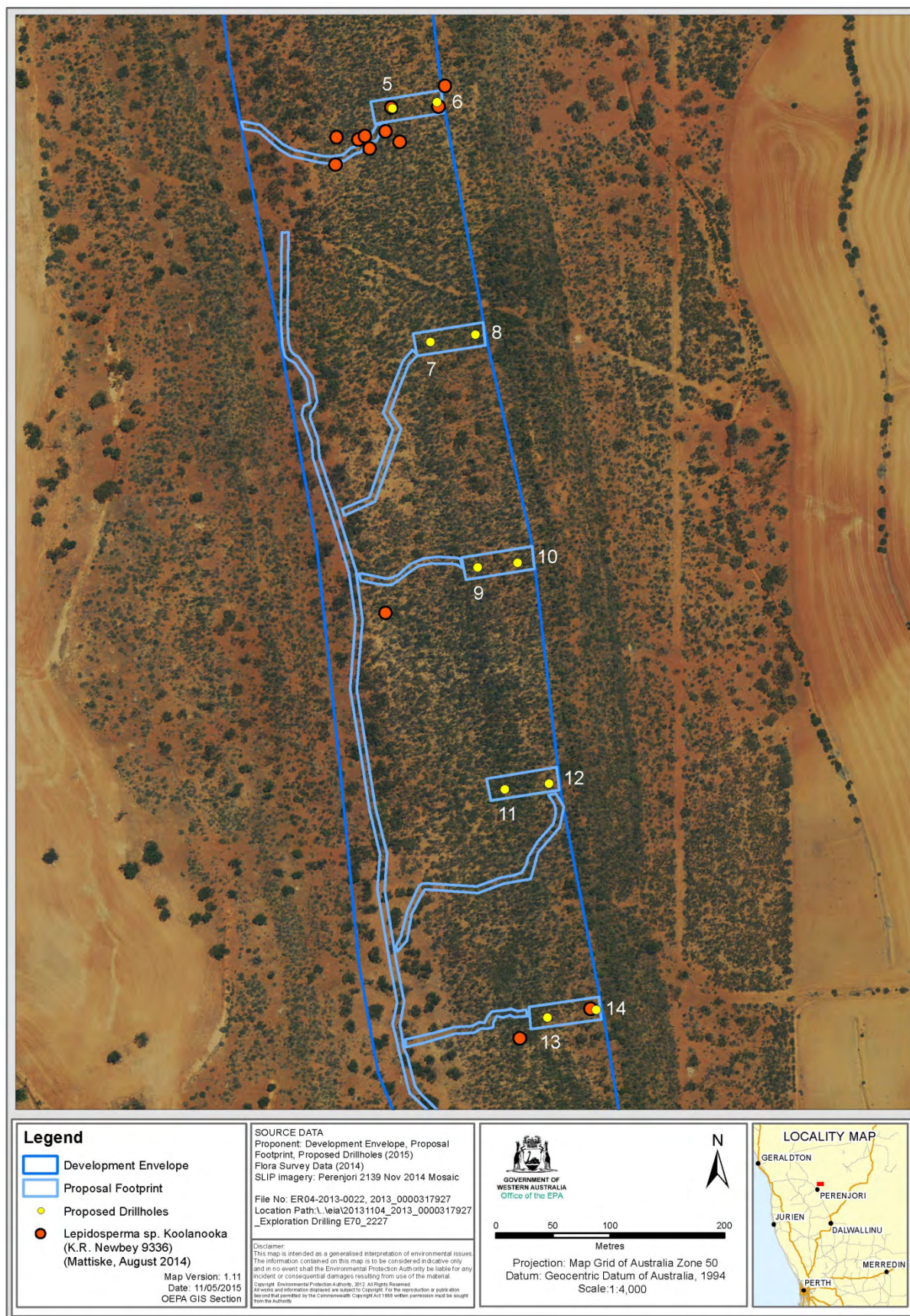


Figure 3: Location of the identified *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336) individuals in the proposal area

The proponent has agreed that avoidance of *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336) should be achievable through the supervision provided by the on-site botanist in selecting the final track alignments.

The EPA notes that despite the extent of the exploration program being limited, given the condition of the vegetation and intactness of the Range, and taking account of the cumulative impacts and other threatening processes in the area, incremental losses and/or degradation of the conservation values of the Koolanooka System are of considerable concern. Stringent management measures are required to ensure impacts are kept to a minimum.

The EPA has recommended condition 6 which requires the preparation of a Construction and Operation Environmental Management Plan (EMP). This EMP incorporates the management measures proposed by the proponent, and will specify the methods, procedures and management actions to minimise impacts on vegetation and flora. Part of recommended condition 6 requires the proponent to design and implement the proposal to avoid the Priority 1 flora species *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336).

The area of the Koolanooka System TEC to be cleared is based on 6 m wide access tracks. The EPA notes that this width exceeds the width required for rig access. The proponent has confirmed that 6 m is the maximum width of access tracks, and will only be used at certain points along the alignment (e.g. turning circles). Therefore, the actual area of clearing is expected to be less than 3.24 ha.

To manage impact on the Koolanooka System TEC vegetation, the authorised extent in Schedule 1 of the recommended conditions limits the clearing to a maximum of 3.24 ha and defines the boundaries of the development envelope. Condition 6 requires minimisation of clearing, and procedures for avoiding York gums and conservation significant flora species.

There is potential for a significant residual impact if rehabilitation is unsuccessful. Recommended condition 7 requires the proponent to prepare and implement a Rehabilitation Plan. In the event that rehabilitation is unsuccessful, recommended condition 8 allows for the development and implementation of an Offset Strategy. These matters are discussed further in sections 4.3 and 4.4.

Summary

Having particular regard to the:

- (a) small extent of the proposal and its limited duration;
- (b) management measures and selection of equipment to minimise clearing and disturbance impacts;
- (c) environmental values of the Koolanooka System TEC which hosts endemic and restricted flora and vegetation;

- (d) vegetation to be cleared being in Very Good to Excellent condition; and
- (e) potential for a significant residual impact if rehabilitation is unsuccessful,

the EPA considers that the proposal can be managed to meet the EPA's objectives for Flora and Vegetation provided conditions are imposed requiring the proponent to:

- manage clearing impact on the Koolanooka System TEC vegetation by limiting the authorised extent to a maximum of 3.24 ha in the development envelope;
- prepare and implement a Construction and Operation EMP which includes procedures for avoiding York gums and conservation significant flora species, and designing and implementing the proposal to avoid the Priority 1 flora species *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336);
- prepare and implement a Rehabilitation Plan which specifies the works to be undertaken including timing, monitoring methods, and contingency actions; and
- develop and implement an Offset Strategy in the event that rehabilitation is unsuccessful.

4.2 Terrestrial Fauna

The EPA's environmental objective for this factor is *to maintain representation, diversity, viability and ecological function at the species, population and assemblage level.*

The proponent undertook a level 1 fauna assessment with targeted searching in August 2014. The key issue identified is the presence of Malleefowl which is listed as Schedule 1 (ranked Vulnerable) under the *Wildlife Conservation Act 1950* and Vulnerable under the *Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999*. Two Malleefowl mounds were found, one of which was active (Figure 4). An adult Malleefowl was also recorded in the survey area.

The survey results prompted the proponent to revise the access track alignment to avoid ground disturbance within a 55 m buffer around the identified mounds. The proponent has also stated that the exploration program will not be undertaken during the Malleefowl breeding season; noting that the exploration program is of only six weeks duration.

The EPA has recommended condition 6 which requires the preparation of a Construction and Operation EMP. The Construction and Operation EMP requires the proponent to avoid the identified Malleefowl mounds, and also develop and implement protocols for avoidance should any additional Malleefowl mounds be encountered during the exploration program.

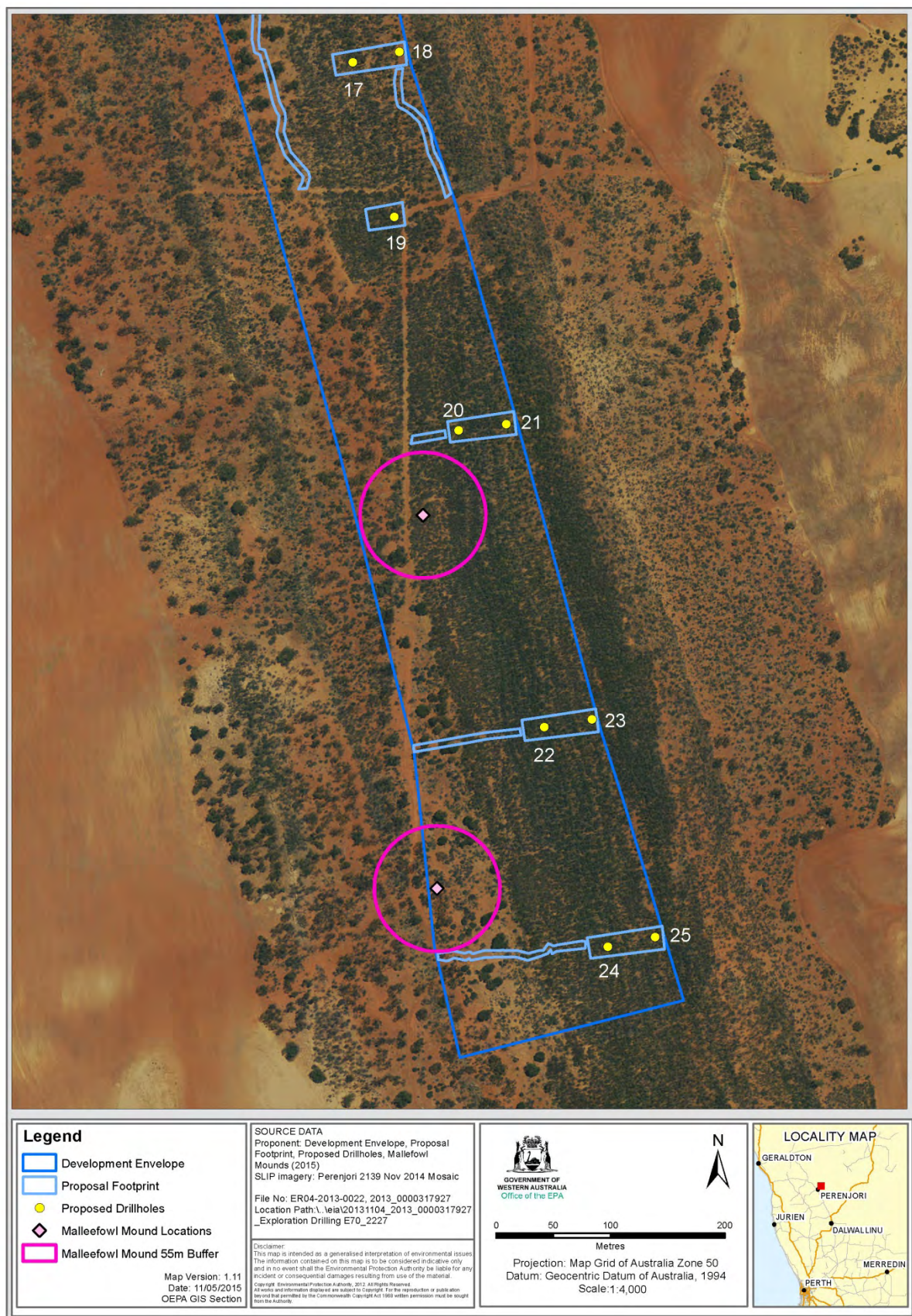


Figure 4: Location of the identified Malleefowl mounds in the proposal area

The EPA also recommends that the authorised extent in Schedule 1 of the recommended conditions restrict activity within the (55 m) buffer zones around any Malleefowl mounds. The location of these buffer zones is defined in Schedule 1 along with the development envelope.

Summary

Having particular regard to the:

- (a) short duration of the exploration program;
- (b) program being undertaken to avoid the Malleefowl breeding season;
- (c) access tracks and drill pads being positioned to avoid ground disturbance within a 55 m buffer around identified Malleefowl mounds,

the EPA considers that the proposal can be managed to meet the EPA's objectives for Terrestrial Fauna provided conditions are imposed requiring the proposal to:

- manage clearing impact on fauna habitat by limiting the authorised extent to a maximum of 3.24 ha in the development envelope; and
- prepare and implement a Construction and Operation EMP which includes procedures for maintaining a buffer around Malleefowl mounds.

4.3 Rehabilitation and Decommissioning

The EPA's environmental objective for this factor is *to ensure that premises are decommissioned and rehabilitated in an ecologically sustainable manner.*

Presently there is a lack of examples of successful rehabilitation in Midwest/Yilgarn BIF ranges. However, it is noted that the impacts associated with exploration activities are of a lower magnitude than impacts associated with mining operations.

The proposal would impact Very Good to Excellent condition native vegetation associated with the Koolanooka System TEC, which hosts endemic and restricted flora and vegetation, and conservation significant fauna species.

The proposed tracks would increase access to areas of the Koolanooka System at Perenjori Hills which currently do not have extensive access, resulting in degradation to other areas. The indirect impacts of additional access, particularly as the System is surrounded by actively grazed agricultural land, could be significant. The EPA considers that restricting future access along these tracks by exclusion fencing will be essential for the success of rehabilitation.

The PER document broadly describes management measures that will be undertaken during rehabilitation of the proposal area. This includes capping of drill holes, waste removal including rock chips and spoil water, ripping of any compacted ground and re-spreading of mulch. The proponent has also stated that supplementary seeding using local native species will be undertaken prior

to the seasonal rains, if after 12 months from completion of the exploration program it is determined to be needed.

The EPA has recommended condition 7 which requires the preparation and implementation of a Rehabilitation Plan. The Rehabilitation Plan will specify the type and method of works that must be undertaken during rehabilitation, their timing, the monitoring methods to be used, and contingency actions. The Rehabilitation Plan will also determine the criteria by which rehabilitation success will be measured.

There is potential for a significant residual impact if rehabilitation is unsuccessful. Recommended condition 8 allows for the development and implementation of an Offset Strategy in this event. This matter is discussed further in Section 4.4.

Summary

Having particular regard to the:

- (a) small extent of the proposal and its limited duration;
 - (b) limited duration between disturbance and start of rehabilitation;
 - (c) management measures and selection of equipment to minimise ground disturbance;
 - (d) environmental values of the Koolanooka System TEC which hosts endemic and restricted flora and vegetation and conservation significant fauna species; and
 - (e) potential for significant residual impact if rehabilitation is unsuccessful,
- the EPA considers that the proposal can be managed to meet the EPA's objectives for Rehabilitation and Decommissioning provided conditions are imposed requiring the proponent to:
- prepare and implement a Rehabilitation Plan which specifies the type and method of works that must be undertaken during rehabilitation, their timing, the monitoring methods to be used, and contingency actions. The Rehabilitation Plan will also determine the criteria by which rehabilitation success will be measured; and
 - develop and implement an Offset Strategy in the event that rehabilitation is unsuccessful.

4.4 Offsets

The EPA's environmental objective for this factor is *to counterbalance any significant residual environmental impacts or uncertainty through the application of offsets.*

The State Government WA Environmental Offsets Guidelines (August 2014) contains a Residual Impact Significance Model which identifies impact to TECs as something that may require an offset.

The EPA notes that the exploration proposal would impact (Koolanooka System) TEC vegetation in Very Good to Excellent condition that hosts endemic and restricted flora and vegetation and conservation significant fauna species. The EPA also notes that the Perenjori Hills on which the proposal is located are intact landforms.

Given the extent of cumulative impact on BIF ranges in the surrounding area and other threatening processes, the EPA is of the view that incremental losses and/or degradation of the conservation values of the Koolanooka System is of considerable concern. The EPA also notes that currently there is a lack of examples of successful rehabilitation in Midwest/Yilgarn BIF ranges.

The EPA is of the view that the proposal should be implemented in a manner that ensures that there are no significant residual impacts to flora and vegetation, and that an offset should only be triggered as a contingency in the event that there is an ongoing significant residual impact. This approach puts the onus on the proponent to diligently implement the management actions outlined in the Rehabilitation Plan, required by recommended condition 7 to minimise and rectify any impacts in the first instance.

The EPA has recommended condition 8 which allows for the development and implementation of an Offset Strategy if successful rehabilitation is not achieved within five years of completion of the exploration program, and it is determined that significant residual impacts remain in the proposal area. The offset would only be triggered as a contingency in the event that there is an ongoing significant residual impact and the value of the offset would be appraised to counterbalance up to 3.24 ha of unsuccessful rehabilitation.

Summary

Having particular regard to the:

- (a) environmental values of the Koolanooka System TEC which hosts endemic and restricted flora and vegetation and conservation significant fauna species;
- (b) cumulative impact on BIF ranges in the surrounding area and other threatening processes; and
- (a) lack of examples of successful rehabilitation of Midwest/Yilgarn BIF ranges,

the EPA considers that the proposal can be managed to meet the EPA's objectives for Offsets provided conditions are imposed requiring the proponent to:

- develop and implement an Offset Strategy in the event that successful rehabilitation is not achieved within five years from completion of the exploration program, and it is determined that significant residual impacts remain in the proposal area.

5. Conditions

Section 44 of the EP Act requires that this assessment report must set out:

- what the EPA considers to be the key environmental factors identified in the course of the assessment; and
- the EPA's recommendations as to whether or not the proposal may be implemented and, if the EPA recommends that implementation be allowed, the conditions and procedures to which implementation should be subject.

5.1 Recommended conditions

The EPA has developed a set of conditions that the EPA recommends be imposed if the proposal by HHPL on behalf of the Devereux Syndicate, for the Exploration Drilling E70/2227 Feral Prospect proposal, is approved for implementation.

These conditions are presented in Appendix 4. Matters addressed in the conditions include the following:

- (a) Schedule 1 constrains the location and authorised extent of clearing which can be undertaken.
- (b) Condition 6 requires the preparation and implementation of a Construction and Operation EMP. This EMP will specify the methods, procedures and management to minimise impacts on vegetation and flora. The EMP also requires the proponent to avoid identified Malleefowl mounds, and *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336) individuals and populations, and develop and implement protocols for avoidance if any additional Malleefowl mounds are encountered during the exploration program.
- (c) Condition 7 requires the preparation and implementation of a Rehabilitation Plan. The Rehabilitation Plan will specify the type and method of works that must be undertaken during rehabilitation, their timing, the monitoring methods to be used, and contingency actions. The Rehabilitation Plan will also determine the criteria by which rehabilitation success will be measured.
- (d) Condition 8 allows for the development and implementation of an Offset Strategy if successful rehabilitation is not achieved within five years, and the CEO determines that significant residual impacts remain in the proposal area.

5.2 Consultation

In developing these conditions, the EPA consulted with the proponent, the Department of Parks and Wildlife and the Department of Mines and Petroleum on matters of fact, technical feasibility and potential difficulties with implementation. Minor changes, which did not change the intent or scope, were made to conditions 6 and 7.

6. Recommendations

That the Minister for Environment notes:

1. that the proposal assessed is for exploration drilling program which involves disturbance and clearing for access tracks and drill pads, and fencing, on Banded Iron Formation ranges of the Perenjori Hills;
2. the key environmental factors identified by the EPA in the course of its assessment are set out in Section 4; and
3. that the EPA has concluded that the proposal may be implemented to meet the EPA's objectives, provided the implementation of the proposal is carried out in accordance with the recommended conditions and procedures set out in Appendix 4 and summarised in Section 5.

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Appendix 1

List of Submitters

Organisations:

Department of Aboriginal Affairs
Department of Mines and Petroleum
Department of Parks and Wildlife
Wildflower Society of Western Australia

Individuals:

Graham M. Pavlinovich

Appendix 2

References

1. Gibson N, Meissner R, Markey A.S and Thompson, W.A (2012), *Patterns of plant diversity in ironstone ranges in arid south western Australia*, Journal of Arid Environments **77**: 25-31.
2. Government of Western Australia (2007), *Strategic review of the conservation and resource values of the banded iron formation of the Yilgarn Craton*, Perth, WA.
3. Government of Western Australia (2013), *2013 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis*, Perth WA.
4. Government of Western Australia (2014), *WA Environmental Offsets Guidelines*, August 2014.
5. Hermitage Holdings Pty Ltd (2014), *Public Environmental Review – Exploration Drilling Proposal E70/2227 Feral Prospect*, November 2014.
6. Matiske (2014), *Assessment of Flora and Vegetation on Sections of the Feral Prospect within Exploration Lease E70/2227*, prepared for the Devereux Syndicate by Matiske Consulting Pty Ltd, September 2014.

Appendix 3

Summary of Identification of Key Environmental Factors and Principles

| Preliminary environmental factors | Description of the proposal's likely impacts on the environmental factor | Government agency and public comments | Evaluation of whether a factor <i>is</i> a key environmental factor |
|-----------------------------------|---|---|--|
| LAND | | | |
| Landforms | <p>The proposal is located on Banded Iron Formation landforms of the Perenjori Hills, which form part of the Koolanooka System. The Koolanooka System has been identified as possessing high environmental values.</p> <p>The proposal is for resource definition and requires clearing of native vegetation in order to drill 23 reverse circulation holes and 2 diamond drill holes. The drilling program requires development of a 1.36 km access track, 12 short drill site access tracks, and 12 paired drill pads of 20 m by 60 m.</p> <p>Clearing and drilling activities have the potential to significantly alter intact BIF landforms of the Perenjori Hills.</p> | <p>Submissions for this factor include:</p> <ul style="list-style-type: none"> • The potential impact to soils, geodiversity and habitat for BIF specialist species; • Concern that the conservation significance of the Perenjori Hills have not been adequately considered; • An assessment of 'best practice' exploration techniques should be undertaken for the proposal; • Concern raised over the impact to BIF landforms associated with the Koolanooka System and the values it hosts; and • Concern raised over further cumulative impacts, degradation and incremental losses of the conservation values of the Koolanooka System BIFs. | <p>The drilling rig for the proposal is jack-mounted and can operate on slopes up to 18°. Therefore, cut and fill is not required for pad construction, so permanent alteration of BIF landforms is not expected.</p> <p>Clearing impact will be minimised by the use of a 'raking' method which avoids breaking the soil, and leaves root stock in the ground and mulch on the ground.</p> <p>Condition 7 requires a series of management actions which ensure landforms impacted by exploration activities are rehabilitated including: final landform profile, treatment of compacted soils, return of subsoils and topsoils, and the return of vegetation comparable to that which naturally occurs in the surrounding area.</p> |

| Preliminary environmental factors | Description of the proposal's likely impacts on the environmental factor | Government agency and public comments | Evaluation of whether a factor <i>is</i> a key environmental factor |
|-----------------------------------|--|--|---|
| | | | Not considered to be a key environmental factor and does not require further evaluation by the EPA. |
| Flora and Vegetation | <p>Up to 3.24 ha of native vegetation clearing; comprising 1.8 ha for access tracks and 1.44 ha for drill pads, is required for the proposal.</p> <p>The proposal will impact flora and vegetation of the Koolanooka System Threatened Ecological Community (TEC). The Koolanooka System TEC is highly impacted, and therefore regionally restricted.</p> <p>The condition of the vegetation in the proposal area is considered to be Very Good to Excellent.</p> <p>Five floristic communities types (FCT) will be impacted by the proposal; all 5 FCTs host Priority</p> | <p>Submissions for this factor include:</p> <ul style="list-style-type: none"> • Concern raised regarding further impact to the restricted flora and vegetation of the Koolanooka System TEC; • The Koolanooka System TEC has been highly impacted and is currently subject to threatening processes including exploration, mining and agricultural practices; • Concern raised at the potential for increased access to areas of the Koolanooka System, at the Perenjori Hills, which currently do not have extensive access; • Concern raised over the extent of impact to the endemic flora species <i>Lepidosperma</i> sp. Koolanooka (K.R. Newbey 9336) at both the local and regional scale; • Impact on <i>Lepidosperma</i> sp. Koolanooka (K.R. Newbey 9336) should be avoided, and if impacts cannot be avoided, additional information should be provided to inform a quantitative impact assessment; • Proposed methods for reducing impact, such as an on-site botanist and the type of drilling rig, is supported; • It is requested that any additional information held by the | Considered to be a key environmental factor and discussed in section 4.1. |

| Preliminary environmental factors | Description of the proposal's likely impacts on the environmental factor | Government agency and public comments | Evaluation of whether a factor <i>is</i> a key environmental factor |
|-----------------------------------|--|---|---|
| | <p>flora species.</p> <p>Four Priority flora species will be impacted by the proposal.</p> <p>The most significant impact is to the Priority 1 <i>Lepidosperma</i> sp. Koolanooka (K.R. Newbey 9336); with a proposed impact to 52.4% of the recorded population in the proposal area.</p> <p><i>Lepidosperma</i> sp. Koolanooka (K.R. Newbey 9336) is endemic to the Koolanooka System.</p> | <p>proponent in relation to the distribution of <i>Lepidosperma</i> sp. Koolanooka (K.R. Newbey 9336) be provided to the Department of Parks and Wildlife; and</p> <ul style="list-style-type: none"> • Access to the in-depth survey data, and resolution of issues identified with the data and analysis, will be required if the proponent proposes to use the information to support a future mining proposal. | |
| Terrestrial Fauna | <p>The Koolanooka System hosts a suite of conservation significant fauna species. The Malleefowl, listed as Schedule 1 (ranked Vulnerable) under the <i>Wildlife Conservation Act 1950</i> and Vulnerable under the <i>Commonwealth Environment Protection and Biodiversity</i></p> | <p>Submissions for this factor include:</p> <ul style="list-style-type: none"> • Avoidance of Malleefowl nesting sites is supported. | <p>Considered to be a key environmental factor and discussed in section 4.2.</p> |

| Preliminary environmental factors | Description of the proposal's likely impacts on the environmental factor | Government agency and public comments | Evaluation of whether a factor <i>is</i> a key environmental factor |
|-----------------------------------|--|---|---|
| | <p><i>Conservation</i> (EPBC) Act 1999, has been identified in the proposal area.</p> <p>Two Malleefowl mounds were identified during flora and vegetation surveying, one of which was active, and an adult Malleefowl was also recorded.</p> <p>There is the potential for additional Malleefowl mounds and individuals to be present in the proposal area.</p> | | |
| PEOPLE | | | |
| Heritage | <p>A search of the Aboriginal Heritage Inquiry System (AHIS) has identified at least seven heritage places within exploration tenement E70/2227.</p> <p>Land disturbance and vegetation clearing has the potential to impact historical and cultural associations, and natural heritage.</p> | <p>Submissions for this factor include:</p> <ul style="list-style-type: none"> • The proposal area may contain aboriginal heritage sites not currently recorded by the Department of Aboriginal Affairs (DAA), but any new sites identified are still afforded protection under the <i>Aboriginal Heritage Act 1972</i> (AHA); • If the proponent has any additional information about any sites or places to which the AHA may apply, this information must be reported under section 15 of the AHA; | <p>According to the AHIS there are no registered sites that will be impacted by the proposal.</p> <p>The closest unregistered heritage place is 200 m north of the development envelope.</p> <p>Any disturbance to aboriginal heritage sites requires clearance under the</p> |

| Preliminary environmental factors | Description of the proposal's likely impacts on the environmental factor | Government agency and public comments | Evaluation of whether a factor <i>is</i> a key environmental factor |
|------------------------------------|---|--|--|
| | | <ul style="list-style-type: none"> • The DAA recommends that the proponent seeks guidance from the DAA to verify if the proposed works will impact on any Aboriginal heritage sites; • The proponent may wish to contact the relevant Native Title claimant groups and seek their views as to whether the proposal is likely to impact any heritage sites; and • If concerns are raised, it is recommended the proponent seeks further advice from the DAA prior to commissioning any heritage survey or submitting an application under the AHA. | <p>provisions of the AHA.</p> <p>The proponent has stated that it will work within the DAA Due Diligence Guidelines, and has committed to further consult with the DAA in relation to its recommendations.</p> <p>Not considered to be a key environmental factor and does not require further evaluation by the EPA.</p> |
| INTERGRATING | | | |
| Rehabilitation and Decommissioning | <p>The proposal will impact Very Good to Excellent condition native vegetation associated with the Koolanooka System TEC, which hosts endemic and restricted flora and vegetation, and conservation significant fauna species.</p> <p>Presently there is a lack of examples of successful rehabilitation in Midwest/Yilgarn BIF</p> | <p>Submissions for this factor include:</p> <ul style="list-style-type: none"> • Specific information on rehabilitation methodology will be required as part any Rehabilitation Plan; • Concern raised over where mulch and topsoil will be stored; • Concern raised at the lack of evidence of successful rehabilitation of BIF landforms; and • The establishment of monitoring quadrats post-exploration to compare with the results of the Level 2 survey is recommended, and may assist in demonstrating impact predictions. | <p>Considered to be a key environmental factor and discussed in section 4.3.</p> |

| Preliminary environmental factors | Description of the proposal's likely impacts on the environmental factor | Government agency and public comments | Evaluation of whether a factor <i>is</i> a key environmental factor |
|-----------------------------------|---|---|---|
| | <p>ranges.</p> <p>The proposal also has the potential to increase access to areas that are currently not easily accessible, and cause further degradation to other areas.</p> | | |
| Offsets | <p>The State Government WA Environmental Offsets Guidelines (August 2014) identifies impact to TECs as something that may require an offset.</p> <p>The proposal will impact (Koolanooka System) TEC vegetation in Very Good to Excellent condition, and the Perenjori Hills on which the proposal is located are intact BIF landforms.</p> <p>Due to the:</p> <ul style="list-style-type: none"> • extent of cumulative impacts on BIF ranges in the surrounding area; • other threatening | <p>Submissions for this factor include:</p> <ul style="list-style-type: none"> • Due to the distinct values and restricted range of the Koolanooka System, the loss or degradation of areas cannot be directly mitigated off-site. | <p>Considered to be a key environmental factor and discussed in section 4.4.</p> |

| Preliminary environmental factors | Description of the proposal's likely impacts on the environmental factor | Government agency and public comments | Evaluation of whether a factor <i>is</i> a key environmental factor |
|-----------------------------------|---|---------------------------------------|---|
| | <p>processes such as mining and agricultural practices; and</p> <ul style="list-style-type: none"> • lack of examples of successful rehabilitation in Midwest/Yilgarn BIF ranges, <p>the incremental losses and/or degradation of the conservation values of the Koolanooka System are of concern.</p> <p>There is the potential for significant residual impact if rehabilitation of the proposal area is unsuccessful.</p> | | |

| PRINCIPLES | | |
|--|--------------------|--|
| Principle | Relevant Yes/No | If yes, Consideration |
| Environmental principles of the EP Act | | |
| <p>1. The precautionary principle</p> <p><i>Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.</i></p> <p><i>In application of this precautionary principle, decisions should be guided by –</i></p> <p>a) <i>careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and</i></p> <p>b) <i>an assessment of the risk-weighted consequences of various options.</i></p> | Yes | <p>The proposal will impact high value vegetation, flora and fauna habitat from clearing, and there is the potential for significant residual impact if rehabilitation is unsuccessful.</p> <p>Condition 7 has been recommended which requires the proponent to prepare a Rehabilitation Plan which specifies the type and method of works that must be undertaken during rehabilitation, their timing, the monitoring methods to be used, and contingency actions. The Rehabilitation Plan will also determine the criteria by which rehabilitation success will be measure.</p> <p>Condition 8 has been recommended which allows for the development and implementation of an Offset Strategy in the event that successful rehabilitation is not achieved within 5 years from completion of the exploration program, and the CEO determines that significant residual impacts remain in the proposal area.</p> |
| <p>2. The principle of intergenerational equity</p> <p><i>The present generation should ensure that the health, diversity and productivity of the environment is maintained and enhanced for the benefit of future generations.</i></p> | Yes | <p>The proposal will impact high value vegetation, flora and fauna habitat from clearing and there is the potential for increased access to areas that are currently not easily accessible, resulting in further degradation to other areas. There is also the potential for significant residual impact if rehabilitation is unsuccessful.</p> <p>Management measures for the proposal include limiting the authorised extent to a maximum of 3.24 ha in the development</p> |

| | | |
|---|-----|---|
| | | <p>envelope, and the limited duration between disturbance and start of rehabilitation works.</p> <p>Condition 7 has been recommended which requires the proponent to prepare a Rehabilitation Plan which specifies the type and method of works that must be undertaken during rehabilitation, their timing, the monitoring methods to be used, and contingency actions. The Rehabilitation Plan will also determine the criteria by which rehabilitation success will be measure.</p> <p>Condition 8 has been recommended which allows for the development and implementation of an Offset Strategy in the event that successful rehabilitation is not achieved within 5 years from completion of the exploration program, and the CEO determines that significant residual impacts remain in the proposal area.</p> |
| <p>3. The principle of the conservation of biological diversity and ecological integrity</p> <p><i>Conservation of biological diversity and ecological integrity should be a fundamental consideration.</i></p> | Yes | <p>The proposal will impact high value vegetation and flora and has the potential to impact conservation significant fauna from clearing and vehicle movements.</p> <p>Management measures such as the selection of vehicle/equipment type have been proposed by the proponent to minimise clearing and disturbance impacts.</p> <p>Condition 6 has been recommended which includes requirements for the proponent to:</p> <ul style="list-style-type: none"> • Have a botanist on site during the drilling program to minimise clearing impact on native vegetation; • Provide procedures for avoiding York gums and |

| | | |
|--|-----|---|
| | | <p>conservation significant flora species;</p> <ul style="list-style-type: none"> • Avoid individuals and populations of the endemic flora species <i>Lepidosperma</i> sp. Koolanooka (K.R. Newbey 9336); • Undertake the drilling program outside of the Malleefowl breeding season; and • Maintain a 55 m buffer around Malleefowl mounds. |
| <p>4. Principles relating to improved valuation, pricing and incentive mechanisms</p> <p>(1) <i>Environmental factors should be included in the valuation of assets and services.</i></p> <p>(2) <i>The polluter pays principles – those who generate pollution and waste should bear the cost of containment, avoidance and abatement.</i></p> <p>(3) <i>The users of goods and services should pay prices based on the full life-cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste.</i></p> <p>(4) <i>Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structure, including market mechanisms, which enable those best placed to maximise benefits and/or minimize costs to develop their own solution and responses to environmental problems.</i></p> | N/A | |
| <p>5. The principle of waste minimisation</p> <p><i>All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.</i></p> | Yes | <p>The proposal has the potential to impact native vegetation and fauna, and soils if waste materials are left on site.</p> <p>Part of the management measures that will be implemented in condition 7 requires the removal of all waste products from the</p> |

| | | |
|---|-----|---|
| | | site, such as rock chips, spoil water and any other general refuse. |
| Environmental principles of the EPA | | |
| <p>1. Best practice</p> <p><i>When designing proposals and implementing environmental mitigation and management actions, the contemporary best practice measures available at the time of implementation should be applied.</i></p> | Yes | Section 3 lists the management measures proposed by the proponent to reduce impact. |
| <p>2. Continuous Improvement</p> <p><i>The implementation of environmental practices should aim for continuous improvement in environmental performance.</i></p> | N/A | It is a short program of six weeks with limited opportunity for improvement. |

Appendix 4

Identified Decision-making Authorities and Recommended Environmental Conditions

Identified Decision-making Authorities

Section 44(2) of EP Act specifies that the EPA's report must set out (if it recommends that implementation be allowed) the conditions and procedures, if any, to which implementation should be subject. This Appendix contains the EPA's recommended conditions and procedures.

Section 45(1) requires the Minister for Environment to consult with decision-making authorities, and if possible, agree on whether or not the proposal may be implemented, and if so, to what conditions and procedures, if any, that implementation should be subject.

The following decision-making authorities have been identified for this consultation:

| Decision making authority | Approval |
|-------------------------------------|--|
| 1. Minister for Environment | <i>Wildlife Conservation Act 1950</i> Taking of protected flora and fauna |
| 2. Minister for Aboriginal Affairs | <i>Aboriginal Heritage Act 1972</i> s18 approval |
| 3. Minister for Mines and Petroleum | <i>Mining Act 1978</i> |

Note: In this instance, agreement is required with DMAs 1, 2 and 3 since these DMAs are Ministers.

RECOMMENDED ENVIRONMENTAL CONDITIONS

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(Environmental Protection Act 1986)

EXPLORATION DRILLING E70/2227 FERAL PROSPECT

Proposal: The proposal is for an exploration drilling program which involves disturbance and clearing for access tracks and drill pads, and fencing, on banded iron formation ranges of the Perenjori Hills.

Proponent: Hermitage Holdings Pty Ltd, ACN 009 157 591
Devereux Nominees Pty Ltd, ACN 008 850 860
Pinecroft Pty Ltd, ACN 009 125 893
Paloma Holdings Pty Ltd, ACN 009 210 262

Proponent Address: % Hermitage Holdings Pty Ltd
9 Marie Way, Kalamunda, WA 6076

Assessment Number: 2016

Report of the Environmental Protection Authority: 1549

Pursuant to section 45 of the *Environmental Protection Act 1986* it has been agreed that the proposal described and documented in Table 2 of Schedule 1 may be implemented and that the implementation of the proposal is subject to the following implementation conditions and procedures:

Note: Words and expressions used in this Statement shall have the same respective meanings as in the Act or as provided for in Schedule 1 of this Statement.

1 Proposal Implementation

1-1 When implementing the proposal, the proponent shall not exceed the authorised extent of the proposal as defined in Table 2 in Schedule 1, unless amendments to the proposal and the authorised extent of the proposal have been approved under the EP Act.

2 Contact Details

2-1 The proponent shall notify the CEO of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.

3 Time Limit for Proposal Implementation

- 3-1 The proponent shall not commence implementation of the proposal after five (5) years from the date on this Statement, and any commencement, prior to this date, must be substantial.
- 3-2 Any commencement of implementation of the proposal, on or before five (5) years from the date of this Statement, must be demonstrated as substantial by providing the CEO with written evidence, on or before the expiration of five (5) years from the date of this Statement.

4 Compliance Reporting

- 4-1 The proponent shall prepare, submit and maintain a Compliance Assessment Plan to the CEO at least six (6) months prior to the first Compliance Assessment Report required by condition 4-6, or prior to implementation, whichever is sooner.
- 4-2 The Compliance Assessment Plan shall indicate:
 - (1) the frequency of compliance reporting;
 - (2) the approach and timing of compliance assessments;
 - (3) the retention of compliance assessments;
 - (4) the method of reporting of potential non-compliances and corrective actions taken;
 - (5) the table of contents of Compliance Assessment Reports; and
 - (6) public availability of Compliance Assessment Reports.
- 4-3 After receiving notice in writing from the CEO that the Compliance Assessment Plan satisfies the requirements of condition 4-2 the proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by condition 4-1.
- 4-4 The proponent shall retain reports of all compliance assessments described in the Compliance Assessment Plan required by condition 4-1 and shall make those reports available when requested by the CEO.
- 4-5 The proponent shall advise the CEO of any potential non-compliance within seven (7) days of that non-compliance being known.
- 4-6 The proponent shall submit to the CEO the first Compliance Assessment Report fifteen (15) months from the date of issue of this Statement addressing the twelve (12) month period from the date of issue of this Statement and then

annually from the date of submission of the first Compliance Assessment Report, or as otherwise agreed in writing by the CEO.

The Compliance Assessment Report shall:

- (1) be endorsed by the proponent's Chief Executive Officer or a person delegated to sign on the Chief Executive Officer's behalf;
- (2) include a statement as to whether the proponent has complied with the conditions;
- (3) identify all potential non-compliances and describe corrective and preventative actions taken;
- (4) be made publicly available in accordance with the approved Compliance Assessment Plan; and
- (5) indicate any proposed changes to the Compliance Assessment Plan required by condition 4-1.

5 Public Availability of Data

5-1 Subject to condition 5-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal the proponent shall make publicly available, in a manner approved by the CEO, all validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products (e.g. maps)) relevant to the assessment of this proposal and implementation of this Statement.

5-2 If any data referred to in condition 5-1 contains particulars of:

- (1) a secret formula or process; or
- (2) confidential commercially sensitive information;

the proponent may submit a request for approval from the CEO to not make these data publicly available. In making such a request the proponent shall provide the CEO with an explanation and reasons why the data should not be made publicly available.

6 Construction and Operation Environmental Management Plan

6-1 The proponent shall ensure that clearing and disturbance for access and exploration drilling activities and fencing in the proposal area are undertaken in a manner that minimises impact on flora and vegetation, and avoids conservation significant fauna habitat.

6-2 Prior to the commencement of exploration and related activities, the proponent shall prepare and submit to the CEO a Construction and Operation

Environmental Management Plan on advice of the Department of Parks and Wildlife and the Department of Mines and Petroleum.

The Construction and Operation Environmental Management Plan shall:

- (1) describe the minimal impact clearing processes for development of access tracks, drill pads and any associated infrastructure to ensure the management objective in condition 6-1 is achieved;
 - (2) provide procedures for avoiding York gums, conservation significant flora species and Malleefowl mounds (including 55m mound buffers) during construction of access tracks, drill pads and any associated infrastructure;
 - (3) describe the process by which access tracks will have their final alignment positioned to avoid individuals and populations of *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336);
 - (4) provide protocols for avoidance of any additional Malleefowl mounds encountered during the exploration program and related activities;
 - (5) describe procedures for the management and storage of mulch onsite; and
 - (6) describe procedures for waste removal, weed prevention and control, preventing uncontrolled vehicle access to the proposal area, and for the control of feral species and fire.
- 6-3 The proponent shall have a qualified and experienced botanist supervising all ground disturbing and clearing activities associated with the exploration program.
- 6-4 The proponent shall only undertake exploration and related activities in dry soil conditions and outside of Malleefowl breeding/nesting season.
- 6-5 The proponent shall not commence exploration and related activities until the CEO has given written notice that the Construction and Operation Environmental Management Plan satisfies the requirements of condition 6-2, and subject to the terms of that notice, the proponent shall:
- (1) implement the management actions as specified in the Construction and Operation Environmental Management Plan; and
 - (2) continue to implement the management actions in accordance with the requirements of the Construction and Operation Environmental Management Plan until the CEO has confirmed by notice in writing that it has been demonstrated that the objective in condition 6-1 has been met, and therefore the implementation of the management actions is no longer required.

6-6 Within two months after cessation of drilling the proponent shall provide a report to the CEO which contains:

- (1) a calculation of the actual area cleared, including a map and spatial data showing the final alignment, dimensions and location of access tracks, drill pads and any other areas disturbed in the Development Envelope; and
- (2) a demonstration that *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336) individuals and populations, and Malleefowl mounds, have been avoided.

6-7 The Construction and Operation Environmental Management Plan required by condition 6-2 shall be made publicly available once approved by the CEO.

7 Rehabilitation

7-1 The proponent shall ensure that cleared and disturbed areas are rehabilitated such that no permanent scarring and degradation to the surrounding area results from the exploration program. Native vegetation is to be returned to disturbed areas using native species of local provenance. The proponent shall ensure that the condition, abundance and density of species are comparable to that which naturally occurs on the Perenjori Hills.

7-2 Prior to clearing and ground disturbing activities the proponent shall prepare and submit a Rehabilitation Plan to the CEO on advice from the Department of Parks and Wildlife and the Department of Mines and Petroleum. The Rehabilitation Plan shall:

- (1) spatially define the areas to be rehabilitated;
- (2) specify the final profiles (reshaping) of drilled landforms;
- (3) determine the species to be returned, including abundance and density;
- (4) specify the management actions for the return of stored subsoils and topsoil, final landform profile, the treatment of any compacted soils, the return of mulch and native plant species, weed management and control of access, including fencing, to ensure the management objective in condition 7-1 is achieved;
- (5) determine the rehabilitation success criteria for the native flora species to be returned;
- (6) provide protocols and procedures that describe the monitoring methodology and monitoring program for rehabilitation areas to:
 - (a) establish baseline vegetation condition;

- (b) measure regrowth and coverage of the disturbed areas;
 - (c) identify the native species that have returned including vigour, abundance and density;
 - (d) identify any weed species present including vigour, abundance and density; and
 - (e) determine the effectiveness of the measures used for exclusion of vehicles, stock and feral species.
 - (7) develop contingency measures and actions in the event the monitoring actions in condition 7-2(6) indicates that the rehabilitation objective in condition 7-1 is not being achieved; and
 - (8) provide a protocol and procedure for the review of the Rehabilitation Plan to ensure that the Rehabilitation Plan is meeting the objective specified in condition 7-1.
- 7-3 After receiving notice in writing from the CEO that the Rehabilitation Plan satisfies the requirements of condition 7-2, the proponent shall:
- (1) implement the management actions required by condition 7-2(4) in the Rehabilitation Plan no longer than two months after cessation of drilling;
 - (2) continue to implement the management actions and monitor in accordance with the requirements of the Rehabilitation Plan until the CEO, on the advice of the Department of Parks and Wildlife, has confirmed by notice in writing that it has been demonstrated that the objective in condition 7-1 and the requirements in condition 7-2(5) is being, and will continue to be met, and implementation of the management actions and monitoring is no longer required; and
 - (3) report the results of the monitoring and any contingency measures implemented to the CEO and the Department of Parks and Wildlife on an annual basis, or as approved in writing by the CEO.
- 7-4 The proponent shall implement the contingency measures as required by condition 7-2(7) as and when directed by the CEO.
- 7-5 The proponent shall review and revise the Rehabilitation Plan as and when directed by the CEO.
- 7-6 The proponent shall implement the latest revision of the Rehabilitation Plan, which the CEO has confirmed by notice in writing, satisfies the requirements of condition 7-2.
- 7-7 The Rehabilitation Plan required by condition 7-2 shall be made publicly available once approved by the CEO.

8 Provisional Offset

- 8-1 If, the monitoring required by condition 7-2(6) has not demonstrated that the rehabilitation success criteria required by condition 7-2(5) has been met within 5 years of cessation of drilling, and the CEO determines that implementation of the proposal has resulted in a significant residual impact, the CEO may direct the proponent to prepare and implement an Offset Strategy.
- 8-2 The value of any required Offset Strategy would be appraised to counterbalance up to 3.24 hectares of unsuccessful rehabilitation and shall be prepared to the requirements of the CEO no longer than 6 months from written notice from the CEO.

Schedule 1

Table 1: Summary of the Proposal

| | |
|--------------------------|--|
| Proposal Title | Exploration Drilling E70/2227 Feral Prospect |
| Short Description | The proposal is for an exploration drilling program which involves disturbance and clearing for access tracks and drill pads, and fencing, on banded iron formation ranges of the Perenjori Hills. |

Table 2: Location and authorised extent of physical and operational elements

| Column 1 | Column 2 | Column 3 |
|-------------------------------|--|---|
| Element | Location | Authorised Extent |
| Clearing and disturbance area | Figures 2, 3 and 4 of Schedule 1 and geographic coordinates as defined in Schedule 2 | Clearing of no more than: <ul style="list-style-type: none"> • 1.8 ha for access tracks; and • 1.44 ha for paired drill pads, within a 48.63 ha development envelope. |

Table 3: Abbreviations and Definitions

| Acronym or Abbreviation | Definition or Term |
|-------------------------|--|
| CEO | The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the <i>Environmental Protection Act 1986</i> , or his delegate. |
| EPA | Environmental Protection Authority |
| EP Act | <i>Environmental Protection Act 1986</i> |
| OEPA | Office of the Environmental Protection Authority |
| ha | Hectare |

Figures (attached)

- Figure 1 Regional location and Koolanooka System Threatened Ecological community
- Figure 2 Proposal location and Development Envelope
- Figure 3 Location of identified *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336) individuals in the proposal area
- Figure 4 Location of identified Malleefowl mounds in the proposal area

(These Figures are a representation of the coordinates shown in Tables 1, 2, 3 and 4 of Schedule 2)



Figure 1 – Regional location and Koolanooka System Threatened Ecological Community

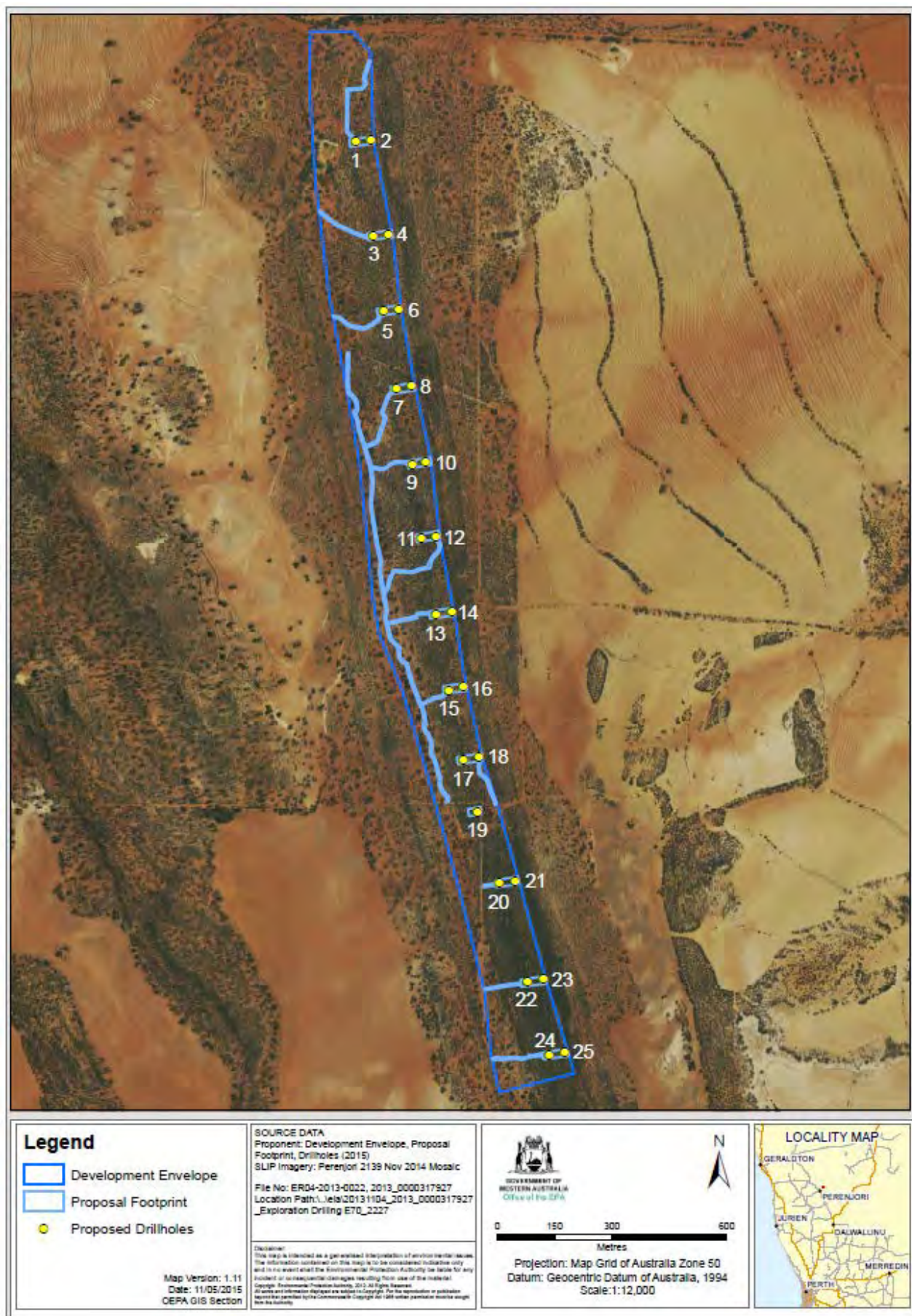


Figure 2 – Proposal location and Development Envelope



Figure 3 – Location of the identified *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336) individuals in the proposal area



Figure 4 – Location of the identified Malleefowl mounds in the proposal area

Schedule 2

Table 1: Exploration Development Envelope Coordinates (MGA Zone 50)

| Coordinate No | Easting | Northing |
|---------------|-----------|------------|
| 1 | 439205.53 | 6752471.99 |
| 2 | 439009.91 | 6752422.12 |
| 3 | 438987.54 | 6752519.64 |
| 4 | 438969.97 | 6752689.04 |
| 5 | 438905.25 | 6752948.22 |
| 6 | 438818.76 | 6753261.38 |
| 7 | 438756.89 | 6753471.34 |
| 8 | 438694.96 | 6753623.80 |
| 9 | 438678.53 | 6753718.39 |
| 10 | 438662.06 | 6753887.38 |
| 11 | 438641.37 | 6754085.08 |
| 12 | 438606.62 | 6754278.91 |
| 13 | 438564.24 | 6754512.84 |
| 14 | 438529.74 | 6754797.12 |
| 15 | 438513.18 | 6755050.43 |
| 16 | 438515.71 | 6755199.65 |
| 17 | 438625.71 | 6755198.98 |
| 18 | 438672.68 | 6755143.23 |
| 19 | 438681.73 | 6754907.84 |
| 20 | 438728.93 | 6754671.82 |
| 21 | 438751.47 | 6754475.39 |
| 22 | 438790.78 | 6754260.46 |
| 23 | 438829.87 | 6754084.62 |
| 24 | 438855.12 | 6753866.23 |
| 25 | 438892.84 | 6753669.88 |
| 26 | 438921.20 | 6753493.78 |
| 27 | 438967.10 | 6753290.08 |
| 28 | 439005.89 | 6753169.40 |
| 29 | 439057.24 | 6752987.08 |
| 30 | 439133.92 | 6752705.77 |
| 31 | 439153.50 | 6752644.59 |
| 32 | 439205.53 | 6752471.99 |

Table 2: Clearing and Disturbance Footprint Coordinates (MGA Zone 50)

| Coordinate No | Easting | Northing | Description |
|---------------|-----------|------------|-------------|
| 1 | 438664.21 | 6754670.38 | pads (3,4) |
| 2 | 438728.43 | 6754678.60 | pads (3,4) |
| 3 | 438729.55 | 6754669.63 | pads (3,4) |
| 4 | 438730.86 | 6754660.66 | pads (3,4) |
| 5 | 438667.31 | 6754652.89 | pads (3,4) |

| Coordinate No | Easting | Northing | Description |
|----------------------|----------------|-----------------|--------------------|
| 6 | 438664.21 | 6754670.38 | pads (3,4) |
| 1 | 438853.47 | 6753871.29 | pads (11,12) |
| 2 | 438793.62 | 6753861.99 | pads (11,12) |
| 3 | 438789.92 | 6753881.25 | pads (11,12) |
| 4 | 438851.22 | 6753891.22 | pads (11,12) |
| 5 | 438853.47 | 6753871.29 | pads (11,12) |
| 1 | 438890.27 | 6753670.71 | pads (13,14) |
| 2 | 438828.48 | 6753662.40 | pads (13,14) |
| 3 | 438826.92 | 6753681.67 | pads (13,14) |
| 4 | 438888.03 | 6753690.64 | pads (13,14) |
| 5 | 438890.27 | 6753670.71 | pads (13,14) |
| 1 | 438923.37 | 6753473.88 | pads (15,16) |
| 2 | 438864.29 | 6753465.80 | pads (15,16) |
| 3 | 438862.34 | 6753484.52 | pads (15,16) |
| 4 | 438921.12 | 6753493.81 | pads (15,16) |
| 5 | 438923.37 | 6753473.88 | pads (15,16) |
| 1 | 438963.67 | 6753290.27 | pads (17,18) |
| 2 | 438901.59 | 6753280.96 | pads (17,18) |
| 3 | 438898.49 | 6753299.01 | pads (17,18) |
| 4 | 438961.43 | 6753310.20 | pads (17,18) |
| 5 | 438963.67 | 6753290.27 | pads (17,18) |
| 1 | 438789.04 | 6754260.31 | pads (7,8) |
| 2 | 438729.19 | 6754251.01 | pads (7,8) |
| 3 | 438725.49 | 6754270.27 | pads (7,8) |
| 4 | 438786.80 | 6754280.24 | pads (7,8) |
| 5 | 438789.04 | 6754260.31 | pads (7,8) |
| 1 | 438831.84 | 6754064.64 | pads (9,10) |
| 2 | 438771.99 | 6754055.34 | pads (9,10) |
| 3 | 438768.30 | 6754074.60 | pads (9,10) |
| 4 | 438829.60 | 6754084.57 | pads (9,10) |
| 5 | 438831.84 | 6754064.64 | pads (9,10) |
| 1 | 439130.96 | 6752706.90 | pads (23,24) |
| 2 | 439066.74 | 6752699.02 | pads (23,24) |
| 3 | 439064.22 | 6752717.18 | pads (23,24) |
| 4 | 439128.72 | 6752726.83 | pads (23,24) |
| 5 | 439130.96 | 6752706.90 | pads (23,24) |
| 1 | 439188.96 | 6752516.85 | pads (24,25) |
| 2 | 439124.16 | 6752508.64 | pads (24,25) |
| 3 | 439121.15 | 6752526.68 | pads (24,25) |
| 4 | 439186.72 | 6752536.78 | pads (24,25) |
| 5 | 439188.96 | 6752516.85 | pads (24,25) |
| 1 | 438962.00 | 6753149.76 | pads (19) |
| 2 | 438930.47 | 6753145.49 | pads (19) |
| 3 | 438927.37 | 6753163.65 | pads (19) |

| Coordinate No | Easting | Northing | Description |
|----------------------|----------------|-----------------|--------------------|
| 4 | 438959.76 | 6753169.70 | pads (19) |
| 5 | 438962.00 | 6753149.76 | pads (19) |
| 1 | 438681.38 | 6754905.49 | pads (1,2) |
| 2 | 438618.61 | 6754897.39 | pads (1,2) |
| 3 | 438617.34 | 6754916.11 | pads (1,2) |
| 4 | 438679.05 | 6754923.43 | pads (1,2) |
| 5 | 438681.38 | 6754905.49 | pads (1,2) |
| 1 | 438752.22 | 6754463.32 | pads (5,6) |
| 2 | 438692.36 | 6754454.02 | pads (5,6) |
| 3 | 438688.67 | 6754473.28 | pads (5,6) |
| 4 | 438749.97 | 6754483.25 | pads (5,6) |
| 5 | 438752.22 | 6754463.32 | pads (5,6) |
| 1 | 439059.38 | 6752967.02 | pads (20,21) |
| 2 | 439001.56 | 6752960.17 | pads (20,21) |
| 3 | 438999.04 | 6752978.22 | pads (20,21) |
| 4 | 439057.14 | 6752986.95 | pads (20,21) |
| 5 | 439059.38 | 6752967.02 | pads (20,21) |
| 1 | 438673.61 | 6755121.96 | tracks (pad 1,2) |
| 2 | 438659.00 | 6755076.34 | tracks (pad 1,2) |
| 3 | 438662.86 | 6755063.17 | tracks (pad 1,2) |
| 4 | 438661.04 | 6755058.51 | tracks (pad 1,2) |
| 5 | 438650.33 | 6755046.71 | tracks (pad 1,2) |
| 6 | 438621.99 | 6755044.56 | tracks (pad 1,2) |
| 7 | 438616.94 | 6755045.20 | tracks (pad 1,2) |
| 8 | 438614.81 | 6755043.19 | tracks (pad 1,2) |
| 9 | 438613.81 | 6754940.47 | tracks (pad 1,2) |
| 10 | 438616.45 | 6754936.83 | tracks (pad 1,2) |
| 11 | 438633.74 | 6754918.86 | tracks (pad 1,2) |
| 12 | 438626.36 | 6754918.27 | tracks (pad 1,2) |
| 13 | 438617.77 | 6754926.09 | tracks (pad 1,2) |
| 14 | 438614.74 | 6754930.06 | tracks (pad 1,2) |
| 15 | 438612.50 | 6754932.37 | tracks (pad 1,2) |
| 16 | 438611.23 | 6754933.25 | tracks (pad 1,2) |
| 17 | 438610.05 | 6754935.13 | tracks (pad 1,2) |
| 18 | 438608.49 | 6754937.56 | tracks (pad 1,2) |
| 19 | 438609.17 | 6755045.27 | tracks (pad 1,2) |
| 20 | 438611.28 | 6755049.71 | tracks (pad 1,2) |
| 21 | 438616.23 | 6755050.18 | tracks (pad 1,2) |
| 22 | 438622.05 | 6755050.54 | tracks (pad 1,2) |
| 23 | 438648.36 | 6755052.24 | tracks (pad 1,2) |
| 24 | 438656.84 | 6755062.37 | tracks (pad 1,2) |
| 25 | 438653.08 | 6755077.19 | tracks (pad 1,2) |
| 26 | 438667.87 | 6755123.59 | tracks (pad 1,2) |
| 27 | 438673.61 | 6755121.96 | tracks (pad 1,2) |

| Coordinate No | Easting | Northing | Description |
|----------------------|----------------|-----------------|--------------------|
| 1 | 438665.12 | 6754663.07 | tracks (pad 3,4) |
| 2 | 438664.76 | 6754656.98 | tracks (pad 3,4) |
| 3 | 438627.80 | 6754669.96 | tracks (pad 3,4) |
| 4 | 438577.38 | 6754693.73 | tracks (pad 3,4) |
| 5 | 438542.07 | 6754722.80 | tracks (pad 3,4) |
| 6 | 438538.56 | 6754725.77 | tracks (pad 3,4) |
| 7 | 438540.18 | 6754731.76 | tracks (pad 3,4) |
| 8 | 438544.96 | 6754728.02 | tracks (pad 3,4) |
| 9 | 438580.07 | 6754698.74 | tracks (pad 3,4) |
| 10 | 438630.68 | 6754675.08 | tracks (pad 3,4) |
| 11 | 438665.12 | 6754663.07 | tracks (pad 3,4) |
| 1 | 438702.18 | 6754453.08 | tracks (pad 5,6) |
| 2 | 438696.68 | 6754445.74 | tracks (pad 5,6) |
| 3 | 438693.71 | 6754439.18 | tracks (pad 5,6) |
| 4 | 438684.79 | 6754436.36 | tracks (pad 5,6) |
| 5 | 438679.68 | 6754429.13 | tracks (pad 5,6) |
| 6 | 438674.54 | 6754427.89 | tracks (pad 5,6) |
| 7 | 438665.65 | 6754421.63 | tracks (pad 5,6) |
| 8 | 438656.34 | 6754419.59 | tracks (pad 5,6) |
| 9 | 438651.29 | 6754419.12 | tracks (pad 5,6) |
| 10 | 438644.88 | 6754419.86 | tracks (pad 5,6) |
| 11 | 438618.25 | 6754425.81 | tracks (pad 5,6) |
| 12 | 438608.60 | 6754431.30 | tracks (pad 5,6) |
| 13 | 438590.75 | 6754447.05 | tracks (pad 5,6) |
| 14 | 438577.34 | 6754449.52 | tracks (pad 5,6) |
| 15 | 438575.46 | 6754455.72 | tracks (pad 5,6) |
| 16 | 438578.76 | 6754455.74 | tracks (pad 5,6) |
| 17 | 438592.18 | 6754452.82 | tracks (pad 5,6) |
| 18 | 438611.59 | 6754436.19 | tracks (pad 5,6) |
| 19 | 438621.23 | 6754431.03 | tracks (pad 5,6) |
| 20 | 438646.40 | 6754425.52 | tracks (pad 5,6) |
| 21 | 438654.27 | 6754425.23 | tracks (pad 5,6) |
| 22 | 438664.55 | 6754426.62 | tracks (pad 5,6) |
| 23 | 438671.12 | 6754432.86 | tracks (pad 5,6) |
| 24 | 438676.94 | 6754434.66 | tracks (pad 5,6) |
| 25 | 438681.08 | 6754440.55 | tracks (pad 5,6) |
| 26 | 438689.31 | 6754444.37 | tracks (pad 5,6) |
| 27 | 438691.71 | 6754449.14 | tracks (pad 5,6) |
| 28 | 438694.12 | 6754453.37 | tracks (pad 5,6) |
| 29 | 438702.18 | 6754453.08 | tracks (pad 5,6) |
| 1 | 438729.28 | 6754252.12 | tracks (pad 7,8) |
| 2 | 438729.19 | 6754251.01 | tracks (pad 7,8) |
| 3 | 438722.04 | 6754243.99 | tracks (pad 7,8) |
| 4 | 438713.13 | 6754221.89 | tracks (pad 7,8) |

| Coordinate No | Easting | Northing | Description |
|----------------------|----------------|-----------------|--------------------|
| 5 | 438705.48 | 6754201.46 | tracks (pad 7,8) |
| 6 | 438714.97 | 6754187.22 | tracks (pad 7,8) |
| 7 | 438692.50 | 6754123.39 | tracks (pad 7,8) |
| 8 | 438665.58 | 6754111.38 | tracks (pad 7,8) |
| 9 | 438663.31 | 6754117.02 | tracks (pad 7,8) |
| 10 | 438687.63 | 6754127.13 | tracks (pad 7,8) |
| 11 | 438707.89 | 6754186.63 | tracks (pad 7,8) |
| 12 | 438699.46 | 6754201.21 | tracks (pad 7,8) |
| 13 | 438707.49 | 6754223.52 | tracks (pad 7,8) |
| 14 | 438716.69 | 6754246.51 | tracks (pad 7,8) |
| 15 | 438724.99 | 6754256.19 | tracks (pad 7,8) |
| 16 | 438729.28 | 6754252.12 | tracks (pad 7,8) |
| 1 | 438769.02 | 6754065.29 | tracks (pad 9,10) |
| 2 | 438763.77 | 6754068.37 | tracks (pad 9,10) |
| 3 | 438759.78 | 6754069.01 | tracks (pad 9,10) |
| 4 | 438746.77 | 6754069.27 | tracks (pad 9,10) |
| 5 | 438742.69 | 6754069.47 | tracks (pad 9,10) |
| 6 | 438730.76 | 6754067.30 | tracks (pad 9,10) |
| 7 | 438721.57 | 6754061.27 | tracks (pad 9,10) |
| 8 | 438713.74 | 6754055.13 | tracks (pad 9,10) |
| 9 | 438706.39 | 6754050.44 | tracks (pad 9,10) |
| 10 | 438696.68 | 6754051.05 | tracks (pad 9,10) |
| 11 | 438679.86 | 6754054.62 | tracks (pad 9,10) |
| 12 | 438678.28 | 6754060.37 | tracks (pad 9,10) |
| 13 | 438681.09 | 6754060.50 | tracks (pad 9,10) |
| 14 | 438701.70 | 6754056.18 | tracks (pad 9,10) |
| 15 | 438706.74 | 6754056.87 | tracks (pad 9,10) |
| 16 | 438712.46 | 6754059.45 | tracks (pad 9,10) |
| 17 | 438723.76 | 6754069.15 | tracks (pad 9,10) |
| 18 | 438730.16 | 6754071.95 | tracks (pad 9,10) |
| 19 | 438735.19 | 6754073.75 | tracks (pad 9,10) |
| 20 | 438744.22 | 6754074.80 | tracks (pad 9,10) |
| 21 | 438747.13 | 6754075.15 | tracks (pad 9,10) |
| 22 | 438761.89 | 6754074.56 | tracks (pad 9,10) |
| 23 | 438766.75 | 6754073.59 | tracks (pad 9,10) |
| 24 | 438769.02 | 6754065.29 | tracks (pad 9,10) |
| 1 | 438874.19 | 6753466.19 | tracks (pad 15,16) |
| 2 | 438869.75 | 6753460.96 | tracks (pad 15,16) |
| 3 | 438855.81 | 6753454.57 | tracks (pad 15,16) |
| 4 | 438849.99 | 6753452.76 | tracks (pad 15,16) |
| 5 | 438844.94 | 6753452.74 | tracks (pad 15,16) |
| 6 | 438842.22 | 6753454.27 | tracks (pad 15,16) |
| 7 | 438839.41 | 6753452.71 | tracks (pad 15,16) |
| 8 | 438836.51 | 6753450.47 | tracks (pad 15,16) |

| Coordinate No | Easting | Northing | Description |
|----------------------|----------------|-----------------|--------------------|
| 9 | 438827.32 | 6753445.55 | tracks (pad 15,16) |
| 10 | 438821.31 | 6753443.19 | tracks (pad 15,16) |
| 11 | 438817.35 | 6753440.07 | tracks (pad 15,16) |
| 12 | 438814.24 | 6753440.49 | tracks (pad 15,16) |
| 13 | 438810.46 | 6753437.92 | tracks (pad 15,16) |
| 14 | 438808.04 | 6753437.02 | tracks (pad 15,16) |
| 15 | 438806.56 | 6753441.56 | tracks (pad 15,16) |
| 16 | 438808.70 | 6753441.68 | tracks (pad 15,16) |
| 17 | 438812.86 | 6753444.47 | tracks (pad 15,16) |
| 18 | 438815.57 | 6753444.49 | tracks (pad 15,16) |
| 19 | 438818.76 | 6753446.94 | tracks (pad 15,16) |
| 20 | 438833.58 | 6753453.67 | tracks (pad 15,16) |
| 21 | 438836.76 | 6753457.68 | tracks (pad 15,16) |
| 22 | 438843.17 | 6753458.60 | tracks (pad 15,16) |
| 23 | 438847.44 | 6753458.18 | tracks (pad 15,16) |
| 24 | 438853.25 | 6753459.98 | tracks (pad 15,16) |
| 25 | 438863.04 | 6753464.14 | tracks (pad 15,16) |
| 26 | 438874.19 | 6753466.19 | tracks (pad 15,16) |
| 1 | 439002.33 | 6753177.57 | tracks (pad 17,18) |
| 2 | 438997.50 | 6753174.00 | tracks (pad 17,18) |
| 3 | 438993.94 | 6753185.61 | tracks (pad 17,18) |
| 4 | 438987.94 | 6753200.76 | tracks (pad 17,18) |
| 5 | 438982.05 | 6753212.14 | tracks (pad 17,18) |
| 6 | 438979.67 | 6753222.77 | tracks (pad 17,18) |
| 7 | 438978.37 | 6753228.30 | tracks (pad 17,18) |
| 8 | 438976.30 | 6753234.38 | tracks (pad 17,18) |
| 9 | 438974.23 | 6753239.69 | tracks (pad 17,18) |
| 10 | 438967.11 | 6753246.74 | tracks (pad 17,18) |
| 11 | 438963.31 | 6753249.83 | tracks (pad 17,18) |
| 12 | 438956.88 | 6753252.78 | tracks (pad 17,18) |
| 13 | 438955.61 | 6753254.55 | tracks (pad 17,18) |
| 14 | 438954.33 | 6753258.86 | tracks (pad 17,18) |
| 15 | 438952.68 | 6753275.59 | tracks (pad 17,18) |
| 16 | 438954.18 | 6753285.90 | tracks (pad 17,18) |
| 17 | 438960.00 | 6753287.04 | tracks (pad 17,18) |
| 18 | 438958.80 | 6753274.84 | tracks (pad 17,18) |
| 19 | 438960.45 | 6753257.46 | tracks (pad 17,18) |
| 20 | 438970.77 | 6753251.53 | tracks (pad 17,18) |
| 21 | 438979.17 | 6753242.93 | tracks (pad 17,18) |
| 22 | 438981.92 | 6753236.74 | tracks (pad 17,18) |
| 23 | 438985.07 | 6753228.12 | tracks (pad 17,18) |
| 24 | 438985.69 | 6753222.14 | tracks (pad 17,18) |
| 25 | 438987.48 | 6753214.28 | tracks (pad 17,18) |
| 26 | 438993.46 | 6753203.34 | tracks (pad 17,18) |

| Coordinate No | Easting | Northing | Description |
|----------------------|----------------|-----------------|--------------------|
| 27 | 439002.33 | 6753177.57 | tracks (pad 17,18) |
| 1 | 439063.42 | 6752703.66 | tracks (pad 22,23) |
| 2 | 439033.15 | 6752700.50 | tracks (pad 22,23) |
| 3 | 439019.18 | 6752697.66 | tracks (pad 22,23) |
| 4 | 438969.82 | 6752689.08 | tracks (pad 22,23) |
| 5 | 438969.59 | 6752694.95 | tracks (pad 22,23) |
| 6 | 439018.66 | 6752703.75 | tracks (pad 22,23) |
| 7 | 439032.73 | 6752706.15 | tracks (pad 22,23) |
| 8 | 439062.32 | 6752709.52 | tracks (pad 22,23) |
| 9 | 439063.42 | 6752703.66 | tracks (pad 22,23) |
| 1 | 438997.75 | 6752964.03 | tracks (pad 20,21) |
| 2 | 438967.20 | 6752958.88 | tracks (pad 20,21) |
| 3 | 438968.53 | 6752965.42 | tracks (pad 20,21) |
| 4 | 438996.94 | 6752970.12 | tracks (pad 20,21) |
| 5 | 438997.75 | 6752964.03 | tracks (pad 20,21) |
| 1 | 438990.86 | 6752513.13 | tracks (pad 24,25) |
| 2 | 439004.83 | 6752515.09 | tracks (pad 24,25) |
| 3 | 439014.06 | 6752513.03 | tracks (pad 24,25) |
| 4 | 439018.52 | 6752514.50 | tracks (pad 24,25) |
| 5 | 439021.44 | 6752512.63 | tracks (pad 24,25) |
| 6 | 439030.84 | 6752515.34 | tracks (pad 24,25) |
| 7 | 439047.63 | 6752515.98 | tracks (pad 24,25) |
| 8 | 439060.64 | 6752515.61 | tracks (pad 24,25) |
| 9 | 439069.88 | 6752513.00 | tracks (pad 24,25) |
| 10 | 439079.18 | 6752515.49 | tracks (pad 24,25) |
| 11 | 439082.97 | 6752515.51 | tracks (pad 24,25) |
| 12 | 439084.22 | 6752517.62 | tracks (pad 24,25) |
| 13 | 439087.30 | 6752521.74 | tracks (pad 24,25) |
| 14 | 439091.97 | 6752519.43 | tracks (pad 24,25) |
| 15 | 439095.36 | 6752520.67 | tracks (pad 24,25) |
| 16 | 439117.19 | 6752523.89 | tracks (pad 24,25) |
| 17 | 439120.01 | 6752523.35 | tracks (pad 24,25) |
| 18 | 439119.36 | 6752517.59 | tracks (pad 24,25) |
| 19 | 439094.42 | 6752514.90 | tracks (pad 24,25) |
| 20 | 439090.75 | 6752512.78 | tracks (pad 24,25) |
| 21 | 439089.18 | 6752516.21 | tracks (pad 24,25) |
| 22 | 439086.96 | 6752512.98 | tracks (pad 24,25) |
| 23 | 439081.05 | 6752510.62 | tracks (pad 24,25) |
| 24 | 439069.23 | 6752507.12 | tracks (pad 24,25) |
| 25 | 439059.60 | 6752509.84 | tracks (pad 24,25) |
| 26 | 439047.27 | 6752510.00 | tracks (pad 24,25) |
| 27 | 439031.45 | 6752509.47 | tracks (pad 24,25) |
| 28 | 439019.63 | 6752506.97 | tracks (pad 24,25) |
| 29 | 439018.16 | 6752508.84 | tracks (pad 24,25) |

| Coordinate No | Easting | Northing | Description |
|----------------------|----------------|-----------------|--------------------|
| 30 | 439015.16 | 6752507.05 | tracks (pad 24,25) |
| 31 | 439004.86 | 6752509.22 | tracks (pad 24,25) |
| 32 | 438998.95 | 6752506.41 | tracks (pad 24,25) |
| 33 | 438995.94 | 6752506.95 | tracks (pad 24,25) |
| 34 | 438991.08 | 6752507.70 | tracks (pad 24,25) |
| 35 | 438990.86 | 6752513.13 | tracks (pad 24,25) |
| 1 | 438857.43 | 6753856.79 | tracks (pad 11,12) |
| 2 | 438853.64 | 6753838.71 | tracks (pad 11,12) |
| 3 | 438834.73 | 6753816.56 | tracks (pad 11,12) |
| 4 | 438830.26 | 6753799.92 | tracks (pad 11,12) |
| 5 | 438828.45 | 6753793.48 | tracks (pad 11,12) |
| 6 | 438821.66 | 6753792.34 | tracks (pad 11,12) |
| 7 | 438804.49 | 6753789.36 | tracks (pad 11,12) |
| 8 | 438782.40 | 6753781.38 | tracks (pad 11,12) |
| 9 | 438744.33 | 6753783.83 | tracks (pad 11,12) |
| 10 | 438735.69 | 6753784.34 | tracks (pad 11,12) |
| 11 | 438731.56 | 6753776.56 | tracks (pad 11,12) |
| 12 | 438724.73 | 6753763.67 | tracks (pad 11,12) |
| 13 | 438720.30 | 6753739.93 | tracks (pad 11,12) |
| 14 | 438711.90 | 6753730.36 | tracks (pad 11,12) |
| 15 | 438710.81 | 6753735.12 | tracks (pad 11,12) |
| 16 | 438714.94 | 6753742.45 | tracks (pad 11,12) |
| 17 | 438720.45 | 6753765.75 | tracks (pad 11,12) |
| 18 | 438730.53 | 6753787.08 | tracks (pad 11,12) |
| 19 | 438733.52 | 6753789.42 | tracks (pad 11,12) |
| 20 | 438737.50 | 6753789.89 | tracks (pad 11,12) |
| 21 | 438781.40 | 6753787.13 | tracks (pad 11,12) |
| 22 | 438802.42 | 6753794.89 | tracks (pad 11,12) |
| 23 | 438814.06 | 6753796.84 | tracks (pad 11,12) |
| 24 | 438820.46 | 6753799.09 | tracks (pad 11,12) |
| 25 | 438824.50 | 6753805.98 | tracks (pad 11,12) |
| 26 | 438826.40 | 6753812.75 | tracks (pad 11,12) |
| 27 | 438829.19 | 6753817.64 | tracks (pad 11,12) |
| 28 | 438834.39 | 6753825.98 | tracks (pad 11,12) |
| 29 | 438848.09 | 6753841.34 | tracks (pad 11,12) |
| 30 | 438850.09 | 6753848.67 | tracks (pad 11,12) |
| 31 | 438850.45 | 6753854.65 | tracks (pad 11,12) |
| 32 | 438848.77 | 6753859.74 | tracks (pad 11,12) |
| 33 | 438844.07 | 6753866.92 | tracks (pad 11,12) |
| 34 | 438850.38 | 6753868.28 | tracks (pad 11,12) |
| 35 | 438857.43 | 6753856.79 | tracks (pad 11,12) |
| 1 | 438825.21 | 6753673.35 | tracks (pad 13,14) |
| 2 | 438813.37 | 6753672.84 | tracks (pad 13,14) |
| 3 | 438810.45 | 6753674.49 | tracks (pad 13,14) |

| Coordinate No | Easting | Northing | Description |
|---------------|-----------|------------|----------------------|
| 4 | 438804.54 | 6753672.57 | tracks (pad 13,14) |
| 5 | 438798.61 | 6753673.43 | tracks (pad 13,14) |
| 6 | 438795.63 | 6753667.65 | tracks (pad 13,14) |
| 7 | 438795.65 | 6753663.88 | tracks (pad 13,14) |
| 8 | 438790.52 | 6753662.75 | tracks (pad 13,14) |
| 9 | 438784.69 | 6753662.61 | tracks (pad 13,14) |
| 10 | 438779.37 | 6753659.36 | tracks (pad 13,14) |
| 11 | 438771.12 | 6753658.43 | tracks (pad 13,14) |
| 12 | 438762.39 | 6753658.16 | tracks (pad 13,14) |
| 13 | 438746.10 | 6753653.42 | tracks (pad 13,14) |
| 14 | 438735.44 | 6753650.37 | tracks (pad 13,14) |
| 15 | 438719.64 | 6753646.74 | tracks (pad 13,14) |
| 16 | 438718.63 | 6753653.27 | tracks (pad 13,14) |
| 17 | 438744.52 | 6753659.18 | tracks (pad 13,14) |
| 18 | 438761.38 | 6753664.03 | tracks (pad 13,14) |
| 19 | 438777.20 | 6753665.00 | tracks (pad 13,14) |
| 20 | 438783.30 | 6753668.36 | tracks (pad 13,14) |
| 21 | 438788.06 | 6753667.72 | tracks (pad 13,14) |
| 22 | 438788.73 | 6753669.83 | tracks (pad 13,14) |
| 23 | 438792.10 | 6753674.72 | tracks (pad 13,14) |
| 24 | 438794.32 | 6753677.51 | tracks (pad 13,14) |
| 25 | 438799.56 | 6753678.20 | tracks (pad 13,14) |
| 26 | 438804.51 | 6753678.67 | tracks (pad 13,14) |
| 27 | 438811.78 | 6753679.82 | tracks (pad 13,14) |
| 28 | 438817.23 | 6753678.07 | tracks (pad 13,14) |
| 29 | 438824.60 | 6753679.44 | tracks (pad 13,14) |
| 30 | 438825.21 | 6753673.35 | tracks (pad 13,14) |
| 1 | 438805.19 | 6753425.60 | tracks (north south) |
| 2 | 438802.53 | 6753433.23 | tracks (north south) |
| 3 | 438797.91 | 6753443.29 | tracks (north south) |
| 4 | 438777.15 | 6753495.81 | tracks (north south) |
| 5 | 438765.07 | 6753538.18 | tracks (north south) |
| 6 | 438764.18 | 6753541.83 | tracks (north south) |
| 7 | 438752.20 | 6753549.41 | tracks (north south) |
| 8 | 438746.52 | 6753557.25 | tracks (north south) |
| 9 | 438745.82 | 6753561.34 | tracks (north south) |
| 10 | 438743.68 | 6753581.61 | tracks (north south) |
| 11 | 438742.28 | 6753587.81 | tracks (north south) |
| 12 | 438727.84 | 6753601.36 | tracks (north south) |
| 13 | 438722.87 | 6753605.76 | tracks (north south) |
| 14 | 438721.38 | 6753611.07 | tracks (north south) |
| 15 | 438714.83 | 6753637.74 | tracks (north south) |
| 16 | 438713.54 | 6753642.17 | tracks (north south) |
| 17 | 438711.56 | 6753650.69 | tracks (north south) |

| Coordinate No | Easting | Northing | Description |
|----------------------|----------------|-----------------|----------------------|
| 18 | 438709.87 | 6753657.99 | tracks (north south) |
| 19 | 438707.49 | 6753667.18 | tracks (north south) |
| 20 | 438708.83 | 6753670.73 | tracks (north south) |
| 21 | 438711.85 | 6753685.70 | tracks (north south) |
| 22 | 438704.86 | 6753721.90 | tracks (north south) |
| 23 | 438703.06 | 6753732.53 | tracks (north south) |
| 24 | 438694.53 | 6753784.23 | tracks (north south) |
| 25 | 438696.88 | 6753815.04 | tracks (north south) |
| 26 | 438687.45 | 6753853.99 | tracks (north south) |
| 27 | 438679.71 | 6753903.15 | tracks (north south) |
| 28 | 438670.67 | 6753959.83 | tracks (north south) |
| 29 | 438675.39 | 6754020.13 | tracks (north south) |
| 30 | 438669.53 | 6754061.54 | tracks (north south) |
| 31 | 438656.29 | 6754105.35 | tracks (north south) |
| 32 | 438655.00 | 6754109.78 | tracks (north south) |
| 33 | 438638.02 | 6754162.09 | tracks (north south) |
| 34 | 438637.27 | 6754175.50 | tracks (north south) |
| 35 | 438629.88 | 6754195.18 | tracks (north south) |
| 36 | 438628.40 | 6754199.38 | tracks (north south) |
| 37 | 438629.06 | 6754204.15 | tracks (north south) |
| 38 | 438630.20 | 6754207.15 | tracks (north south) |
| 39 | 438635.53 | 6754209.84 | tracks (north south) |
| 40 | 438632.61 | 6754229.54 | tracks (north south) |
| 41 | 438622.43 | 6754244.78 | tracks (north south) |
| 42 | 438616.58 | 6754248.07 | tracks (north south) |
| 43 | 438613.66 | 6754251.05 | tracks (north south) |
| 44 | 438611.47 | 6754259.68 | tracks (north south) |
| 45 | 438610.20 | 6754280.06 | tracks (north south) |
| 46 | 438610.65 | 6754358.73 | tracks (north south) |
| 47 | 438616.57 | 6754359.10 | tracks (north south) |
| 48 | 438616.02 | 6754279.87 | tracks (north south) |
| 49 | 438616.60 | 6754262.59 | tracks (north south) |
| 50 | 438618.58 | 6754255.84 | tracks (north south) |
| 51 | 438621.22 | 6754252.20 | tracks (north south) |
| 52 | 438625.31 | 6754250.00 | tracks (north south) |
| 53 | 438638.03 | 6754231.90 | tracks (north south) |
| 54 | 438641.64 | 6754211.20 | tracks (north south) |
| 55 | 438638.96 | 6754204.65 | tracks (north south) |
| 56 | 438635.87 | 6754201.09 | tracks (north south) |
| 57 | 438635.70 | 6754196.54 | tracks (north south) |
| 58 | 438642.40 | 6754178.18 | tracks (north south) |
| 59 | 438643.65 | 6754162.12 | tracks (north south) |
| 60 | 438660.62 | 6754112.13 | tracks (north south) |
| 61 | 438661.91 | 6754107.37 | tracks (north south) |

| Coordinate No | Easting | Northing | Description |
|----------------------|----------------|-----------------|----------------------|
| 62 | 438675.74 | 6754063.35 | tracks (north south) |
| 63 | 438681.60 | 6754019.95 | tracks (north south) |
| 64 | 438676.49 | 6753959.20 | tracks (north south) |
| 65 | 438692.68 | 6753856.46 | tracks (north south) |
| 66 | 438702.80 | 6753815.74 | tracks (north south) |
| 67 | 438700.74 | 6753784.04 | tracks (north south) |
| 68 | 438708.88 | 6753733.00 | tracks (north south) |
| 69 | 438710.78 | 6753722.93 | tracks (north south) |
| 70 | 438717.68 | 6753686.18 | tracks (north south) |
| 71 | 438714.66 | 6753669.54 | tracks (north south) |
| 72 | 438714.00 | 6753665.33 | tracks (north south) |
| 73 | 438715.59 | 6753659.46 | tracks (north south) |
| 74 | 438716.60 | 6753652.49 | tracks (north south) |
| 75 | 438717.11 | 6753646.40 | tracks (north south) |
| 76 | 438718.10 | 6753643.63 | tracks (north south) |
| 77 | 438720.65 | 6753639.21 | tracks (north south) |
| 78 | 438727.20 | 6753612.32 | tracks (north south) |
| 79 | 438732.29 | 6753605.37 | tracks (north south) |
| 80 | 438746.43 | 6753591.93 | tracks (north south) |
| 81 | 438750.25 | 6753586.96 | tracks (north south) |
| 82 | 438749.21 | 6753580.75 | tracks (north south) |
| 83 | 438751.74 | 6753561.49 | tracks (north south) |
| 84 | 438753.13 | 6753557.06 | tracks (north south) |
| 85 | 438757.70 | 6753555.31 | tracks (north south) |
| 86 | 438764.24 | 6753549.14 | tracks (north south) |
| 87 | 438768.62 | 6753545.73 | tracks (north south) |
| 88 | 438770.20 | 6753541.97 | tracks (north south) |
| 89 | 438770.69 | 6753539.87 | tracks (north south) |
| 90 | 438782.96 | 6753497.61 | tracks (north south) |
| 91 | 438803.63 | 6753444.98 | tracks (north south) |
| 92 | 438807.37 | 6753436.02 | tracks (north south) |
| 93 | 438810.51 | 6753428.84 | tracks (north south) |
| 94 | 438814.66 | 6753415.90 | tracks (north south) |
| 95 | 438816.77 | 6753402.06 | tracks (north south) |
| 96 | 438818.87 | 6753390.88 | tracks (north south) |
| 97 | 438818.91 | 6753383.34 | tracks (north south) |
| 98 | 438814.06 | 6753382.87 | tracks (north south) |
| 99 | 438819.00 | 6753368.05 | tracks (north south) |
| 100 | 438824.95 | 6753361.77 | tracks (north south) |
| 101 | 438833.90 | 6753340.10 | tracks (north south) |
| 102 | 438835.21 | 6753332.24 | tracks (north south) |
| 103 | 438834.06 | 6753311.51 | tracks (north south) |
| 104 | 438834.87 | 6753303.98 | tracks (north south) |
| 105 | 438839.44 | 6753302.90 | tracks (north south) |

| Coordinate No | Easting | Northing | Description |
|---------------|-----------|------------|----------------------|
| 106 | 438846.95 | 6753279.45 | tracks (north south) |
| 107 | 438852.21 | 6753257.98 | tracks (north south) |
| 108 | 438857.11 | 6753248.37 | tracks (north south) |
| 109 | 438857.82 | 6753242.50 | tracks (north south) |
| 110 | 438856.14 | 6753231.63 | tracks (north south) |
| 111 | 438862.06 | 6753213.94 | tracks (north south) |
| 112 | 438877.49 | 6753196.62 | tracks (north south) |
| 113 | 438878.97 | 6753192.20 | tracks (north south) |
| 114 | 438878.49 | 6753189.98 | tracks (north south) |
| 115 | 438876.21 | 6753182.10 | tracks (north south) |
| 116 | 438869.03 | 6753181.51 | tracks (north south) |
| 117 | 438872.39 | 6753187.84 | tracks (north south) |
| 118 | 438873.24 | 6753192.17 | tracks (north south) |
| 119 | 438864.16 | 6753201.98 | tracks (north south) |
| 120 | 438859.56 | 6753207.83 | tracks (north south) |
| 121 | 438856.63 | 6753211.14 | tracks (north south) |
| 122 | 438853.87 | 6753219.43 | tracks (north south) |
| 123 | 438850.82 | 6753227.50 | tracks (north south) |
| 124 | 438850.12 | 6753231.27 | tracks (north south) |
| 125 | 438851.25 | 6753237.92 | tracks (north south) |
| 126 | 438851.98 | 6753245.35 | tracks (north south) |
| 127 | 438849.14 | 6753249.77 | tracks (north south) |
| 128 | 438846.58 | 6753256.62 | tracks (north south) |
| 129 | 438841.13 | 6753278.42 | tracks (north south) |
| 130 | 438835.39 | 6753298.56 | tracks (north south) |
| 131 | 438830.52 | 6753300.86 | tracks (north south) |
| 132 | 438828.33 | 6753312.15 | tracks (north south) |
| 133 | 438829.38 | 6753332.76 | tracks (north south) |
| 134 | 438828.87 | 6753337.64 | tracks (north south) |
| 135 | 438821.08 | 6753359.31 | tracks (north south) |
| 136 | 438815.34 | 6753361.83 | tracks (north south) |
| 137 | 438813.47 | 6753366.25 | tracks (north south) |
| 138 | 438808.25 | 6753381.29 | tracks (north south) |
| 139 | 438808.70 | 6753387.06 | tracks (north south) |
| 140 | 438812.95 | 6753390.18 | tracks (north south) |
| 141 | 438808.94 | 6753415.31 | tracks (north south) |
| 142 | 438805.19 | 6753425.60 | tracks (north south) |

Table 3: *Lepidosperma* location Coordinates (MGA Zone 50)

| Coordinate No | Easting | Northing |
|---------------|---------|----------|
| 1 | 438678 | 6754440 |
| 2 | 438688 | 6754432 |
| 3 | 438707 | 6754468 |

| Coordinate No | Easting | Northing |
|----------------------|----------------|-----------------|
| 4 | 438754 | 6754487 |
| 5 | 438819 | 6753654 |
| 6 | 438658 | 6754418 |
| 7 | 438659 | 6754442 |
| 8 | 438684 | 6754443 |
| 9 | 438702 | 6754026 |
| 10 | 438702 | 6754447 |
| 11 | 438714 | 6754438 |
| 12 | 438748 | 6754469 |
| 13 | 438881 | 6753680 |

Table 4: Malleefowl mound location Co-ordinates (MGA Zone 50)

| Coordinate | Easting | Northing |
|-------------------|----------------|-----------------|
| North | 438990.12 | 6752569.78 |
| South | 438977.82 | 6752896.27 |

All coordinates are in metres, listed in Map Grid of Australia Zone 50 (MGA Zone 50), datum of Geocentric Datum of Australia 1994 (GDA94).

Coordinates defining the Exploration Drilling E70/2227 Feral Prospect development envelopment as shown in Figure 2 are held by the Office of the EPA, dated 11 and 15 May 2015 (Document numbers 2015-0001142336 and 2015-0001142335).

Appendix 5

Summary of Submissions and Proponent's Response to Submissions

Provided on CD in hardcopies of this report
and on the EPA's website at www.epa.wa.gov.au