DEEP YELLOW LIMITED (ABN 97 006 391 948)

VIMY RESOURCES PTY LTD (ABN 56 120 178 949)

Mulga Rock Project

Annual Compliance Report – EPBC 2013/7083

Reporting Period: 10 September 2022 – 31 December 2023

March 2024

DOCUMENT VERSION CONTROL AND DECLARATION OF ACCURACY

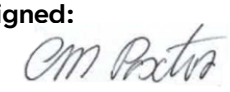
Document Version Control

Revision Number	Author	Reviewed	Date	Description
A	G. Clarke	C. Paxton		Draft document for review
0	G. Clarke	C. Paxton	18/03/24	Final document for submission to DCCEEW

Declaration of Accuracy

In making this declaration, I am aware that section 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed:



Full name (please print):

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Head of Environment and Sustainability

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Vimy Resources Pty Ltd (ABN 56 120 178 949)

Date: 18 March 2024

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1. INTRODUCTION

1.1 OWNERSHIP

The owner of the Mulga Rock Project (**MRP** or **Project**), and the registered holder of the tenements associated with the Project, is Narnoo Mining Pty Ltd (ABN 81 084 713 100) (**Narnoo**). Narnoo is a 100% owned subsidiary of Vimy Resources Pty Ltd[1] (ABN 56 120 178 949) (**Vimy**). Vimy is the Proponent for the Ministerial approval under the *Environmental Protection Act 1986* (WA) (**EP Act**), and the Commonwealth Ministerial approval under the *Environmental Protection and Biodiversity Act, 1999* (Cth) (**EPBC Act**). Vimy is a 100% owned subsidiary of Deep Yellow Limited (ABN 97 006 391 948) (**Deep Yellow** or **Company**). Deep Yellow is listed on the Australian Securities Exchange and is the ultimate holding company in the Deep Yellow group of companies, which includes Vimy and Narnoo.

1.2 LOCATION

Vimy is developing the MRP located approximately 290 km by road east-northeast of the regional mining city of Kalgoorlie–Boulder in the Shire of Menzies in Western Australia (Figure 1). The MRP lies on two granted Mining Leases (M39/1104 and M39/1105) and associated Miscellaneous Licences (Figure 2). The Project is located within Unallocated Crown Land on the western flank of the Great Victoria Desert. The nearest residential town is Laverton which is approximately 200 km to the northwest.

Other regional residential communities include Pinjin Station Homestead, located approximately 100 km to the west; Kanandah Station Homestead, about 150 km to the southeast; Tropicana Gold Mine approximately 110 km to the northeast, and Mt Margaret Community, around 337 km to the northwest.

1.3 PROJECT DESCRIPTION

The MRP is the largest advanced uranium project in Australia with an ore reserve of 22.7 Mt at ~845 ppm Uranium Oxide (U_3O_8) for 42.3 Mlb U_3O_8. The ore reserve is a subset of the mineral resource which stands at 71.2 Mt at 570 ppm U_3O_8 for a contained 90.1 Mlb U_3O_8 at a cut-off of 150 ppm U_3O_8. The Project is made up of the Mulga Rock East mining area, comprising the Ambassador and Princess deposits, and the Mulga Rock West mining area comprising the Shogun and Emperor deposits.

The two separate mining areas cover a total length of 30 km with the individual deposits ranging in length from 1 km to 8 km. The ore zones are up to 38 m thick at Mulga Rock East with an average thickness of 4.5 m, and up to 8 m in thickness at Mulga Rock West with an average of 2.4 m.

Uranium mineralisation is hosted by flat-lying, carbonaceous clastic sediments which are in turn overlain by weathered, oxidised sediments that range in thickness from 19 m to 62 m forming the waste overburden. Owing to the nature of the host rock and overburden, the majority of the mining will be done by free digging, with only a small requirement for drill and blast of cemented, silica-rich layers.

[1] Note in 2024 Vimy Resources Limited name changed to Vimy Resources Pty Ltd. The ACN 120 178 949 and ABN 56 120 178 949 of the company remain the same.

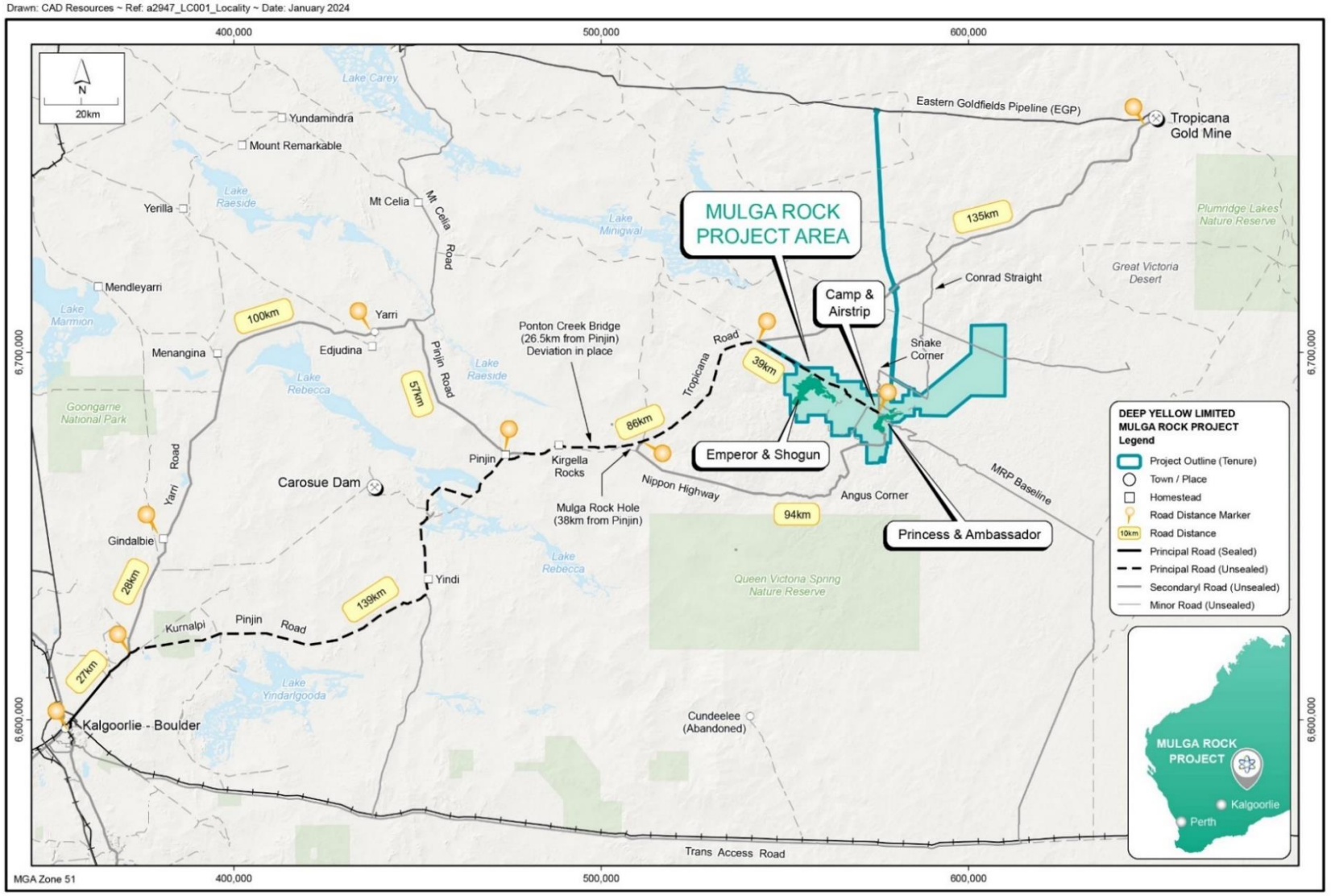

Figure 1: Mulga Rock Project Regional Location

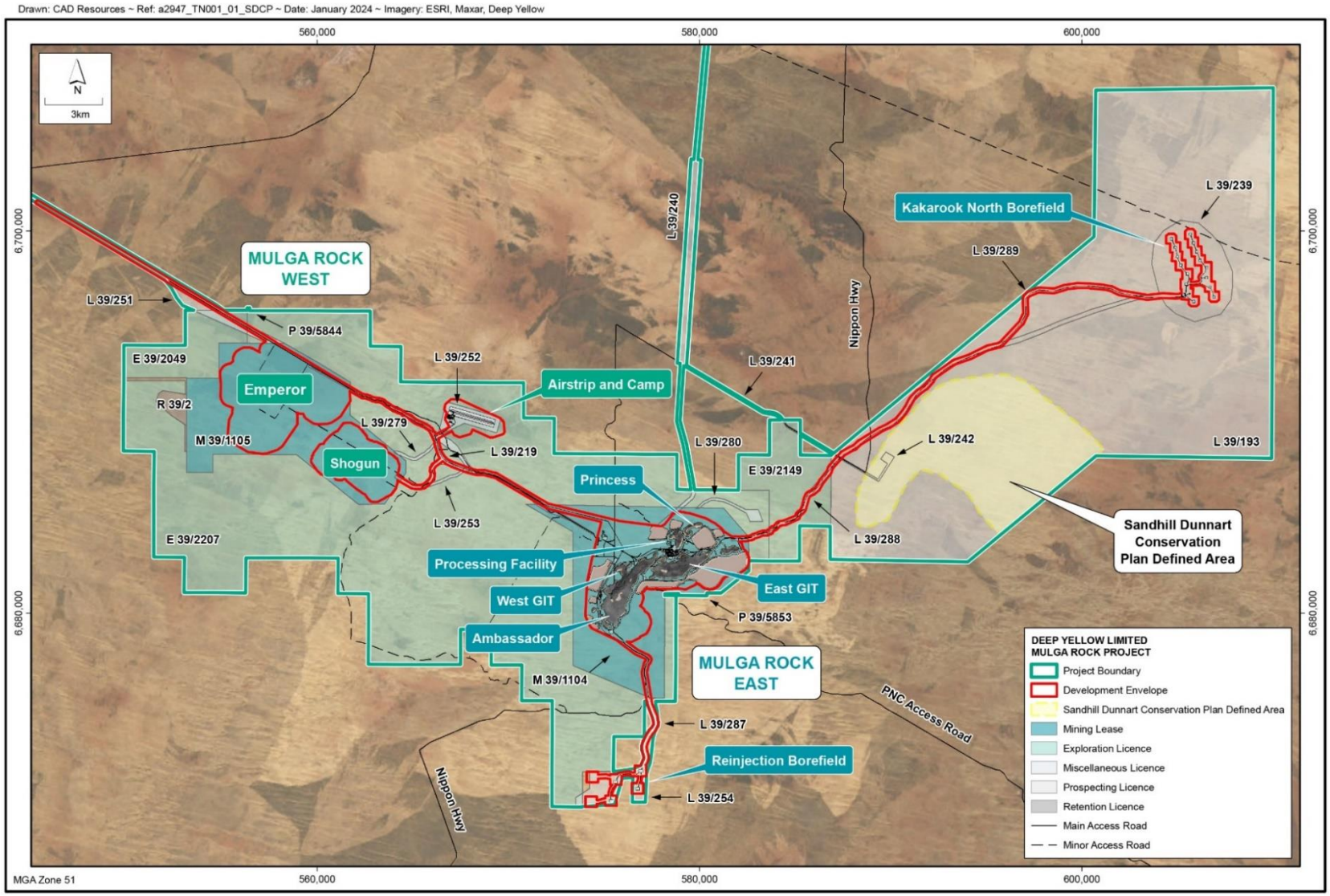

Figure 2: MRP Tenure

The deposits will be mined in large-scale open pits to produce an annualised peak capacity of 2,180 t/a (4.8 Mlbs) of Uranium Oxide. Due to the large lateral extent and horizontal geometry of the deposits, it is proposed to use 'strip' mining techniques similar to those used in mineral sands and coal mining. Strip mining commences with the excavation of an initial box cut to expose the ore, with the overburden placed in a surface landform. After mining the ore exposed by the first slot cut, the resulting pit void will be available to take the overburden from the next mining strip as mining moves along strike. In general, mining advances one strip at a time with previously mined areas progressively backfilled and rehabilitated. This mining method will allow in progressive rehabilitation resulting in a small disturbance footprint at any given time and significant savings in waste rock movement and rehabilitation costs.

1.4 APPROVALS

A Public Environmental Review (**PER**) for the MRP was submitted to the Western Australian (WA) Environmental Protection Authority (**EPA**) in June 2015. The assessment process for the PER was undertaken under a bilateral agreement between the State of Western Australia and the Commonwealth Government. The assessment found that no residual environmental impact would result from the Project and all temporary impacts could be effectively managed through environmental conditions.

The PER was endorsed by the EPA on 25 August 2016 and the State of Western Australia granted Ministerial Approval for the MRP under s.45(5)(b) of the EP Act on 16 December 2016, Ministerial Statement No. 1046 (**MS1046**). The Australian Commonwealth Government (then Department of the Environment and Energy and now known as the Department of Climate Change, Energy, the Environment and Water [**DCCEEW**]) granted final approval for the MRP under s.133 of the EPBC Act on 2 March 2017 (EPBC 2013/7083).

Vimy on the 17 September 2021 notified the Department of Agriculture, Water and Environment (**DAWE**), now known as the DCCEEW, in accordance with Condition 4 of Ministerial Environmental approval (EPBC 2013/7083) of the commencement of the action on the 10 September 2021. DAWE noted on 1 October 2021 that the action had commenced and advised under Condition 6 EPBC 2013/7083 the first Annual Compliance Report is due on the 10 December 2022.

Notification of substantial commencement, as defined in EPBC 2013/7083, was provided to the Department of Water Environment and Regulation (**DWER**) on the 25 November 2021 and further supporting information on the 15 December 2021, as required by condition 3-2 of MS1046. DWER acknowledged the substantial commencement in correspondence dated 16 December 2021: *"The Department of Water and Environmental Regulation has reviewed the information provided and considers the requirements of conditions 3-1 and 3-2 of MS 1046 have been met"*.

The Mining Proposal (Reg. ID: 92188) and Mine Closure Plan (ID 8648407) for Mulga Rock Project East was approved by the Department of Mines, Industry Resources and Safety (**DMIRS**) and now known as the Department of Energy (**DEMIRS**), on 29 September 2021. A Radiation Management Plan (RM-872-448196) was approved by DMIRS on 9 December 2021.

On 17 March 2022, an application for a works approval was submitted to the DWER under section 54 of the EP Act for the construction of two wastewater treatment plants and a putrescible landfill facility. DWERS's approval (Works Approval Number W6678/2022/1) was received on 14 December 2022 for a sewage facility consisting of one waste water treatment plants one at the accommodation village and the other at the mine support area, a Class II putrescible landfill site, and a hydrocarbon and chemical storage area.

1.5 PURPOSE AND CONTENT OF THE ANNUAL COMPLIANCE REPORT

The purpose of this Annual Compliance Report (**ACR**) is to demonstrate compliance with the nine conditions (EPBC 2013/7083) of the Commonwealth Ministerial approval under the EPBC Act.

The Company provided the Environmental and Compliance Team from the DCCEEW the first ACR within fifteen (15) months of the anniversary of the commencement of the action (Project start). In accordance with Condition 4 EPBC 2013/7083, the Department of Agriculture, Water and the Environment (**DAWE**), now known as DCCEEW, acknowledged in correspondence to the Company on 1 October 2021, that the Project had commenced on the 10 September 2021.

Condition 6 of the approval states that an ACR is required for each 12-month period following the date of commencement of the action, and that the reports must be published within 3 months of every 12-month anniversary of commencement. Documentary evidence providing the date of publication must be provided to the department at the same time the report is published. The first ACR covered the period from 10 September 2021 to 9 September 2022, and was published on the Company's website[2] on the 9 December 2022.

On the 5 December 2023 the DCCEEW issued a variation of conditions attached to the approval EPBC 2013/7083. The variation was the deletion and substitution of condition 6 (principally relating to the reporting period, so as to align with the state compliance reporting period) and adding more definitions. The DCCEEW letter and variation notice is available on Deep Yellow's website[2].

The reporting period covered in this ACR is from 10 September 2022 to 31 December 2023.

This ACR is prepared in accordance with the ACR Guidelines (DCCEEW, 2023).

This report includes:

- Section 1 – Introduction, including sub-sections on ownership, location, Project description, approvals, status of operations and purpose and content of the ACR
- Section 2 – EPBC Approval Conditions and Compliance, including sub-sections on compliance and the Sandhill Dunnart Conservation Plan's (**SDCP**) implementation, monitoring and review
- Section 3 – Western Australia Ministerial Statement Conditions
- Section 4 – New Environmental Risks
- Section 5 – Conclusions
- Section 6 – Abbreviations and Units of Measure
- Section 7 – References
- Appendices.

[2] https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/

1.6 STATUS OF OPERATIONS

Following the merger with Vimy in August 2022, Deep Yellow identified the possibility for significant project value uplift and is currently undertaking further evaluation into the mineralised material in order to optimise the plant design, improve project viability, extend life of mine and increase resource utilisation. In this context the processing operation previously proposed by Vimy is being reviewed by the Deep Yellow technical team, who have extensive experience in uranium and critical minerals processing operations. The MRP remains within the existing approvals and development footprint. Therefore, project progress since the merger has focused on revising the Definitive Feasibility Study to encompass the evaluation prior to further development at the site.

The status of the key operational limits stated in the PER and MS1046 are provided in Table 1.

Table 1: MRP Key Characteristics Status

Element	Description	Status / Comment*
Disturbance Footprint	The Development Envelope for the Project covers an area of 9,998 ha. Within the Development Envelope, it is proposed to disturb up to 3,787 ha (Disturbance Footprint).	As at the end of the reporting period the disturbance footprint is approximately 550 ha. Disturbance tracked and recorded via Ground Disturbance Activity Permit (GDAP) process and GIS system.
Open cut mine pits	Clearing of no more than 2,374 ha within the 9,998 ha Development Envelope.	Open Cut Mine Pit area disturbance within the Development Envelope is approximately 193 ha. Disturbance tracked and recorded via GDAP process and GIS system.
Associated Infrastructure	Clearing of no more than 1,307 ha within the Development Envelope.	Disturbance for roads, pipelines, topsoil stockpiles, exploration drilling within the Development Envelope is approximately 357 ha. Disturbance tracked and recorded via GDAP process and GIS system.
Backfilling of mine pits with waste as part of progressive rehabilitation	Backfilling of pits to a height of at least 10 m above the water table.	Not required at this stage of the Project.
Above-ground TSF	Clearing of no more than 106 ha within the Development Envelope.	No clearing undertaken for the TSF. Not under construction, and not currently proposed to be constructed in the Mining Proposal submitted to WA Department of Mines, Industry Regulation and Safety (**DMIRS**).
Tailings disposal	Disposal of no more than 3 Mt/a of beneficiation rejects and no more than 2 Mt/a of post-leaching tailings material.	Not required at this stage of the Project.

Element	Description	Status / Comment*
Water abstraction	Abstraction of no more than 3 GL/a from the Kakarook North Borefield.	The Kakarook North Borefield, has not been developed, and is not required at this stage of the Project. It still requires a water abstraction licence and has had no water abstraction to date. South of the Kakarook North Borefield there are two water extraction bores in-place. Both bores come under a licence to take water GWL203514(3), with an annual entitlement of 135,600 kL, of which during the last licencing period (1 November 2022 to 31 October 2023), 1,258 kL was extracted.
Mine dewatering	Dewatering of no more than 2.5 GL/a.	Not required at this stage of the Project.
Water reinjection	Reinjection of no more than 1.5 GL/a.	Not required at this stage of the Project.

Numbers reported are taken from the sites WA Mine Rehabilitation Fund calculation and 2022-2023 exploration program disturbance.

The activities undertaken for the MRP during the reporting period have included:

- Monitoring of Sandhill Dunnarts, feral animals, soils, depositional dust, groundwater quality and climate;
- Planning for the establishment of a new Class II Putrescible Waste Landfill, under the Western Australian Work Approval process (Works Approval Number W6678/2022/1). A hydrogeology assessment and report for the landfill construction site was completed on 26 July 2023 (Deep Yellow 2023). The proposed landfill location meets the requirements of the DWER's Works Approval W6678/2022/1;
- Drilling programs commenced in November 2022 focussing on the Ambassador and Princess deposits, for the purpose of geo-metallurgical testing, infill and further resource definition:
    - 63 aircore holes to support a geo-metallurgical study (completed in 2022);
    - 233 aircore holes of close-space drilling to establish grade variability and additional material for metallurgical analysis; and
    - 423 aircore holes of infill drilling to upgrade resource classification for uranium and critical minerals; and
- Rehabilitation of the areas disturbed by the drilling program described above commenced with first campaign of 63 holes completed at the end of June 2023. It is planned that the areas disturbed from the remaining 656 holes will be rehabilitated in 2024.

2. EPBC APPROVAL CONDITIONS AND COMPLIANCE

2.1 CONDITIONS

The approval from the Commonwealth Minister for the Environment and Energy in March 2017 for the MRP (EPBC 2013/7083) contained nine conditions attached to the approval to be met. The Company received correspondence from DCCEEW on 5 December 2023 varying condition 6 of EPBC 2013/7083 (Table 2).

Table 2: EPBC 2013/7083 Condition 6 Change

Condition 6 – Pre-5 December	Condition 6 – Post-5 December 2023
Within three (3) months of every twelve (12) month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of the Plan. Documentary evidence providing proof of the date of publication must be provided to the Department at the same time as the compliance report is published. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published.	The person taking the action must prepare a compliance report for each 12-month period following 31 December of any given year, or as otherwise agreed to in writing by the Minister. Each compliance report must be consistent with the Annual Compliance Report Guidelines, Commonwealth of Australia 2014 and include: a) Accurate and complete details of compliance and any non-compliance with the conditions and the plans, and any incidents. b) One or more shapefile showing all clearing of protected matters, and/or their habitat, undertaken within the 12-month period at the end of which that compliance report is prepared. c) A schedule of all plans in existence in relation to these conditions and accurate and complete details of how each plan is being implemented. The person taking the action must: d) Publish each compliance report on the website within 60 business days following the end of the 12-month period for which that compliance report is required. e) Notify the department electronically, within 5 business days of the date of publication that a compliance report has been published on the website. f) Provide the weblink for the compliance report in the notification to the department. g) Keep all published compliance reports required by these conditions on the website until the expiry date of this approval. h) Exclude or redact sensitive ecological data from compliance reports published on the website or otherwise provided to a member of the public. i) If sensitive ecological data is excluded or redacted from the published version, submit the full compliance report to the department within 5 business days of its publication on the website and notify the department in writing what exclusions and redactions have been made in the version published on the website. Note: Compliance reports may be published on the department's website. Note: Compliance reports may be published on the department's website.

The substituted EPBC 2013/7083 condition 6 now aligns the ACR with the WA statutory reporting timeframe which is based on a calendar year. As the previous reporting period for the ACR was from September to September the reporting period for this ACR is for the longer 15 month period 10 September 2022 – 31 December 2023 and all future reports will be for a January to December reporting period.

The declared compliance status of each condition, for the reporting period is presented in Table 3 – EPBC 2013/7083 Approval Conditions Compliance Table. During this reporting period, the Company was compliant with all conditions attached to the EPBC 2013/7083 approval.

Table 3: EPBC 2013/7083 Approval Conditions Compliance

Condition Number	Condition	Compliance Status	Evidence / Comments
1.	To manage impacts of the action on protected matters, the person taking the action must implement the conditions of the WA approval.	Compliant	Refer to the compliance reporting submissions to the WA Department of Water and Environmental Regulation (**DWER**): • Compliance Assessment Report (**CAR**) dated 16 March 2023 for the reporting period 16 December 2021 to 15 December 2022. • CAR dated 16 March 2024 for the reporting period 16 December 2022 to 15 December 2023. • The CARs include a Statement of Compliance and an MRP Audit Table addressing compliance to MS1046 requirements. • The CARs are published on Deep Yellow's website: (https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/). Protected matters is defined in EPBC 2013/7083 as: • matters protected under Part 3 of the EPBC Act for which this approval has effect, which are the Ooldea Guinea-Flower (*Hibbertia crispula*), the Sandhill Dunnart (*Sminthopsis psammophila*) and the environment (as defined by section 528 of the EPBC Act). Targeted surveys of *Hibbertia crispula* have been undertaken within and around MRP with over 14,000 plants recorded. The *Hibbertia crispula* in the area have been included in the MRP GIS system. A Ground Disturbance Activity Permit (GDAP) is required prior to land clearance / disturbance with protection of this species undertaken by avoiding or minimising land disturbance activities.
2.	To offset the residual significant impact to the Sandhill Dunnart (*Sminthopsis psammophila*), the person taking the action must prepare a Sandhill Dunnart Conservation Plan (the Plan) to reduce the threat to the Sandhill Dunnart posed by feral animals within the defined area. The Plan must be prepared by a suitably qualified expert and in consultation with the WA Department of Parks and Wildlife. The Plan must:	Compliant	The SDCP was developed by suitably qualified fauna experts and in consultation with the now WA Department of Biodiversity, Conservation and Attractions (**DBCA**). The draft Plan was prepared in consultation with the DCCEEW and DBCA during the 2022 reporting period and was subsequently submitted to the DCCEEW for review and approval on 10 November 2022. Section 4 (Conditions of Approval) of the SDCP, provides details of the suitably qualified experts. The SDCP was approved by the DCCEEW on the 31 January 2023 (correspondence attached in ACR 2023).
2. a).	define the area over which the Plan applies (the defined area). The defined area must:		
2. a). i.	be located outside of the MRUP Development Envelope, but within the Project boundary	Compliant	Requirement included within the SDCP: Table 2 - EPBC Approval Condition Requirements; Section 9 – Proposed Defined Area; and Figure 3.

Condition Number	Condition	Compliance Status	Evidence / Comments
2. a). ii.	contain at least 6,000 ha of suitable habitat for the Sandhill Dunnart	Compliant	Requirement included within the SDCP: Table 2 - EPBC Approval Condition Requirements; Section 9 – Proposed Defined Area; and Figure 3.
2. a). iii.	contain a local population of Sandhill Dunnart.	Compliant	Requirement included within the SDCP: Table 2 - EPBC Approval Condition Requirements and Section 9 – Proposed Defined Area. Evidence of Sandhill Dunnart presence in the Defined Area is provided in GHD Technical Memorandum and letter reports dated 3 March 2023, 4 December 2023 and 29 January 2024 (Appendix 2, Appendix 3 and Appendix 4 respectively) and see summary in Section 3.2. The DBCA were emailed the GHD Technical Memorandum (GHD, 2023) on 14 March 2023 and acknowledged receipt on the same day. The memorandum was also included in the DWER Compliance Assessment Report (CAR) 16 March 2023 for the reporting period 16 December 2021 to 15 December 2022. This report is published on Deep Yellow's website (https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/).
2. b).	detail objectives and measurable performance indicators for implementing the Plan and managing threats to the Sandhill Dunnart within the defined area relating to feral animals.	Compliant	Requirement included within the SDCP: Table 2 - EPBC Approval Condition Requirements; and Section 5.4.3 Potential threats to the Sandhill Dunnart's survival, Sections 6 - Risk Assessment, Section 11 - Conservation Outcomes and Performance Indicators and Section 12 - Management Measures.
2. c).	detail the methodology that will be implemented for determining the baseline condition of the defined area including estimated baseline local population of Sandhill Dunnart and feral animals.	Compliant	Requirement included within the SDCP: Table 2 - EPBC Approval Condition Requirements, and Section 15 - Monitoring.
2. d).	detail management actions that will be implemented to achieve the objectives of the Plan.	Compliant	Requirement included within the SDCP: Table 2 - EPBC Approval Condition Requirements, and Section 12 - Management Measures and Section 13 - Contingency Responses and Corrective Actions.
2. e).	identify and manage risks associated with achieving the Plan's objectives.	Compliant	Requirement included within the SDCP: Table 2 - EPBC Approval Condition Requirements and Section 6 - Risk Assessment.
2. f).	detail contingency responses and corrective actions that will be implemented should performance indicators not be achieved. This includes trigger values for implementing contingency responses and corrective actions, and the timeframes in which corrective actions will be implemented.	Compliant	Requirement included within the SDCP: Table 2 - EPBC Approval Condition Requirements and Section 6 - Risk Assessment and 13 - Contingency Responses and Corrective Actions.
2. g).	detail a monitoring program, including a monitoring methodology, to review effectiveness of management actions and to support an adaptive management approach to implementation of the Plan.	Compliant	Requirement included within the SDCP: Table 2 - EPBC Approval Condition Requirements and Section 15 - Monitoring.

Condition Number	Condition	Compliance Status	Evidence / Comments
2. h).	provide the timing and frequency of management actions, monitoring and reporting programs and the person/s responsible for implementing the actions and programs.	Compliant	Requirement included within the SDCP: Table 2 - EPBC Approval Condition Requirements, Section 6 - Risk Assessment, Section 11 -Conservation Outcomes and Performance Indicators, Section 15 - Monitoring, Section 16 - Reporting and Section 17 - Roles and Responsibilities.
3.	The person taking the action must not commence construction of the airstrip unless the Plan has been approved in writing by the Minister. If the Minister approves the Plan, then the approved plan must be implemented for the life of the approval.	Compliant	Nothing further is required for this condition as it is fully satisfied as complete. The SDCP was approved on 31 January 2023, prior to commencing construction of the airstrip. The airstrip at the time of this report has not been constructed.
4.	Within ten (10) days after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.	Compliant	Nothing further is required for this condition as it is fully satisfied as complete. The Project substantially commenced 10 September 2021. DAWE (now DCCEEW), acknowledged in correspondence to the Company on 1 October 2021, that the Project had commenced on the 10 September 2021. (Evidence of the correspondence was provided in the 2022 ACR).
5.	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans and strategies required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Compliant	Internal filing systems are in-place for maintaining relevant records, such as: • correspondence; • reports; • monitoring data; and • legal obligations and commitment register.
6.	The person taking the action must prepare a compliance report for each 12-month period following 31 December of any given year, or as otherwise agreed to in writing by the Minister. Each compliance report must be consistent with the Annual Compliance Report Guidelines, Commonwealth of Australia 2014 and include:	Compliant	The first ACR 2022 (reporting period 10 September 2021 to 9 September 2022) was submitted 9 December 2022. The ACR 2022 and ACR 2023 in Section 3.1 provides an update of the SDCP's approval and review status. ACR 2023 Section 3.2 provides a summary of the SDCP implementation. The ACR 2022 was published on Deep Yellow's website on 9 December 2022. The Company received correspondence from DCCEEW on 5 December 2023 varying condition 6 of EPBC 2013/7083 (Table 2). One of the variations in EPBC 2013/7083 condition 6 aligns the ACR with the WA statutory reporting timeframe. The reporting period for this ACR is 10 September 2022 – 31 December 2023, a 15 month period.

Condition Number	Condition	Compliance Status	Evidence / Comments
6. a).	Accurate and complete details of compliance and any non-compliance with the conditions and the plans, and any incidents.	Compliant	Details of compliance are provided. There were no non-compliances with the conditions and plans, and no incidents.
6. b).	One or more shapefile showing all clearing of protected matters, and/or their habitat, undertaken within the 12-month period at the end of which that compliance report is prepared.	Compliant	Shapefile submitted separately to the DCCEEW.
6. c).	A schedule of all plans in existence in relation to these conditions and accurate and complete details of how each plan is being implemented.		Section 2.2.1 Implementation and Table 4 Conservation Outcomes Implementation Schedule – Status, provide details of the SDCP implementation.
	The person taking the action must:		
6. d).	Publish each compliance report on the website within 60 business days following the end of the 12-month period for which that compliance report is required.	Compliant	Previous ACR was in accordance with the pre-substituted condition 6 (Table 2), i.e. *"Within three (3) months of every twelve (12) month anniversary of the commencement of the action ..."*, being posted on the Company website on 9 December 2022.
6. e).	Notify the department electronically, within 5 business days of the date of publication that a compliance report has been published on the website.	Compliant	The DCCEEW were emailed on the 9 December 2022 and responded with acknowledgement of the ACR being published on Deep Yellow's website on 12 December 2022.
6. f).	Provide the weblink for the compliance report in the notification to the department.	Compliant	The weblink for the ACR on Deep Yellow's website (https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/) was provided in the notification to the DCCEEW.
6. g).	Keep all published compliance reports required by these conditions on the website until the expiry date of this approval.	Compliant	All published ACRs and the SDCP are included on Deep Yellow's website (https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/).
6. h).	Exclude or redact sensitive ecological data from compliance reports published on the website or otherwise provided to a member of the public.	Not Applicable	
6. i).	If sensitive ecological data is excluded or redacted from the published version, submit the full compliance report to the department within 5 business days of its publication on the website and notify the department in writing what exclusions and redactions have been made in the version published on the website. Note: Compliance reports may be published on the department's website.	Not Applicable	

Condition Number	Condition	Compliance Status	Evidence / Comments
7.	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The person taking the action must not commence the audit until the independent auditor and audit criteria have been approved by the Minister in writing. The audit report must address the criteria to the satisfaction of the Minister.	Not Applicable	No direction received from the Minister; therefore, no independent audit of compliance was required.
8.	If, at any time after five (5) years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister.	Compliant	Nothing further is required for this condition as it is fully satisfied as complete. The Project substantially commenced 10 September 2021. In accordance with condition 4 of the EPBC Act approval EPBC 2013/7083, the DAWE (now DCCEEW), acknowledged in correspondence to the Company on 1 October 2021, that the Project had commenced on the 10 September 2021. (Evidence of the correspondence was provided in the 2022 ACR).
9.	Unless otherwise agreed to in writing by the Minister, the person taking the action must publish the Plan referred to in these conditions of approval on its website within one (1) month of being approved by the Minister.	Compliant	The SDCP was submitted to the DCCEEW for review and approval on 10 November 2022. The SDCP was approved by the DCCEEW on the 31 January 2023 (correspondence was attached in ACR 2023). The SDCP and approval were posted on the Company Website 1 February 2023. Correspondence (Email) was sent to the DCCEEW on 1 February 2023 advising that in accordance with Condition 9 the SDCP and approval letter can be found on Deep Yellow's website (https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/).

2.2 SANDHILL DUNNART CONSERVATION PLAN

EPBC 2013/7083 Condition 2 requires the preparation of a Sandhill Dunnart Conservation Plan (SDCP or the Plan) to reduce the threat to the Sandhill Dunnart posed by feral animals within the Defined Area.

The Plan addresses EPBC 2013/7083 Condition 2 and was submitted to DCCEEW for review and approval on 16 November 2022. Condition 3 states that the Plan must be approved by the Minister prior to the commencement of the construction of the airstrip. The construction of the MRP airstrip has not yet commenced. The Plan was approved by DCCEEW on the 31 January 2023 (Appendix 1), and both the Plan and approval are posted on the Company's website[3].

A review of the SDCP is currently being undertaken by a suitably qualified fauna expert at GHD consultancy. As stated in the Plan's Section 19, Table 19 – Review and Audit Schedule for the Sandhill Dunnart (**SHD**) Conservation Plan, an initial review would be undertaken one year following approval of the Plan (i.e. 31 January 2024). The reviewed Plan will replace the current Plan on the Company's website once approved by the DCCEEW.

2.2.1 Implementation

EPBC 2013/7083 Condition 6, requires the ACR to include information on the implementation of the SDCP. Table 4 below is taken from the SDCP (Conservation Outcomes Implementation Schedule), and a column added to provide the status of implementation for each conservation objective / outcome.

2.2.2 Monitoring

Monitoring results of the presence of SHD and feral animals, after the implementation of the camera trapping program, is provided in GHD (2023), GHD (2023a) and GHD (2024) Technical Memorandum and letter reports (Appendix 2 and Appendix 3 and Appendix 4 respectively).

The two-year baseline commenced in November 2021 and concluded in November 2023. GHD's final baseline report (SHD Defined Area – Species Image Analysis Baseline Assessment, GHD 2024), although authored in January 2024, has been included in Appendix 4, as the study finished during the reporting period. The SDCP stated that this report was to be provided by 30 May 2024.

The SDCP is being reviewed by GHD's senior zoologist and Deep Yellow for issue to DCCEEW in January 2024 for review and approval. The revision will use the baseline study data to propose the way forward in monitoring and management of SHD and feral animals. After two years of data the aim will be to establish thresholds and triggers that potentially induce management actions represented within the SDCP.

[3] https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/

Table 4: Conservation Outcomes Implementation Schedule – Status

Conservation Objective / Outcome	Performance Target	Management Measure(s)	Where	When	Related Monitoring Activity	Status / Evidence / Comments
To understand the threat to the SHD posed by feral animals within the Defined Area	Agreement of monitoring methodology with the regulator	Use developed methodology for monitoring quadrats established within the Defined Area	Within the Defined Area	November 2021 – November 2023	Monitoring Plan (GHD 2021), refer to Section 19	Target of monitoring methodology agreed with regulators during the SDCP review period and management measure of monitoring implemented.
	Develop an estimated baseline of the SHD population within the Defined Area	Installation of 25 monitoring quadrats (2 cameras per site) within the Defined Area	Within the Defined Area		Monitoring data collected and analysed and incorporated into the Monitoring Plan (GHD 2021)	Cameras installed and 2 years baseline study of SHD and feral animals was completed in November 2023. SHD Defined Area – Species Image Analysis Baseline Assessment, GHD 2024), in Appendix 4. Currently the SDCP and Monitoring Plan is being reviewed for issue to DCCEEW on 31 January 2024.
	Develop an estimated baseline of feral animal population within the Defined Area	Installation of 25 monitoring quadrats (2 cameras per site) within the Defined Area				
To control the threat of feral animals within the Defined Area	Reduction of feral animal numbers below estimated baseline within the Defined Area	Install 2x Felixer within the Defined Area	Within the Defined Area	Q1 2024	Record of Felixer installation and locations (incorporated within the Monitoring Plan (GHD 2021))	Currently the SDCP and Monitoring Plan is being reviewed for issue to DCCEEW on 31 January 2024. The review of the Monitoring Plan will include any changes required as a result of SHD and feral animal data analysis. From the data collected the Monitoring Plan will also include recommendation on Felixer use and locations. The number of units available and timing for installation for trialling the Felixer may not occur within Q1 2024, as it will be dependent on rental availability and the baseline data results and their incorporation into the revised SDCP, which will determine the way forward in monitoring and management. Review of Felixer data for incorporation into the Monitoring Plan may be delayed until after Q1 2024, as it is based on when the Felixers are installed (within Q1 or later) and requirements within the SDCP currently being reviewed for submission and approval by DCCEEW.
					Review of Felixer data (data incorporated within the Monitoring Plan (GHD 2021))	

Conservation Objective / Outcome	Performance Target	Management Measure(s)	Where	When	Related Monitoring Activity	Status / Evidence / Comments
		If foxes are sighted through camera trapping, deploy targeted baiting program (1080)	Known fox active areas within the Defined Area	If sighted in baseline monitoring period deploy Q1 2024	Records of baiting activities (quantities / locations) if detected within the Defined Area (incorporated into the Monitoring Plan)	Not yet required and prior to implementing the required permits / licences, resources and training will be undertaken. Details of the baiting program will be included in future revision of the Monitoring Plan.
		If rabbits are sighted through camera trapping, deploy targeted baiting program (1080)	Warrens within the Defined Area	If sighted in baseline monitoring period deploy Q1 2024		
		If camels, donkeys, goats, cattle or sheep are sighted through camera trapping investigate aerial shooting with ranger programs in collaboration with the Great Victoria Desert Biodiversity Trust (GVDBT)	Within the Defined Area	If sighted and population reside in the area	Records of sightings and aerial shoot success	Not required, as no populations of fauna of these types reside in the Defined Area.
To expand the knowledge of the distribution and status of the SHD within the Defined Area	Develop an estimated baseline of the SHD population within the Defined Area	Installation of 25 monitoring quadrats (2 cameras per site) within the Defined Area	Within the Defined Area	November 2021 – November 2023 (commenced)	Monitoring of efficacy of data collection techniques	Cameras installed and 2 year baseline study of SHD and feral animals was completed in November 2023 (attached in Appendix 4). Currently the SDCP and Monitoring Plan is being reviewed for issue to DCCEEW on 31 January 2024.
	Finalise Monitoring Plan	Installation of 25 monitoring quadrats (2 cameras per site) within the Defined Area				

Conservation Objective / Outcome	Performance Target	Management Measure(s)	Where	When	Related Monitoring Activity	Status / Evidence / Comments
		Provide Defined Area SHD population data to relevant government bodies		By May 2024		Evidence of Sandhill Dunnart presence in the Defined Area is provided in GHD Technical Memorandum and letter reports dated 3 March 2023, 4 December 2023 and 29 January 2024 (Appendix 2, Appendix 3 and Appendix 4 respectively) and refer to Section 3.2. The DBCA were emailed the GHD Technical Memorandum (GHD, 2023) on 14 March 2023 and who acknowledged receiving on the same day. The memorandum was also included in the DWER Compliance Assessment Report (CAR) 16 March 2023 for the reporting period 16 December 2021 to 15 December 2022. This report is published on Deep Yellow's website (https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/). GHD letter report (Sandhill Dunnart Defined Area – Species Image Analysis Baseline Assessment, GHD 2024), although due in May 2024 is provided in Appendix 4. This report includes an analysis of all baseline data for the period November 2021 to November 2023.
	Explore and research alternative monitoring techniques where available	Explore and research alternative monitoring techniques where available	Desktop searches for actions viable within the Defined Area	By May 2024	To compliment the Monitoring Plan (GHD 2021)	Deep Yellow's consultants are aware of this Management Measure and will advise if there are any alternative monitoring techniques.

The GHD reports are summarised below:

November 2021 to August 2022 (GHD, 2023 – Appendix 2):

From the images analysed from the MRP between late November 2021 and mid-August 2022, (a period of approximately 260 days), the Sandhill Dunnart (Sminthopsis psammophila) was identified on 42 remote camera devices across 23 sites providing 375 discreet events. Only two sites of the 25 did not record Sandhill Dunnart. This infers there is a good representative population of Sandhill Dunnart persisting within the Conservation area.

Trap efficiency varied from 0 to 10.46% over the nine month period. High events indicated resident specimen in the area. Peak activity periods of the Sandhill Dunnart across most sites were approximately from April through to July. Dispersion of young and other fluctuations in population dynamics such as vagrant movement of males in the population are likely to account for these peak movement periods.

Predatory feral species, consisting of cats and red foxes were recorded on 8 devices across 8 sites providing 8 discreet events. All of these events were singular inferring the presence of invasive predatory species is low within the conservation period.

November 2021 to May 2023 (GHD, 2023a – Appendix 3):

The image analysis from the Defined Area between late-November 2021 and mid-May 2023, (a period of approximately 500 days), the Sandhill Dunnart was identified on 48 camera devices across 24 sites providing 939 discreet events. Only one of the 25 sites did not record Sandhill Dunnart (Site 4, A or B cameras). This infers there is a good representative population of Sandhill Dunnart persisting within the Defined Area.

Peak activity periods of the Sandhill Dunnart across most sites were approximately from March/April through to June and again from August/September. These peaks correlate to dispersal of young and other fluctuations in population dynamics such as vagrant movement of males in the population are likely to account for these peak movement periods. High events indicated resident specimens in the area.

Predatory feral species, consisting of cats and red foxes were recorded on 22 camera devices across 21 sites providing 31 discreet events. Other feral species, consisting of camels and rabbits were recorded on 5 camera devices across 5 sites providing 10 discrete events. All these events were singular inferring the presence of invasive predatory species is low within the Defined Area.

November 2021 to November 2023 (GHD, 2024 – Appendix 4):

The baseline dataset was processed to extract the total number of sandhill dunnart 'events' per day at each camera device. For this analysis, an event for a camera was classified as at least one positive sandhill dunnart ID during a day. For example, if one or multiple positive IDs of SHDs were made at a camera device during a day, this was classified as a single event.

The event data was arranged into a daily timeseries, and a 90-day (~3 month) backwards-looking moving average was calculated. The 5th percentile of the 90-day moving average has been adopted as a trigger indicating low SHD activity.

The 90-day moving average data ranges from a minimum of 0.6 events per day (across all 50 sites) to a maximum of 6.1 events per day, with a median of 2.2 events per day. The 5th percentile of the baseline data is a 90-day average of 0.9 events per day. Future monitoring data will need to be processed in the same manner to compare future data to the two-year baseline. Any future data indicating prolonged durations of 90-day moving averages of less than 0.9 events will indicate a low level of sandhill dunnart presence within the monitoring areas that is statistically rare when compared to the baseline data and should therefore be further investigated to determine possible causes for the low activity.

As the event data is highly seasonal, with events generally peaking though out winter and reducing during summer, expansion of this approach could be applied in future to develop separate thresholds for summer and winter if required when more camera imagery is available. Raw data for feral species would require examination and determine if number present exceed those presented (i.e. fox one event every two month or cats one event per month).

Image analysis for the Defined Area has been undertaken from the period November 2021 to November 2023. The SHD was identified on 48 camera devices across 24 sites providing 1,637 discreet events. Only one of the 25 sites did not record SHD (Site 4, A and B cameras) for the two-year period. There are no obvious reasons for absence of SHD from Site 4, with this locality having a similar habitat score to other areas where the species has been consistently recorded. Other species presence has been recorded.

This presence data infers there is a good representative population of SHD persisting within the Defined Area. SHD events were recorded in every month and consisted of one to 228 events, representing a high degree of fluctuation.

Figure 3 shows the peak activity periods of the SHD from approximately March/April through to June and again from August/September. These peaks correlate to life events for SHD such as dispersal of young and males traversing the area during the mating period. Other high activity events may also indicate residents in the area. A distinct low period in activity is during October to December and is likely to be representative of the female juveniles depositing period where young are too big to be carried in the pouch and transitioned into a nest reducing the female undertaking long distances of activity. It is also the period when the male population is at its smallest, before the dramatic influx of disbursing juveniles.

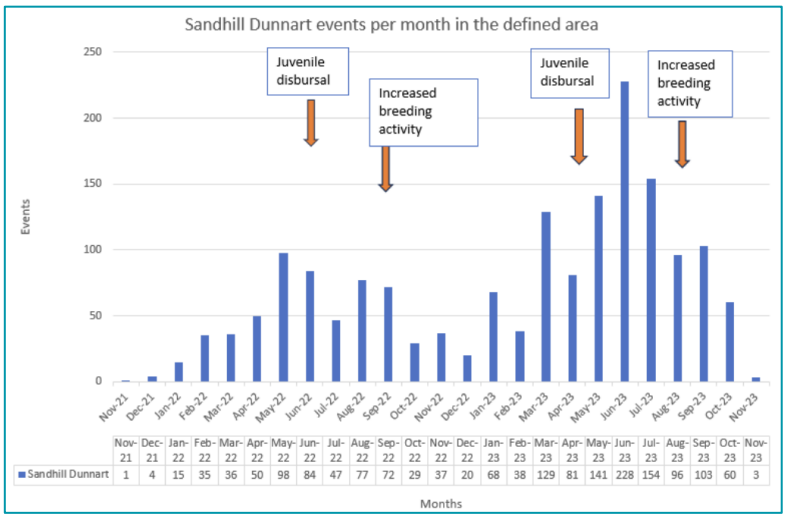

Figure 3: Raw Data Events Per Month Demonstrating Key Activity Periods

Given the low number of feral species recorded over the two-year monitoring period, statistical analysis was not undertaken.

Foxes were recorded on six camera devices over four sites over a two-year period represented 14 discreet events. This data represents limited fox activity at an average of one event every two months. It is unlikely based on these numbers that any animal is sedentary and likely represent individuals moving through the landscape. Twelve of the 14 discreet events were recorded at Sites 11 and 12. These two sites are located adjacent to a clay plan and gypsum rise just outside of the Defined Area. These areas are typical habitat rabbits prefer to dig (as the soil has greater structure) and is also the two locations where rabbits were recorded on camera. Therefore, it is reasonable to assume the foxes are utilising the clay pan/gypsum area to hunt rabbits and additionally traversing through the surrounding habitat.

Cats were recorded on 18 camera devices across 14 sites providing 24 discreet events over a two-year period. This data represents an average of one event every month over the two-year period. No specific sites had greater activity than others over the two-year period.

Other feral species, consisting of camels and rabbits were recorded on five camera devices across five sites providing 10 discrete events. Camel events were singular inferring irregular visitors to the Defined Area while the rabbits were restricted to Sites 11 and 12.

There is no clear correlation between temporal observations of ferals species and SHD prevalence or SHD juvenile dispersal.

With the current data showing feral species persisting at low levels a targeted approach could be adopted for the fox and rabbit. Should management action be required, Sites 11 and 12 area (including the claypan/gypsum area) should be prioritised for fox and rabbit targeted baiting.

If a Felixer is acquired, then one unit could be utilised and moved throughout the Defined Area rather than targeting specific sites. Alternatively the baiting for cats should focus initially on camera locations where they have been.

2.2.3 SDCP Review

The SDCP currently under review will utilise the baseline study data to propose the way forward in monitoring and management.

Management measures, such as baiting feral animals, is included in the implementation schedule to commence in Q1 2024. However, it should be noted that due to the limited number of units available for rent and timing for installation for trialling the Felixer, that it may not occur within Q1 2024. Review of Felixer data for incorporation into the Monitoring Plan may be delayed until after Q1 2024, as it is based on when and if the Felixers are installed (within Q1 or later) and having sufficient dataset. The current review of the SDCP being undertaken may also make change to the management measures previously proposed.

3. WESTERN AUSTRALIA MINISTERIAL STATEMENT CONDITIONS

EPBC 2013/7083 Condition 1 requires impacts to be managed through the implementation of the WA approval, being MS1046 Conditions.

During the ACR reporting period (10 September 2022 to 31 December 2023), Vimy was compliant with all ministerial conditions associated with MS1046, as provided in the 16 March 2023 and 16 March 2024 Compliance Assessment Reports (CARs) submitted to the DWER (Deep Yellow, 2023 and 2024). The reporting period for the CARs being from 16 December 2021 to 15 December 2022, and 16 December 2022 to 15 December 2023. The CARs are published on Deep Yellow's website (https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/).

The CARs include details of compliance including:

- Statement of Compliance; and
- MRP Audit Table that addresses compliance to MS1046 requirements.

4. NEW ENVIRONMENTAL RISKS

A new environmental risk identified is the potential impact on the SHD from third-party activities within the SDCP Defined Area. The Miscellaneous Licence 39/193 can be encroached on by a third-party being granted a tenement (i.e. exploration or miscellaneous licence), and undertaking ground disturbing activities within L39/193 and the Defined Area that lies within this tenement.

The SDCP currently being reviewed will include this risk within the Plan's Risk Assessment Section, such as shown in Table 5 below. Management measures for this risk would include submission of objections on the third-party tenement applications and proposing Access Deeds to the third-party to limit or exclude ground disturbance activities within the Defined Area.

5. CONCLUSION

During this reporting period, the Company was compliant with all conditions attached to the EPBC 2013/7083 approval.

The monitoring of the SHD and feral animals reached a milestone during the reporting period with the conclusion of the two year baseline monitoring in November 2023. The SDCP currently under review will utilise the baseline study data to propose the way forward in monitoring and management of SHD and feral animals.

Table 5: New Environmental Risk

Conservation objective/desired outcome	Event or circumstance	Relevant management actions/measures	Responsibility for implementation	Residual risk			Trigger detection	Monitoring activity	Feasible/effective corrective actions
				Likelihood	Consequence	Risk Rating			
To reduce the threat of third-party activities to the SHD within the Defined Area	Exploration or Miscellaneous lease approval by a third-party within the Defined Area and undertaking activities that impacts on the conservation of the SHD	Deep Yellow to object to third party lease applications over the Defined Area and/or propose Access Deeds.	Deep Yellow / sub-consultant	Possible	High	**Medium**	Third party Exploration or Miscellaneous lease application submitted to Department of Energy, Mines, Industry Regulation and Safety that intersects the Defined Area	Deep Yellow to monitor third party activities in relation to Defined Area	Consult with DCCEEW

6. ABBREVIATIONS AND UNITS OF MEASURE

Abbreviations and Acronyms	
ACR	Annual Compliance Report
CAR	Compliance Assessment Report
Cth	Commonwealth
DAWE	Department of Agriculture, Water and Environment (environmental functions now within the DCCEEW)
DBCA	Department of Biodiversity, Conservation and Attractions (WA)
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Cth)
DOE	Department of the Environment (environmental functions now within the DCCEEW)
Deep Yellow or Company	Deep Yellow Limited
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety (WA) (previously DMIRS)
DMIRS	Department of Mines, Industry Regulation and Safety (WA) (now DEMIRS)
DWER	Department of Water and Environmental Regulation (WA)
EP Act	*Environmental Protection Act 1986* (WA)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
GDAP	Ground Disturbance Activity Permit
MRP or Project	Mulga Rock Project
MS1046	Ministerial Statement No. 1046
Narnoo	Narnoo Mining Pty Ltd
SDCP	Sandhill Dunnart Conservation Plan
SHD	Sandhill Dunnart
Vimy	Vimy Resources Pty Ltd
WA	Western Australia

Units of Measure	
These units of measure may be grouped broadly as prefixes and measurements. A prefix applies to the unit of measurement that immediately follows it-for example, milligram is abbreviated as mg. Superscripts ^{2} and ^{3} following a linear unit indicate area and volume respectively-for example, m^2 (square metres) and m^3 (cubic metres). Different units are combined by a solidus (/) to indicate 'per'. For example, grams per tonne is abbreviated g/t.	
Prefixes	
G	Giga (1,000,000,000)
M	Mega or Million (1,000,000)
k	Kilo (1,000)
c	Centi (0.01)

Units of Measure	
m	Milli (0.001)
µ	Micro (0.000001)
Units	
a	annum
°C	Degrees celsius
ha	hectare
L	litre
lb	pound
m	metre
ppm	Parts per million
t	tonne

7. REFERENCES

DCCEEW. 2023. Annual Compliance Report Guidelines. Department of Climate Change, Energy, the Environment and Water. Commonwealth of Australia, Canberra. CC BY 4.0. (https://www.dcceew.gov.au/).

Deep Yellow. 2023. Compliance Assessment Report 16 December 2021 to 15 December 2022. Deep Yellow Limited. 16 March 2023. (https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/).

Deep Yellow. 2024. Compliance Assessment Report 16 December 2022 to 15 December 2023. Deep Yellow Limited. 16 March 2024. (https://deepyellow.com.au/projects/australia/mulga-rock-project/approvals-and-compliance/).

GHD. 2023. Letter – Sandhill Dunnart Defined Area - Species Image Analysis. Prepared for Deep Yellow Limited. GHD. Perth, WA. 4 December 2023.

GHD. 2023a. Letter – Sandhill Dunnart Defined Area - Species Image Analysis. GHD. Perth, WA. 3 March 2023.

GHD. 2024. Letter – Sandhill Dunnart Defined Area – Species Image Analysis Baseline Assessment. Prepared for Deep Yellow Limited. GHD. Perth, WA. 29 January 2024.

APPENDIX 1: DCCEEW APPROVAL OF SANDHILL DUNNART CONSERVATION PLAN

Australian Government
Department of Climate Change, Energy, the Environment and Water

Mr John Borshoff
Managing Director/CEO
Deep Yellow Limited
john.borshoff@deepyellow.com.au

EPBC 2013/7083: Mulga Rock Uranian Project, Shire of Menzies, WA – Approval of Sandhill Dunnart Conservation Plan

Dear Mr Borshoff

Thank you for your correspondence to the Department seeking approval of the above plan, in accordance with condition 2 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval for the above project.

Officers of the Department have advised me on the plan and the requirements of the conditions of the approval for this project. On this basis, and as a delegate of the Minister for the Environment and Water, I have decided to approve the *Sandhill Dunnart Conservation Plan, V5*, dated 10 November 2022. The approved plan must now be implemented.

As you are aware, the Department has an active monitoring program which includes monitoring inspections, desk top document reviews and audits. Please ensure that you maintain accurate records of all activities associated with, or relevant to, the conditions of approval so that they can be made available to the Department on request.

Should you require any further information please contact William Egan at william.egan@dcceew.gov.au or postapproval@dcceew.gov.au.

Yours sincerely

Natasha Amerasinghe
Acting Branch Head
Environment Assessments (Vic, Tas) and Post Approvals Branch
Environment Approvals Division

31 January 2023

APPENDIX 2: PRESENCE OF SANDHILL DUNNART WITHIN THE DEFINED AREA (GHD 2023)

Technical Memorandum

March 3, 2023

To	Niv Reddy	**Contact No.**	9666 8689
Copy to	Drew Farrar	**Email**	Glen.gaikhorst@ghd.com
From	Glen Gaikhorst	**Project No.**	12598389
Project Name	Sandhill Dunnart Conservation Management Area		
Subject	Sandhill Dunnart and Feral Species Image Analysis		

1. Introduction

Since 2014 GHD has been assisting Deep Yellow (formerly Vimy Resources Limited) at the Mulga Rocks Uranium Project (MRP) in the identification and analysis of remote camera images for all small mammal species. The focus species for undertaking this work is the Sandhill Dunnart (*Sminthopsis psammophila*) which is listed as endangered under both the *Biodiversity Conservation Act 2016* (BC Act) and the *Environmental Protection Biodiversity Conservation Act 1999* (EPBC Act).

The initial programs (2014) were establishing best technique and camera types to use to capture Sandhill Dunnart. In 2015 this program was extended to 15 sites around the Mulga Rocks operational area with the program extending more regionally in late 2015. This data and analysis were presented in GHD 2021a.

1.1 Background

In Vimy Resources Limited goal of seeking environmental approvals for the project referral was sort on the 28 November 2013 under the EPBC Act to the Department of Agriculture, Water and the Environment (DAWE) (EPBC 2013/7083). On 7 January 2014, DAWE determined MRP a “controlled action”, with the controlling provisions being “listed threatened species and communities” and “nuclear actions”, to be assessed under the bilateral agreement with the Western Australian State Government. The MRP was federally approved on the 2 March 2017 with a condition attached to offsetting the residual impact to the Sandhill Dunnart (*Sminthopsis psammophila*).

Condition 2 of the EPBC 2013/7083 approval requires the preparation of a Sandhill Dunnart Conservation Plan (SDCP) to reduce the impact to the Sandhill Dunnart posed by feral animals within a defined conservation area. The SDCP is based around a 6000ha portion of land (Conservation Area) within the Sandhill Dunnarts known distribution. In order to implement the SDCP an understanding of the presence of the species and feral animals is required including an understanding of baseline data.

In December 2021 a study plan was developed by GHD (GHD 2021b) to locate 30 remote camera locations with the conservation area with the intent to utilise 25 of them to obtain preliminary data of Sandhill Dunnart presence and feral species use. This assessment was to be done over a 12 month period.

1.2 Purpose of this Memorandum

This memorandum provides;

– Evidence of Sandhill Dunnart presence and use within the Conservation Area

– A brief analysis of events and locations that recorded Sandhill Dunnart
– Evidence of all feral species recorded on remote camera
– A brief analysis of feral species abundance and use within the Conservation Area.

1.3 Scope and limitations

This memorandum has been prepared by GHD for Deep Yellow and may only be used and relied on by Deep Yellow for the purpose agreed between GHD and Deep Yellow as set out in section 1.2 of this memorandum. GHD otherwise disclaims responsibility to any person other than Deep Yellow arising in connection with this memorandum. GHD also excludes implied warranties and conditions, to the extent legally permissible. The services undertaken by GHD in connection with preparing this memorandum were limited to those specifically detailed in the memorandum and are subject to the scope limitations set out in the memorandum. This memo reports on 6 months of data, with an annual report provided once 12 months of data is acquired.

GHD has prepared this memorandum on the basis of information provided by Deep Yellow and others who provided information to GHD (including Government authorities and private individuals), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the letter report which were caused by or omissions in that information.

Site conditions may change after the date of the field survey. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this memorandum if the site conditions change.

2. Methodology

2.1 Infra-red cameras

The device Reconyx Hyperfire 550, utilizing white LED flash for colour day/night photo capture at close range were used across at 25 of the designated 30 sites as presented in GHD2021b.

2.2 Sensitivity and trigger response

All cameras were set up in the same format with high sensitivity and a camera trigger speed of 1.34 and 0.2 seconds. The trapping efficiency for Sandhill Dunnart (*Sminthopsis psammophila*) was calculated by utilising one event over a 24-hour period per species and calculating all events at a site divided by total number of camera trap nights across all sites.

2.3 Trapping layout

Camera layout formations were kept consistent across all sites, employing a doublet design along an “X” fence line with horizontal cameras placed on posts facing south at its central point. As such, each site consisted of two deployed devices for greater coverage, represented as cameras A and B at each site. The trap layout is described in greater detail in GHD 2021b.

Fresh batteries and SD cards are replaced on the regular basis and downloaded into a central database and labelled accordingly. All images are stored in site and device (A or B) before sending the dataset to GHD for assessment.

2.4 Identification

Sandhill Dunnart (*Sminthopsis psammophila*) were identified in accordance with the Deep Yellows Camera Trapping Protocol, Sandhill Dunnart (*Sminthopsis psammophila*) of the Mulga Rock Project Area (Vimy 2015) and via the consultant’s specialist experience. Glen Gaikhorst has worked on Sandhill Dunnarts since 2001 both in and ex situ.

A confidence key was developed to demonstrate the consultant's confidence in the species identification provided. This is presented below in Table 1.

Table 1. Confidence key for image analysis

Confidence key	
High	High level of confidence of species identification (clear morphological characteristics)
Moderate	Moderate level of confidence of species identification (lacking some degree of detail)
Low	Low level of confidence (blurred image or lacking significant detail detail)

2.5 Event definition

An event was defined as any identification image series within a 24-hour period, unless multiple size classes/life stages were observed, providing strong evidence multiple individuals were present, then further events were recorded.

3. Results

From the images analysed from the Mulga Rocks project between late November 2021 and mid August 2022, (a period of approximately 260 days), the Sandhill Dunnart (*Sminthopsis psammophila*) was identified on 42 remote camera devices across 23 sites providing 375 discreet events. Only two sites of the 25 did not record Sandhill Dunnart. This infers there is a good representative population of Sandhill Dunnart persisting within the Conservation area.

Trap efficiency varied from 0 to 10.46% over the nine month period. High events indicated resident specimen in the area. Peak activity periods of the Sandhill Dunnart across most sites were approximately from April through to July. Dispersion of young and other fluctuations in population dynamics such as vagrant movement of males in the population are likely to account for these peak movement periods.

Predatory feral species, consisting of cats and red foxes were recorded on 8 devices across 8 sites providing 8 discreet events. All of these event were singular inferring the presence of invasive predatory species is low within the conservation period.

After 12 months of data the aim will be to establish thresholds and triggers that induce management actions represented within the Conservation Management Plan.

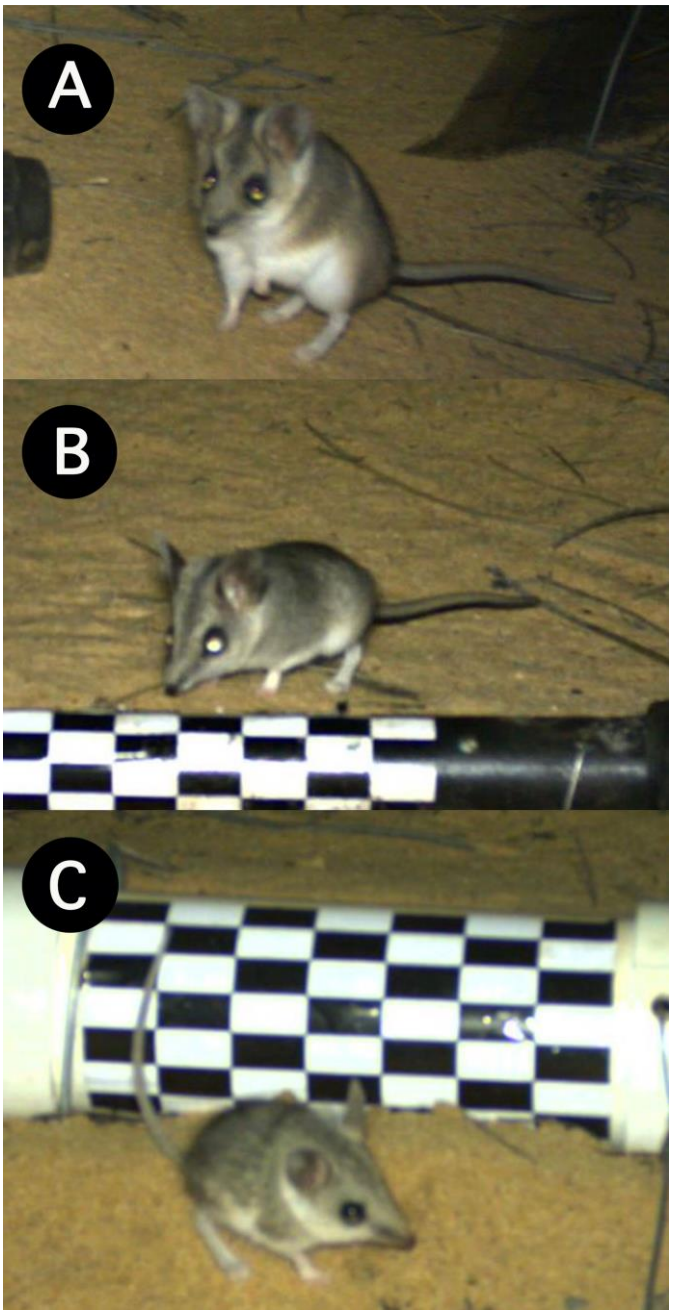

Figure 1. shows size class variation of *Sminthopsis psammophila* present across the survey area. A); adult individual, B); sub-adult individual, C); juvenile individual.

Table 2. Displays captured events of the Sandhill Dunnart (*Sminthopsis psammophila*) and associated trapping efficiency per device per site. Events were defined as any identification series within a 24-hour period, unless multiple size classes/life stages were observed then further events were recorded (Figure 1).

Sites	Captures (events) Sandhill Dunnart	Efficiency
Site 1 A	5 events	1.97%
Site 1 B	13 events	5.13%
Site 2 A	5 events	1.93%
Site 2 B	4 events	1.55%
Site 3 A	4 events	1.54%
Site 3 B	12 events	4.63%
Site 4 A	0 events	0.00%
Site 4 B	0 events	0.00%
Site 5 A	13 events	5.15%
Site 5 B	8 events	3.17%
Site 6 A	1 event	0.38%
Site 6 B	2 events	0.77%
Site 7 A	7 events	2.73%
Site 7 B	4 events	1.56%
Site 8 A	9 events	3.48%
Site 8 B	12 events	4.65%
Site 9 A	0 events	0.00%
Site 9 B	4 events	1.54%
Site 10 A	4 events	1.53%
Site 10 B	0 events	0.00%
Site 11 A	8 events	3.17%
Site 11 B	9 events	3.57%
Site 12 A	27 events	10.46%
Site 12 B	20 events	7.75%
Site 13 A	6 events	2.31%

Sites	Captures (events) Sandhill Dunnart	Efficiency
Site 13 B	9 events	3.47%
Site 14 A	3 events	1.15%
Site 14 B	2 events	0.77%
Site 15 A	9 events	3.48%
Site 15 B	5 events	1.93%
Site 17 A	0 events	0.00%
Site 17 B	21 events	8.13%
Site 18 A	0 events	0.00%
Site 18 B	1 event	0.38%
Site 19 A	4 events	1.55%
Site 19 B	22 events	8.52%
Site 20 A	3 events	1.16%
Site 20 B	21 events	8.13%
Site 21 A	17 events	6.58%
Site 21 B	2 events	0.77%
Site 22 A	14 events	5.42%
Site 22 B	3 events	1.16%
Site 23 A	0 events	0.00%
Site 23 B	0 events	0.00%
Site 28 A	6 events	2.35%
Site 28 B	8 events	3.13%
Site 29 A	14 events	5.46%
Site 29 B	9 events	3.51%
Site 30 A	13 events	5.03%
Site 30 B	12 events	4.65%

Table 3. Displays captured events of fera cat (*Vulpes vulpes*) activity and associated trapping efficiency per device per site. Devices where event captures were not observed were excluded.

Site	Captures – red fox	Trapping efficiency
Site 11 A	1 event	0.39%
Site 12 A	1 event	0.38%

Table 4. Displays captured events of feral cat (*Felis catus*) activity and associated trapping efficiency per device per site. Devices where event captures were not observed were excluded.

Site	Captures – feral cat	Trapping efficiency
Site 7 B	1 event	0.39%
Site 8 A	1 event	0.38%
Site 20 A	1 event	0.38%
Site 22 B	1 event	0.38%
Site 23 B	1 event	0.38%
Site 28 B	1 event	0.39%

Regards

Glen Gaikhorst
Senior Zoologist

APPENDIX 3: PRESENCE OF SANDHILL DUNNART WITHIN THE DEFINED AREA (GHD 2023A)

999 Hay Street, Level 10
Perth, Western Australia 6000
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Your ref:
Our ref: 12591259

04 December 2023

Guy Clarke
Deep Yellow Limited
PO Box 1770
Subiaco WA 6904

Sandhill Dunnart Defined Area - Species Image Analysis

Dear Guy

1. Introduction

1.1 Background

Vimy Resources Limited (ABN 56 120 178 949) (Vimy) is the proponent of the Mulga Rock Project (MRP or the Project). Effective from 4 August 2022, Vimy became a 100% owned subsidiary of Deep Yellow Limited (ABN 97 006 391 948) (Deep Yellow or the Company) following a Scheme of Arrangement (Merger). Deep Yellow is listed on the Australian Securities Exchange (ASX) and is the ultimate holding company in the Deep Yellow group of companies. Narnoo Mining Pty Ltd (ABN 81 084 713 100) (Narnoo) is the owner of the MRP, and the registered holder of the tenements associated with the MRP. Narnoo, as a 100% owned subsidiary of Vimy, is now part of the Deep Yellow group of companies.

Vimy referred the MRP on the 28 November 2013 under the *Environmental Protection Biodiversity Conservation Act 1999* (Cth) (EPBC Act) to the Department of Agriculture, Water and the Environment (DAWE) (EPBC 2013/7083). On 7 January 2014, DAWE determined MRP a “controlled action”, with the controlling provisions being “listed threatened species and communities” and “nuclear actions”, to be assessed under the bilateral agreement with the Western Australian State Government. The MRP was federally approved on the 2 March 2017 with a condition attached to offset the residual impact to the Sandhill Dunnart (*Sminthopsis psammophila*), which is listed as endangered under both the *Biodiversity Conservation Act 2016* (WA) (BC Act) and the EPBC Act.

GHD has been assisting the Company at the MRP since 2014 with the identification and analysis of remote camera images for small mammal species. The focus species for undertaking this work is the Sandhill Dunnart. The initial programs (2014) was focused on establishing best technique and camera types to use to capture Sandhill Dunnart. In 2015 this program was extended to 15 sites around the MRP operational area with the program extending more regionally in late 2015. This data and analysis were presented in GHD (2021a).

Condition 2 of the EPBC 2013/7083 approval requires the preparation of a Sandhill Dunnart Conservation Plan (SDCP) to reduce the impact to the Sandhill Dunnart posed by feral animals within a Defined Area. The SDCP is based around a 6000ha portion of land (Defined Area) within the Sandhill Dunnarts known distribution. In order to implement the SDCP an understanding of the presence of the species and feral animals is required including an understanding of baseline data.

In December 2021 a study plan was developed by GHD (2021b) to locate remote camera locations within the Defined Area to obtain preliminary data of Sandhill Dunnart presence and feral species use. This assessment was to be done over a 2-year period.

1.2 Purpose of this letter

The purpose of this letter is to:

– Summarise the camera analysis from the previous memo (GHD 2022) to May 2023, which incorporates 18-month of camera imagery for the Defined Area
– A brief analysis of Sandhill Dunnart presence and use per site within the Defined Area
– A brief analysis of feral species within the Defined Area.

1.3 Scope and limitations

This letter has been prepared by GHD for Deep Yellow (and may only be used and relied on by Deep Yellow for the purpose agreed between GHD and Deep Yellow as set out in section 1.2 of this letter. GHD otherwise disclaims responsibility to any person other than Deep Yellow arising in connection with this letter. GHD also excludes implied warranties and conditions, to the extent legally permissible. The services undertaken by GHD in connection with preparing this letter were limited to those specifically detailed in the letter and are subject to the scope limitations set out in the letter.

GHD has prepared this letter on the basis of information provided by Deep Yellow, which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the letter report which were caused by or omissions in that information.

Site conditions may change after the date of the field survey. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this letter if the site conditions change.

2. Methodology

2.1 Infra-red cameras

Reconyx Hyperfire 550 cameras, utilising white LED flash for colour day/night photo capture at close range were used across 25 designated sites as presented in GHD (2021b).

All cameras were set up in the same format with high sensitivity and a camera trigger speed of 1.34 and 0.2 seconds and have been in-situ since November 2021. Images are recorded in five shot succession at one second intervals enabling capture of individuals at different angles to aid in identification.

2.2 Trapping layout

Camera layout formations were kept consistent across all sites, employing a doublet design along an “X” fence line with horizontal cameras placed on posts facing south at its central point. As such, each site consisted of two deployed camera devices for greater coverage, represented as cameras A and B at each site. The trap layout is described in greater detail in (GHD 2021b).

Fresh batteries and SD cards are replaced on a regular basis and downloaded into a central database and labelled accordingly. All images are stored and sorted by Deep Yellow before sending the dataset to GHD for assessment.

2.3 Identification

Sandhill Dunnart were identified in accordance with the Deep Yellow’s Camera Trapping Protocol, *Sandhill Dunnart (Sminthopsis psammophila) of the Mulga Rock Project Area* (Vimy 2015) and via the consultant’s

specialist experience. Glen Gaikhorst, the lead researcher has worked on Sandhill Dunnarts since 2001 both in and ex situ.

A confidence key was developed to demonstrate the consultant's confidence in the species identification provided. This is presented below in Table 1.

Table 1 Confidence key for image analysis

Confidence key	Description
High	High level of confidence of species identification (clear morphological characteristics)
Moderate	Moderate level of confidence of species identification (lacking some degree of detail)
Low	Low level of confidence (blurred image or lacking significant detail)

2.4 Event definition

An event was defined as any identification image series within a 24-hour period, unless multiple size classes/life stages were observed, providing strong evidence multiple individuals were present, then further events were recorded. Size variation from life stages is presented in Figure 1.

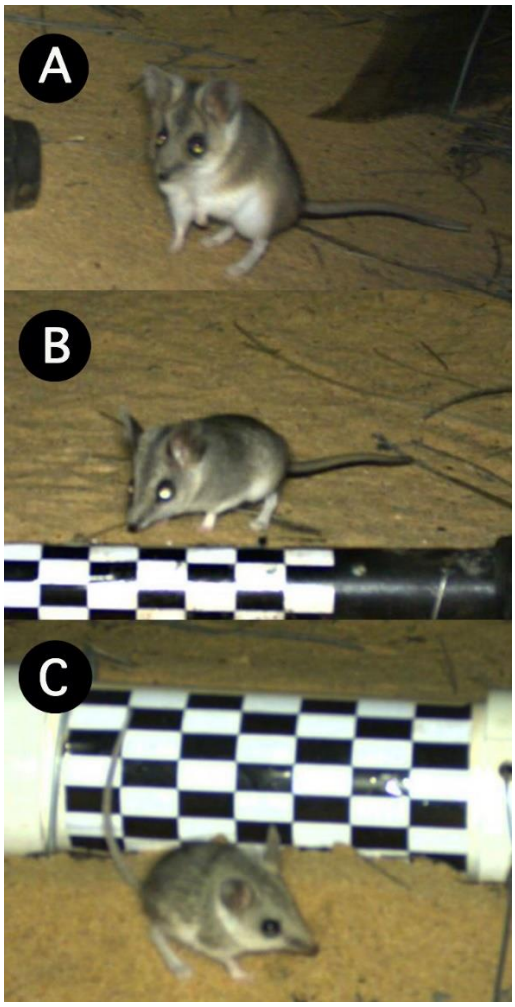

Figure 1 Size class variation of Sminthopsis psammophila present across the survey area. A); adult individual, B); sub-adult individual, C); juvenile individual

3. Results

The image analysis from the Defined Area between late-November 2021 and mid-May 2023, (a period of approximately 500 days), the Sandhill Dunnart was identified on 48 camera devices across 24 sites providing 939 discreet events. Only one of the 25 sites did not record Sandhill Dunnart (Site 4, A or B cameras) (See Table 2). This infers there is a good representative population of Sandhill Dunnart persisting within the Defined Area.

Peak activity periods of the Sandhill Dunnart across most sites were approximately from March/April through to June and again from August/September. These peaks correlate to dispersal of young and other fluctuations in population dynamics such as vagrant movement of males in the population are likely to account for these peak movement periods. High events indicated resident specimens in the area. See Figure 2 demonstrating the monthly event counts.

Predatory feral species, consisting of cats and red foxes were recorded on 22 camera devices across 21 sites providing 31 discreet events (See Table 3 and Table 4). Other feral species, consisting of camels and rabbits were recorded on 5 camera devices across 5 sites providing 10 discrete events (See Table 5 and Table 6). All these events were singular inferring the presence of invasive predatory species is low within the Defined Area.

After 2 years of data the aim will be to establish thresholds and triggers that potentially induce management actions represented within the SDCP.

Table 2 Displays total captured events of the Sandhill Dunnart (Sminthopsis psammophila) per site. Also over two report periods

Sites	Number of Captured Event(s)		
	Period Nov21 to Aug 22	Period Sept 22 to May 23	Total Captures (events)
Site 1 A	5	0	5
Site 1 B	13	2	15
Site 2 A	5	3	8
Site 2 B	4	5	9
Site 3 A	4	11	15
Site 3 B	12	7	19
Site 4 A	0	0	0
Site 4 B	0	0	0
Site 5 A	13	49	62
Site 5 B	8	30	38
Site 6 A	1	1	2
Site 6 B	2	0	2
Site 7 A	7	33	40
Site 7 B	4	24	28
Site 8 A	9	12	21
Site 8 B	12	21	33
Site 9 A	0	8	8
Site 9 B	4	8	12
Site 10 A	4	1	5
Site 10 B	0	2	2
Site 11 A	8	1	9
Site 11 B	9	6	15

Sites	Number of Captured Event(s)		
	Period Nov21 to Aug 22	Period Sept 22 to May 23	Total Captures (events)
Site 12 A	27	7	34
Site 12 B	20	23	43
Site 13 A	6	38	44
Site 13 B	9	58	67
Site 14 A	3	3	6
Site 14 B	2	2	4
Site 15 A	9	3	12
Site 15 B	5	7	12
Site 17 A	0	5	5
Site 17 B	21	1	22
Site 18 A	0	10	10
Site 18 B	1	7	8
Site 19 A	4	15	19
Site 19 B	22	0	22
Site 20 A	3	7	10
Site 20 B	21	21	42
Site 21 A	17	9	26
Site 21 B	2	8	10
Site 22 A	14	7	21
Site 22 B	3	1	4
Site 23 A	0	10	10
Site 23 B	0	8	8
Site 28 A	6	20	28
Site 28 B	8	10	18
Site 29 A	14	4	18
Site 29 B	9	7	16
Site 30 A	13	32	45
Site 30 B	12	20	32

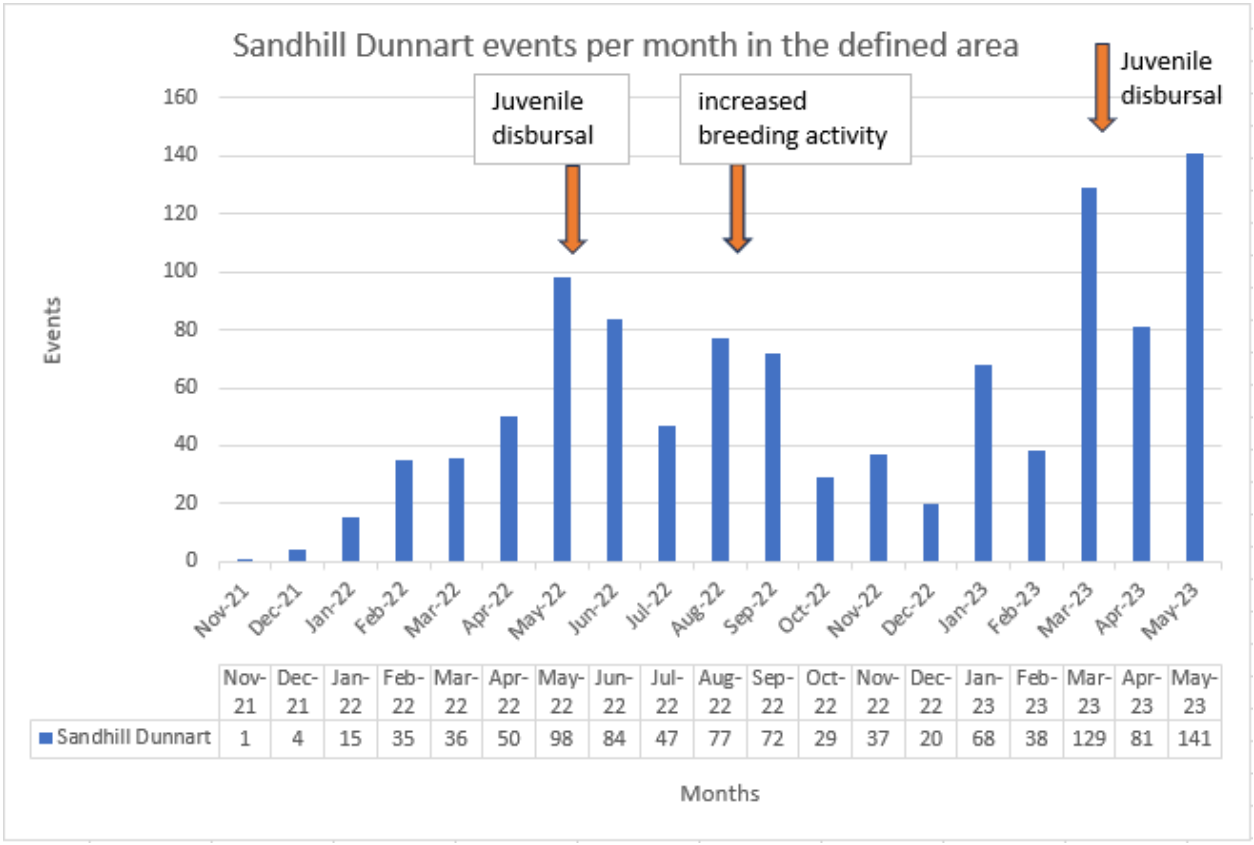

Figure 2 *Events per months demonstrating key activity periods for the species*

Table 3 *Displays captured events of foxes (Vulpes vulpes) activity per site. Devices where event captures were not observed were excluded*

Site	Number of Captured Event(s) – red fox
Site 8 A	1
Site 11 A	2
Site 11B	4
Site 12 A	3
Site 12 B	2
Site 13 A	1

Table 4 *Displays captured events of feral cat (Felis catus) activity per site. Devices where event captures were not observed were excluded*

Site	Number of Captured Event(s) – feral cat
Site 7 B	1
Site 8 A	2
Site 9 A	1
Site 10 B	1
Site 15 B	1
Site 17 B	1
Site 18 B	1
Site 19 A	1
Site 20 A	1
Site 20 B	2

Site	Number of Captured Event(s) – feral cat
Site 21 B	1
Site 22 B	1
Site 23 A	1
Site 28 B	2
Site 30 B	1

Table 5 Displays captured events of camel (Camelus dromedarius) activity per device per site. Devices where event captures were not observed were excluded

Site	Number of Captured Event(s) – Camels
Site 15 A	1
Site 29 A	1

Table 6 Displays captured events of rabbit (Oryctolagus cuniculus) activity per site. Devices where event captures were not observed were excluded

Site	Number of Captured Event(s) – Rabbits
Site 11 A	3
Site 12 A	1
Site 12 B	4

4. References

GDH (2021a). Sandhill Dunnart Camera Trap Monitoring - Small mammal identification and analysis. Unpublished report for Vimy Resources, Perth, Western Australia.

GHD (2021b). Sandhill Dunnart Study Plan. Unpublished report for Vimy Resources, Perth, Western Australia.

GHD (2022). Sandhill Dunnart Conservation Management Area - Sandhill Dunnart and Feral Species Image Analysis. Unpublished report for Deep Yellow.

Vimy Resources (2015) Camera Trapping Protocol – Sandhill Dunnart (*Sminthopsis psammophila*) – Mulga Rock Project Area. Unpublished report

Regards

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APPENDIX 4: SHD DEFINED AREA – SPECIES IMAGE ANALYSIS BASELINE ASSESSMENT (GHD 2024)

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Your ref: PO-1281
Our ref: 12591259

29 January 2024

Guy Clarke
Deep Yellow Limited
PO Box 1770
Subiaco WA 6904

Sandhill Dunnart Defined Area - Species Image Analysis Baseline Assessment

Dear Guy

1. Introduction

1.1 Background

Vimy Resources Limited (ABN 56 120 178 949) (Vimy) is the proponent of the Mulga Rock Project (MRP or the Project). Effective from 4 August 2022, Vimy became a 100% owned subsidiary of Deep Yellow Limited (ABN 97 006 391 948) (Deep Yellow or the Company) following a Scheme of Arrangement (Merger). Deep Yellow is listed on the Australian Securities Exchange (ASX) and is the ultimate holding company in the Deep Yellow group of companies. Narnoo Mining Pty Ltd (ABN 81 084 713 100) (Narnoo) is the owner of the MRP, and the registered holder of the tenements associated with the MRP. Narnoo, as a 100% owned subsidiary of Vimy, is now part of the Deep Yellow group of companies.

Vimy referred the MRP on the 28 November 2013 under the *Environmental Protection Biodiversity Conservation Act 1999* (Cth) (EPBC Act) to the Department of Agriculture, Water and the Environment (DAWE) (EPBC 2013/7083). On 7 January 2014, DAWE determined MRP a “controlled action”, with the controlling provisions being “listed threatened species and communities” and “nuclear actions”, to be assessed under the bilateral agreement with the Western Australian State Government. The MRP was federally approved on the 2 March 2017 with a condition attached to offset the residual impact to the Sandhill Dunnart (SHD) (*Sminthopsis psammophila*), which is listed as endangered under both the *Biodiversity Conservation Act 2016* (WA) (BC Act) and the EPBC Act.

GHD has been assisting the Company at the MRP since 2014 with the identification and analysis of remote camera images for small mammal species. The focus species for undertaking this work is the SHD. The initial programs (2014) were focused on establishing best technique and camera types to use to capture SHDs. In 2015 this program was extended to 15 sites around the MRP operational area with the program extending more regionally in late 2015. This data and analysis were presented in *Sandhill Dunnart Camera Trap Monitoring - Small mammal identification and analysis* (GHD 2021a).

Condition 2 of the EPBC 2013/7083 approval requires the preparation of a *Sandhill Dunnart Conservation Plan* (SDCP) to reduce the impact to the SHD posed by feral animals within a Defined Area. The SDCP is based around a 6000ha portion of land (Defined Area) within the SHD’s known distribution. To implement the SDCP an understanding of the presence of the species and feral animals is required including an

understanding of baseline data. The SDCP was submitted and subsequently approved in November 2022 (GHD 2022b).

Within the SDCP is a study plan (which was first developed by GHD (2021b) to locate remote camera locations within the Defined Area to obtain preliminary data of SHD presence and feral species use. GHD compiled a summary memo of SHD and feral species presence within the Defined Area (GHD 2022a) and covered from camera establishment (November 2021) to August 2022. An additional progress summary memo was also produced in December 2023 covering camera data from the memo for the period November 2021 to August 2022 (GHD 2022a) and August 2022 to May 2023 (GHD 2023).

This letter compiles two-years' (note period covered) worth of camera images to establish baseline data to be used within the SDCP for future triggers and monitoring of SHD and feral species within the Defined Area.

1.2 Purpose of this letter

The purpose of this letter is to:

– Summarise the camera analysis from the previous two years of camera imagery for the Defined Area
– Analyse SHD presence/seasonal patterns and use per site within the Defined Area
– Analyse feral species presence within the Defined Area.

1.3 Scope and limitations

This letter has been prepared by GHD for Deep Yellow (and may only be used and relied on by Deep Yellow for the purpose agreed between GHD and Deep Yellow as set out in section 1.2 of this letter. GHD otherwise disclaims responsibility to any person other than Deep Yellow arising in connection with this letter. GHD also excludes implied warranties and conditions, to the extent legally permissible. The services undertaken by GHD in connection with preparing this letter were limited to those specifically detailed in the letter and are subject to the scope limitations set out in the letter.

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Site conditions may change after the date of the field survey. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this letter if the site conditions change.

2. Methodology

Vimy undertook extensive testing and subsequently were given approval from Department of Parks and Wildlife to undertake camera trapping as their primary means of assessing for presence of SHDs. The approved approach is specified in *Camera Trapping Protocol – Sandhill Dunnart (Sminthopsis psammophila) – Mulga Rock Project Area* (Vimy 2015). In combination with GHD, Deep Yellow has continued to use camera traps as outlined in Vimy (2015) to determine presence of the species. This method is more cost effective, easily repeatable across the landscape and quicker than conventional trapping methods. For this project the study has shown that the camera traps record and demonstrate presence of SHD and ferals across the Defined Area.

2.1 Infra-red cameras

Reconyx Hyperfire 550 cameras, utilising white LED flash for colour day/night photo capture at close range were used across the 25 designated sites as presented in the *Sandhill Dunnart Study Plan* (GHD 2021b). All cameras were set up in the same format. Images are recorded in five shot succession at one second

intervals enabling capture of individuals at different angles to aid in identification. The study plan (GHD 2021b) includes more detail regarding camera set-up.

Fresh batteries and SD cards were replaced on a regular basis and downloaded into a central database and labelled accordingly. All images are stored and sorted by Deep Yellow before sending the dataset to GHD for assessment.

2.2 Trapping layout

Camera layout formations were kept consistent across all sites, employing a doublet design along an "X" fence line with horizontal cameras placed on posts facing south at its central point. As such, each site consisted of two deployed camera devices for greater coverage, represented as cameras A and B at each site. The trap layout is described in greater detail in the *Sandhill Dunnart Study Plan* (GHD 2021b).

2.3 Data collection period

The 25 camera survey sites were setup in November 2021 and have remained *in-situ*. This assessment considers images from commencement of collection until the end of November 2023, to provide two years of data.

2.4 Identification

SHDs were identified in accordance with the Deep Yellow's Camera Trapping Protocol, *Sandhill Dunnart (Sminthopsis psammophila) of the Mulga Rock Project Area* (Vimy 2015) and via the consultant's specialist experience. Glen Gaikhorst, the lead researcher has worked on SHDs since 2001 both in and ex situ.

A confidence key was developed to demonstrate the consultant's confidence in the species identification provided. This is presented below in Table 1.

Table 1 Confidence key for image analysis

Confidence key	Description
High	High level of confidence of species identification (clear morphological characteristics)
Moderate	Moderate level of confidence of species identification (lacking some degree of detail)
Low	Low level of confidence (blurred image or lacking significant detail)

2.5 Event definition

An event was defined as any identification image series within a 24-hour period, unless multiple size classes/life stages were observed, providing strong evidence multiple individuals were present, then further events were recorded. Size variation from life stages is presented in Figure 1.

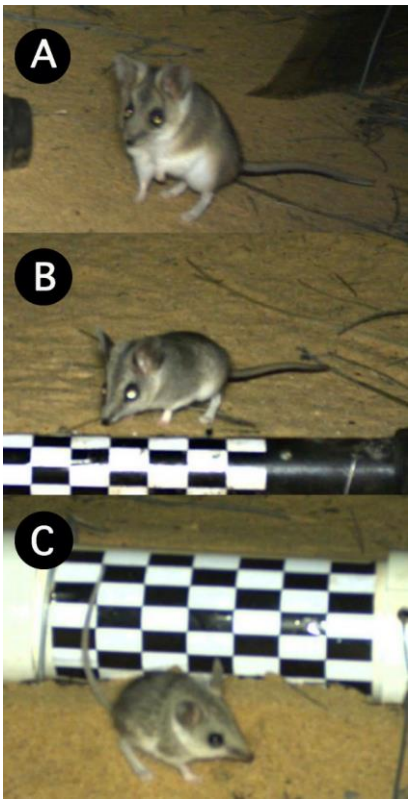

Figure 1 Size class variation of Sminthopsis psammophila present across the survey area. A); adult individual, B); sub-adult individual, C); juvenile individual

2.6 Baseline Parameters

SHDs like most arid zone Sminthopsis species are notoriously difficult to assess population size due to them having highly seasonal fluctuating populations, naturally low population sizes, large home ranges, low recapture rates (for mark recapture studies) and available habitat to assess (Riley 2020, Churchill 2001a, 2001b, Ward et al. 2008). Hence no robust method for estimating a SHD population size has been demonstrated (Riley 2020, Woinarski and Burbidge 2016).

An analysis of the existing two-year baseline dataset of sandhill dunnart imagery was undertaken to derive a proposed threshold to identify periods of low sandhill dunnart activity/presence during ongoing monitoring.

The baseline dataset was processed to extract the total number of sandhill dunnart 'events' per day at each camera device. For this analysis, an event for a camera was classified as at least one positive sandhill dunnart ID during a day. For example, if one or multiple positive IDs of SHDs were made at a camera device during a day, this was classified as a single event. The maximum theoretical number of events that could occur in the dataset during a day is therefore 50 (i.e. one event per camera location).

The event data was arranged into a daily timeseries, and a 90-day (~3 month) backwards-looking moving average was calculated. The first recorded event in the baseline data was on 25 November 2021, and the first result for the 90-day moving average is 90 days after this (22 February 2022).

The 5th percentile of the 90-day moving average has been adopted as a trigger indicating low sandhill dunnart activity. The 5th percentile is a low value within the data range, for which 95% of the data exceeded this value (i.e. the 90-day average was above the 5th percentile 95% of the time, and less than the 5th percentile for only 5% of the time).

Given the low number of feral species recorded over the two-year monitoring period, statistical analysis was not undertaken.

3. Results

3.1 Sandhill Dunnart

The image analysis for the Defined Area has been undertaken from the period of November 2021 to November 2023. The SHD was identified on 48 camera devices across 24 sites providing 1637 discreet events. Only one of the 25 sites did not record SHD ((Site 4, A and B cameras) for the two-year period (see Table 2).

Table 2 Displays total captured events of the SHD (Sminthopsis psammophila) per site over two years

Sites	Number of Captured Event(s)			
	Period Nov 21 - Aug 22	Period Sept 22 - May 23	Period June 23 - Nov 23	Total Events
Site 1 A	5	0	0	5
Site 1 B	13	2	2	17
Site 2 A	5	3	12	20
Site 2 B	4	5	12	21
Site 3 A	4	11	17	32
Site 3 B	12	7	21	40
Site 4 A	0	0	0	0
Site 4 B	0	0	0	0
Site 5 A	13	49	54	116
Site 5 B	8	30	42	80
Site 6 A	1	1	1	3
Site 6 B	2	0	2	4
Site 7 A	7	33	17	57
Site 7 B	4	24	12	40
Site 8 A	9	12	19	40
Site 8 B	12	21	21	54
Site 9 A	0	8	27	35
Site 9 B	4	8	13	25
Site 10 A	4	1	8	13
Site 10 B	0	2	10	12
Site 11 A	8	1	1	10
Site 11 B	9	6	3	18
Site 12 A	27	7	0	34
Site 12 B	20	23	8	51
Site 13 A	6	38	29	73
Site 13 B	9	58	90	157
Site 14 A	3	3	1	7
Site 14 B	2	2	2	6
Site 15 A	9	3	3	15
Site 15 B	5	7	8	20
Site 17 A	0	5	6	11
Site 17 B	21	1	5	27

Sites	Number of Captured Event(s)			
	Period Nov 21 - Aug 22	Period Sept 22 - May 23	Period June 23 - Nov 23	Total Events
Site 18 A	0	10	9	19
Site 18 B	1	7	13	21
Site 19 A	4	15	11	30
Site 19 B	22	0	11	33
Site 20 A	3	7	23	33
Site 20 B	21	21	21	63
Site 21 A	17	9	12	38
Site 21 B	2	8	2	12
Site 22 A	14	7	10	31
Site 22 B	3	1	1	5
Site 23 A	0	10	7	17
Site 23 B	0	8	11	19
Site 28 A	6	20	4	30
Site 28 B	8	10	6	24
Site 29 A	14	4	3	21
Site 29 B	9	7	3	19
Site 30 A	13	32	57	102
Site 30 B	12	20	45	77

This presence data infers there is a good representative population of SHD persisting within the Defined Area. SHD events were recorded in every month and consisted of one to 228 events, representing a high degree of fluctuation within the data as presented in Figure 2.

There are no obvious reasons for the absence of SHD records from Site 4, with this locality having a similar habitat score to other areas where the species has been consistently recorded. Other species have been recorded on Site 4, A and B cameras demonstrating that camera fault is not a factor.

Peak activity periods of the SHD were from approximately March/April through to June and again from August/September. These peaks correlate to life events for sandhill Dunnarts consisting of dispersal of young and increased activity from males as they traverse the landscape during the mating period. Other high activity events may also indicate resident specimens in the area constantly triggering cameras. A distinct low period in activity can be seen from October to December. This period is likely to be representative of the female juveniles depositing period where young are too big to be carried in the pouch and transitioned into a nest reducing the female undertaking long distances of activity. It is also the period when the male portion of the population is at its smallest, before the dramatic influx of disbursing juveniles.

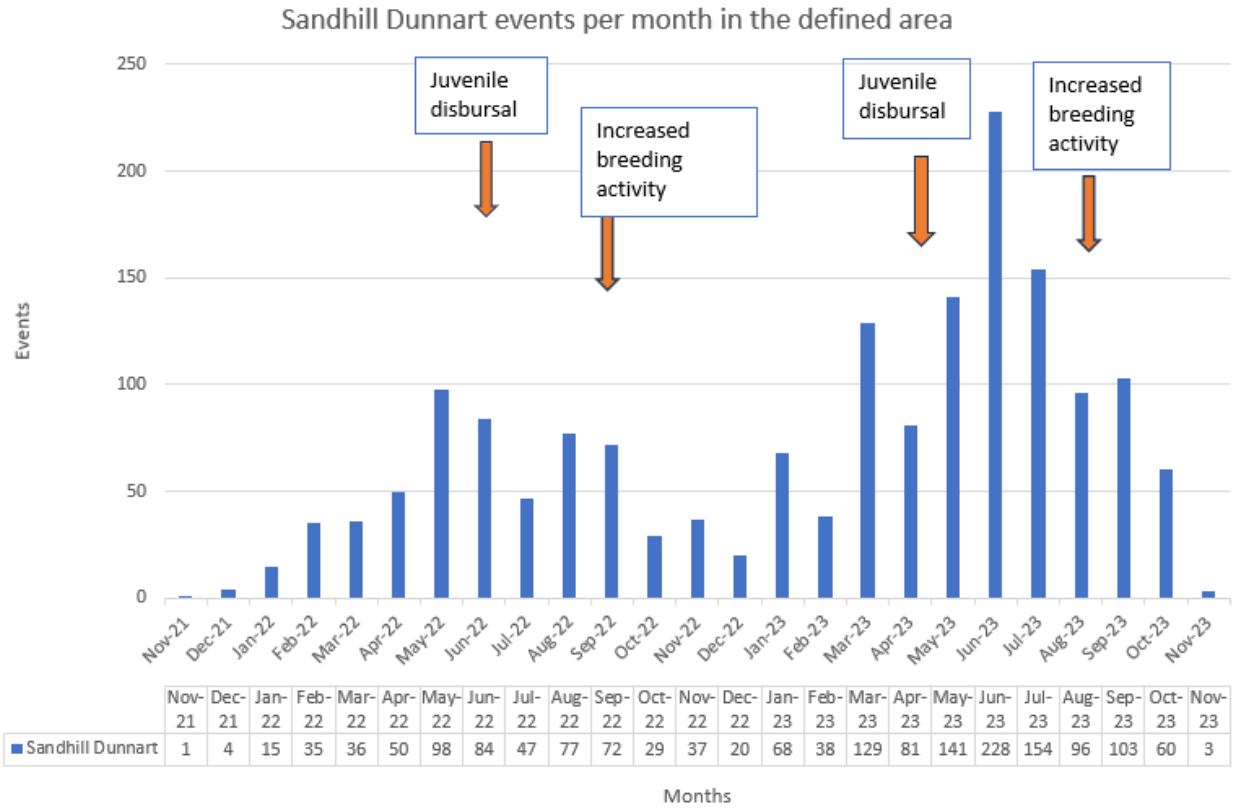

Figure 2 *Raw data events per months demonstrating key activity periods for the species*

3.2 Feral species

Predatory feral species, consisting of cats and red foxes. Foxes were recorded on six camera devices over four sites over a two-year period represented 14 discreet events. This data represents limited fox activity at an average of one event every two months. It is unlikely based on these numbers that any animal is sedentary and likely represent individuals moving through the landscape. Twelve of the 14 discreet events were recorded at Sites 11 and 12. These two sites are located adjacent to a clay plan and gypsum rise just outside of the Defined Area. These areas are typical habitat rabbits prefer to dig (as the soil has greater structure) and is also the two locations where rabbits were recorded on camera. Therefore, it is reasonable to assume the foxes are utilising the clay pan/gypsum area to hunt rabbits and additionally traversing through the surrounding habitat. The fox event data per site is represented in Table 3.

Cats were recorded on 18 camera devices across 14 sites providing 24 discreet events over a two-year period (see Table 4). This data represents an average of one event every month over the two-year period. No specific sites had greater activity than others over the two-year period.

Other feral species, consisting of camels and rabbits were recorded on five camera devices across five sites providing 10 discrete events (see Table 5 and Table 6). Camel events were singular inferring irregular visitors to the Defined Area while the rabbits were restricted to Sites 11 and 12, which is positioned near to a clay pan/gypsum area which is likely utilised for warrens.

There is no clear correlation between temporal observations of ferals species and SHD prevalence or SHD juvenile dispersal.

Table 3 *Displays captured events of foxes (Vulpes vulpes) activity per site over two years.*

Site	Number of Captured Event(s) – red fox
Site 8 A	1
Site 11 A	3
Site 11B	4

Site	Number of Captured Event(s) – red fox
Site 12 A	3
Site 12 B	2
Site 13 A	1

Table 4 Displays captured events of feral cat (Felis catus) activity per site over two years.

Site	Number of Captured Event(s) – feral cat
Site 7A	1
Site 7 B	1
Site 8 A	2
Site 9 A	1
Site 9 B	1
Site 10 B	1
Site 15 B	1
Site 17 B	1
Site 18 B	2
Site 19 A	1
Site 20 A	1
Site 20 B	2
Site 21 B	1
Site 22 B	2
Site 23 A	1
Site 28 B	3
Site 30 A	1
Site 30 B	1

Table 5 Displays captured events of camel (Camelus dromedarius) activity per site over a two-year period.

Site	Number of Captured Event(s) – Camels
Site 15 A	1
Site 29 A	1

Table 6 Displays captured events of rabbit (Oryctolagus cuniculus) activity per site over a two-year period.

Site	Number of Captured Event(s) – Rabbits
Site 11 A	3
Site 12 A	1
Site 12 B	4

3.3 Baseline parameters and triggers

The daily events and 90-day moving average timeseries data are presented in Figure 3 below. The two-year dataset results in a total of 642 90-day moving average data points.

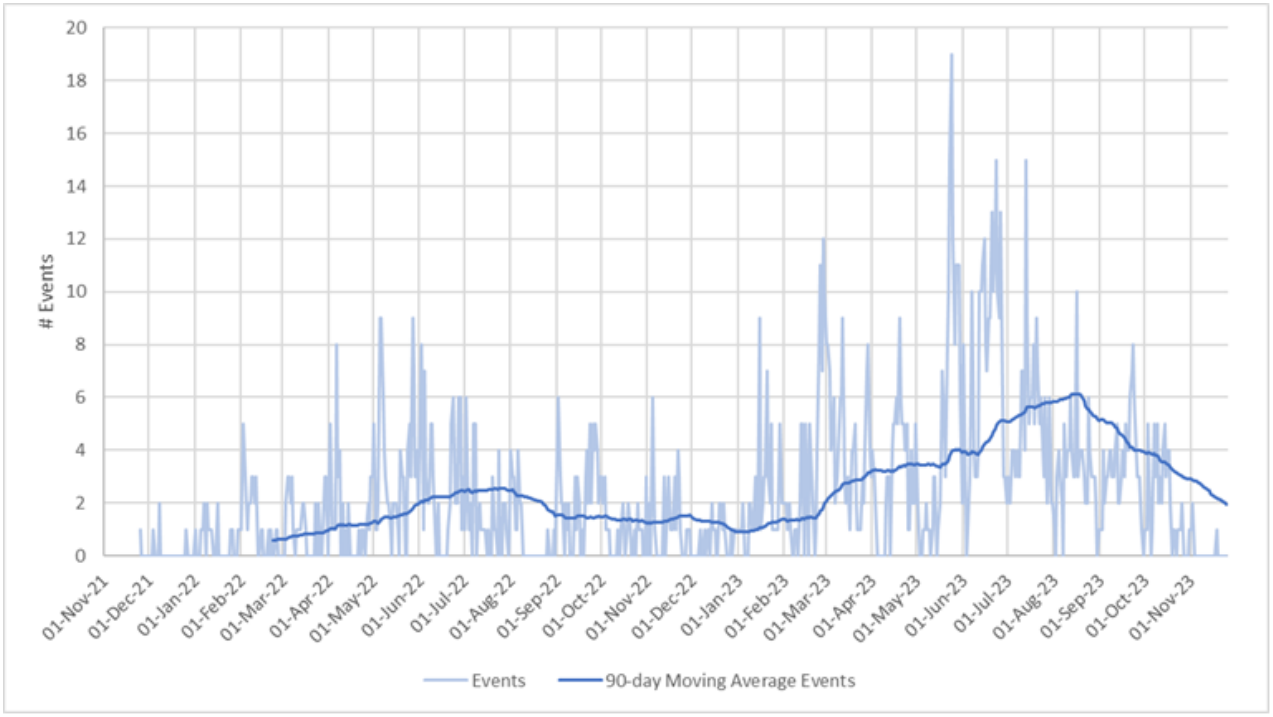

Figure 3 *Daily events and 90-day moving average timeseries data*

The 90-day moving average data ranges from a minimum of 0.6 events per day (across all 50 sites) to a maximum of 6.1 events per day, with a median of 2.2 events per day. The statistical distribution of the 90-day moving average data is displayed in Figure 4 below.

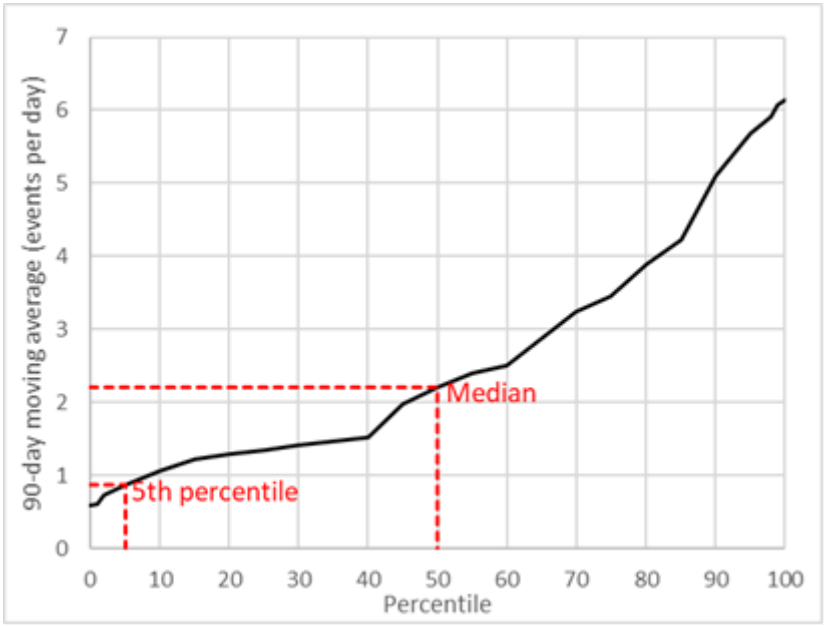

Figure 4 *The statistical distribution of the 90-day moving average data*

The 5th percentile of the baseline data is a 90-day average of 0.9 events per day. Future monitoring data will need to be processed in the same manner as presented in Figure 3 and Figure 4 to compare future data to the two-year baseline. Any future data indicating prolonged durations of 90-day moving averages of less than 0.9 events will indicate a low level of sandhill dunnart presence within the monitoring areas that is statistically rare when compared to the baseline data and should therefore be further investigated to determine possible causes for the low activity.

As the event data is highly seasonal, with events generally peaking though out winter and reducing during summer, expansion of this approach could be applied in future to develop separate thresholds for summer and winter if required when more camera imagery is available.

Raw data for feral species would require examination and determine if number present exceed those presented in Section 3.2 i.e. fox one event every two month or cats one event per month.

3.4 Feral management consideration

With the current data in mind and feral species persisting at low levels a targeted approach could be adopted for the fox and rabbit. Should management action be required, Sites 11 and 12 area (including the claypan/gypsum area) should be prioritised for fox and rabbit targeted baiting.

If a Felixer is acquired, then one unit could be utilised and moved throughout the Defined Area rather than targeting specific sites. Alternatively the baiting for cats should focus initially on camera locations where they have been r

4. References

Churchill, S. (Ed.). 2001a. Recovery plan for the sandhill dunnart (*Sminthopsis psammophila*). Department for Environment and Heritage, Adelaide, South Australia.

Churchill, S. (Ed.). 2001b. Survey and ecological study of the sandhill dunnart, *Sminthopsis psammophila*, at Eyre Peninsula and the Great Victoria Desert. Department for Environment and Heritage, Adelaide, South Australia.

GHD (2021a). Sandhill Dunnart Camera Trap Monitoring - Small mammal identification and analysis. Unpublished report for Vimy Resources, Perth, Western Australia.

GHD (2021b). Sandhill Dunnart Study Plan. Unpublished report for Vimy Resources, Perth, Western Australia.

GHD (2022b). Sandhill Dunnart Conservation Management Area - Sandhill Dunnart and Feral Species Image Analysis. Unpublished report for Deep Yellow.

GHD (2022a). Sandhill Dunnart Conservation Management Area - Sandhill Dunnart and Feral Species Image Analysis. Unpublished memo for Deep Yellow

Riley, J, L. (2020). Spatial ecology and conservation management of the endangered sandhill dunnart, *Sminthopsis psammophila*. A dissertation submitted to the University of Bristol in accordance with the requirements for award of the degree of PhD in the Faculty of Life Sciences.

Vimy Resources (2015) Camera Trapping Protocol – Sandhill Dunnart (*Sminthopsis psammophila*) – Mulga Rock Project Area. Unpublished report

Ward, M. J., J. Read, and K.E. Moseby, K. (Eds). 2008. Monitoring Sandhill dunnarts, *Sminthopsis psammophila*, in the Great Victorian Desert. A Report to the Wildlife Conservation Fund. Department for Environment and Heritage. Adelaide, Australia.

Woinarski, J.C.Z. and A.A. Burbidge. 2016. *Sminthopsis psammophila*. The IUCN Red List of Threatened Species 2016: e.T20293A21947794. www.iucnredlist.org. Accessed 30th December 2016.

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