

Appendix A: Modification Notice - Regulation 22

Interest holder	Tamboran B2 Pty Ltd	EMP Title	Beetaloo Basin Velkerri, Civil Construction EP76 S2 EMP (ORI4-1)		Unique EMP ID	ORI4-1	Mod #	1	Date	30 August 2024																				
Brief Description	<p>The purpose of the regulation 22 is to clearly identify the access tracks and the gravel pits described in the Beetaloo Basin Groundwater Monitoring Bore Installation Program - Velkerri 76 EMP (ORI2-1), including the regulation 22 (ORI2-1.1) which was accepted by the Minister on 14 August 2020, are incorporated into the <i>Beetaloo Sub-basin Velkerri Civil Construction EP 76 S2 EMP</i> (ORI4-1).</p> <p>Activities that will be subsumed into the Velkerri 76 S2 Civil EMP (ORI4-1) include:</p> <ul style="list-style-type: none"> - Construction, operation and management³ of three (3) gravel pits <p><i>Table 1 Gravel pits incorporated under the Velkerri 76 S2 Civil EMP (ORI4-1.1)</i></p> <table border="1"> <thead> <tr> <th>Name</th> <th>Size (ha)</th> <th>Zone</th> <th>Easting</th> <th>Northing</th> </tr> </thead> <tbody> <tr> <td>VGP1 (constructed)</td> <td>3.0</td> <td>53</td> <td>435623</td> <td>8135301</td> </tr> <tr> <td>VGP2</td> <td>3.0</td> <td>53</td> <td>433019</td> <td>8135263</td> </tr> <tr> <td>VGP3</td> <td>3.0</td> <td>53</td> <td>397906</td> <td>8136039</td> </tr> </tbody> </table> <ul style="list-style-type: none"> - Construction, maintenance and ongoing management of 5 km of new access tracks to well pad and gravel pits - Ongoing maintenance of 80 km of existing pastoral access track (original constructed by the pastoralist) - Decommissioning and rehabilitation of the infrastructure. 										Name	Size (ha)	Zone	Easting	Northing	VGP1 (constructed)	3.0	53	435623	8135301	VGP2	3.0	53	433019	8135263	VGP3	3.0	53	397906	8136039
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VGP1 (constructed)	3.0	53	435623	8135301																										
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VGP3	3.0	53	397906	8136039																										
Geospatial files included?	Yes																													
Does the proposed change result in a new, or increased, or potential or actual environmental impact or risk?	If an INCREASE in the existing potential or actual environmental risk, is it provided for in the EMP?	Does the proposed change require additional mitigation measures to be included?	Has additional stakeholder engagement been conducted?	Does it require additional environmental performance standards and measurement criteria?	Does it affect compliances with Sacred Site Authority Certificates?	Does it affect current rehabilitation, weed fire, wastewater, erosion and sediment control, spill or emergency response plans?	Will the environmental outcome continue to be achieved and will the impacts and risks be managed to ALARP and acceptable?																							
No.	Yes.	No.	Not applicable.	No.	No.	No.	Yes.																							
The Velkerri 76 S2 Civil EMP (ORI4-1) includes provision for gravel pit and access track management and rehabilitation at completion. All clearing activities approved under ORI2-1 are to be fully incorporated into ORI4-1.	The Velkerri 76 S2 EMP (ORI4-1) provides for impacts and risks associated with the construction, use, management and maintenance of gravel pits and access tracks.	Existing mitigation measures are in place covering land clearing, erosion and sediment control. The gravel pits and the access tracks will be fully subsumed into the Velkerri 76 S2 EMP (ORI4-1).	Existing stakeholder engagement completed for all activities conducted on Velkerri 76 S2 well site.	The environmental performance standards and measurement criteria are sufficiently captured by the Velkerri 76 S2 Civil EMP (i.e. protection of soils, water, rehabilitation, etc.)	Clearing and activities associated with tracks and gravel pits are covered by AAPA Certificate C2019/039. This AAPA certificate covered all activities for the Velkerri 76 S2 well site.	Construction, use, management and maintenance of gravel pits and access tracks is already incorporated into the broader regulated activities associated with the Velkerri 76 S2 site. These activities are captured in existing plans such as rehabilitation, weed, fire, wastewater, ESCP, spill response plan and emergency response plan. It is noted that the 80 km of existing pastoral access tracks was constructed by the pastoralist.	The environmental outcomes pertaining to the protection of soils, surface water, groundwater, ecology and community are covered by the Velkerri 76 S2 Civil EMP (ORI4-1). The impacts and risks will continue to be managed to ALARP and acceptable.																							

³ Includes rehabilitation of the infrastructure.

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Additional contextual information	<p>The <i>Beetaloo Basin Velkerri, Civil Construction EP76 S2 EMP (ORI4-1)</i> already incorporates the regulated activities associated with the use, management and rehabilitation of gravel pits and access tracks for the Velkerri 76 S2 well site without specifying or identifying the infrastructure. The purpose of this regulation 22 is to enable the gravel pits and access tracks originally described in the <i>Beetaloo Basin Groundwater Monitoring Bore Installation Program - Velkerri 76 EMP (ORI2-1)</i> and subsequent regulation 22 (ORI2-1.1) to be fully incorporated into <i>Beetaloo Basin Velkerri, Civil Construction EP76 S2 EMP (ORI4-1)</i>, inclusive of clearing limits.</p>								

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Current EMP text					Amended EMP text				
<p>1 Executive Summary</p> <p>This EMP covers a series of low impact civil construction activities required to enable Origin's 2019/20 exploration program. The civil construction program will involve the installation of a camp pad, lease pad, helipad, stockpile storage area and wet weather laydown yard.</p> <p>The activities pertaining to this EMP will occur within the approved subject land area which has been approved by the custodians and the NLC and covered by AAPA Certificate C2019/039. The total area of disturbance is estimated to be 7.4 ha and the activities include:</p> <ul style="list-style-type: none"> - Establishment of a 4.5 hectare (ha) exploration lease pad, 1 hectare wet weather storage laydown yard, a 1.2 ha camp pad, 0.5 ha helipad and a 0.2 ha soil stockpile area - Construction of a drilling sump, cellar and sediment basin on the cleared lease pad - Extraction of gravel from the existing gravel pits to provide material for improving stability and integrity of the access tracks and lease pad; and - Installation of fencing, gates and grids. <p>For the preparation of this EMP, a Land Condition Assessment was completed in August 2018 to review the physical, natural and cultural heritage environment of the proposed exploration activities.</p>					<p>1 Executive Summary</p> <p>This EMP covers a series of low impact civil construction activities required to enable Tamboran's exploration program. The civil construction program will involve the installation of a camp pad, lease pad, helipad, stockpile storage area and wet weather laydown yard.</p> <p>The activities pertaining to this EMP will occur within the approved subject land area which has been approved by the custodians and the NLC and covered by AAPA Certificate C2019/039. The total area of disturbance is estimated to be 27.3 ha and the activities include:</p> <ul style="list-style-type: none"> - Establishment of a 4.5-hectare (ha) exploration lease pad, 1 ha wet weather storage laydown yard, a 1.2 ha camp pad, 0.5 ha helipad and a 0.2 ha soil stockpile area - 2 km of new access tracks into Velkerri 76 S2 well site and gravel pits (2.9 ha) - Construction of a drilling sump, cellar and sediment basin on the cleared lease pad - Extraction of gravel from the existing gravel pits (VGP1, VGP2 and VGP3) to provide material for improving stability and integrity of access tracks and lease pad (9 ha) - Operation, management and maintenance of 80 km of existing pastoral access track originally constructed by the pastoralist (8 ha) - Installation of fencing, gates and grids. <p>For the preparation of this EMP, a Land Condition Assessment was completed in August 2018 to review the physical, natural and cultural heritage environment of the proposed exploration activities.</p>				
<p>2.3 Project Description</p> <p>Origin is proposing to construct civils infrastructure within the Velkerri 76 S2 location required for the drilling, stimulation and testing of an exploration well within the Exploration Permit 76. The data collected from the proposed Velkerri 76 S2 exploration well will be utilised to determine the technical and commercial viability of the Kyalla shale resource within Origin's exploration tenure.</p> <p>The boundary of this EMP is restricted to the civil construction activities required to undertake future proposed drilling, stimulation and well testing activities of the Velkerri 76 S2 exploration well. The boundary of the civil construction program defined as the area which may be affected by exploration activities. This includes:</p> <ul style="list-style-type: none"> - Construction of an exploration well lease pad (4.5 ha) and wet weather laydown yard (1 ha) - Construction of a temporary camp lease pad (1.2 ha) - Construction of a helipad (0.5 ha); - Stockpile area (0.2 ha); and - Extraction of gravel from existing approved gravel pits and associated access tracks approved under NT2050-15-MP-017. <p>The proposed locations of the infrastructure is within the NLC and AAPA cleared subject land area and is provided in Table 1, Figure 2, Figure 3 and Figure 4. It is noted that the nominated areas for infrastructure may be changed slightly to minimise environmental and heritage impacts (e.g. significant tree or habitat avoidance, or any chance finds with archaeological artefacts). Such modification will be made within the existing surveyed areas.</p>					<p>2.3 Project Boundary</p> <p>Tamboran is proposing to construct civils infrastructure within the Velkerri 76 S2 location required for the drilling, stimulation and testing of an exploration well within the Exploration Permit 76. The data collected from the proposed Velkerri 76 S2 exploration well will be utilised to determine the technical and commercial viability of the Kyalla shale resource within Tamboran's exploration tenure.</p> <p>The boundary of this EMP is restricted to the civil construction activities required to undertake future proposed drilling, stimulation and well testing activities of the Velkerri 76 S2 well site. The boundary of the civil construction program defined as the area which may be affected by exploration activities. This includes:</p> <ul style="list-style-type: none"> - Construction of an exploration well lease pad (4.5 ha) and wet weather laydown yard (1 ha) - Construction of a temporary camp lease pad (1.2 ha) - Construction of a helipad (0.5 ha) - Stockpile area (0.2 ha) - 2.4 km of new access tracks into Velkerri 76 S2 well site and gravel pit VGP3 (2.9 ha) - Construction, operation, management and maintenance of the approved gravel pits (VGP1, VGP2 and VGP3), (9 ha) - Operation, management and maintenance of 80 km of existing pastoral access track, originally constructed by the pastoralist (8 ha). <p>The proposed locations of the infrastructure is within the NLC and AAPA cleared subject land area and is provided in Table 1, Table 2, Figure 2, Figure 3, Figure 4 and Figure 4A. It is noted that the nominated areas for infrastructure may be changed slightly to minimise environmental and heritage impacts (e.g. significant tree or habitat avoidance, or any chance finds with archaeological artefacts). Such modification will be made within the existing surveyed areas.</p>				

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Current EMP text

Table 2 Existing Gravel pit locations approved under NT-2050-15-MP-017

Exploration Permit	Infrastructure Name	Station	Zone*	Approx Easting	Approx Northing	Disturbance Area (ha)
EP117	Gravel pit 4	Amungee Mungee	53	397906	8136039	1.0
EP117	Gravel pit 5	Amungee Mungee	53	403386	8135809	1.0
EP117	Gravel pit 6	Amungee Mungee	53	406249	8135276	1.0
EP 76	Gravel pit 7	Amungee Mungee	53	435749	8135306	1.0
Total Existing Disturbance Area (Ha)						4

Amended EMP text

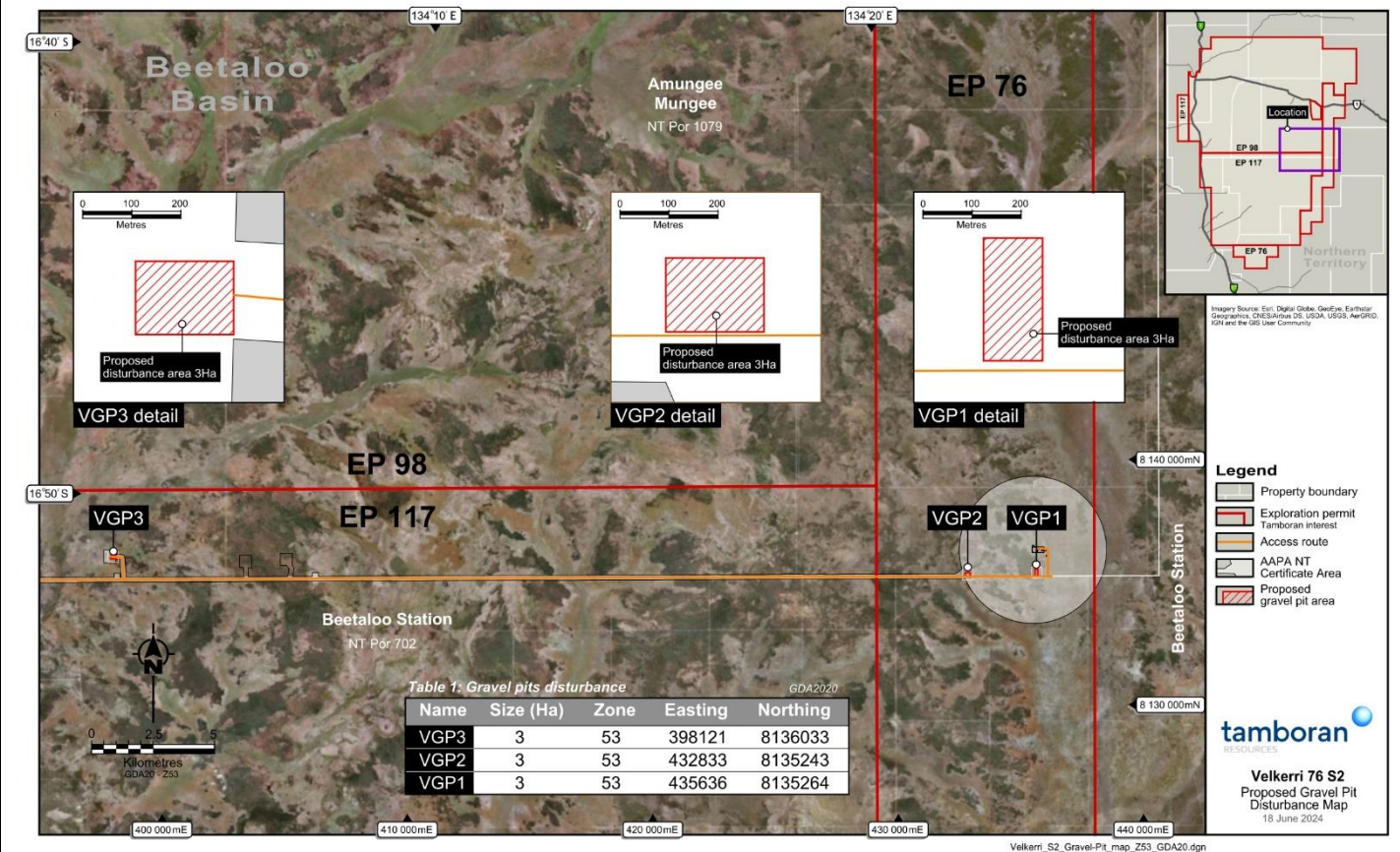
Table 2 Gravel pit locations

Exploration Permit	Infrastructure Name	Station	Zone*	Approx Easting	Approx Northing	Disturbance Area (ha)
EP76	VGP1	Amungee Mungee	53	435623	8135301	3.0 [^]
EP 76	VGP2	Amungee Mungee	53	433019	8135263	3.0 [^]
EP117	VGP3	Amungee Mungee	53	397906	8136039	3.0 [^]
Total Disturbance Area (Ha)						9.0

* Universal Transverse Mercator (UTM) geographic coordinate system is Geocentric Datum of Australia (GDA) 94.

[^] Gravel pit disturbance area previously approved under ORI2-1.1 regulation 22 dated 14 August 2020 incorporated under ORI4-1 regulation 22.

Figure 4A: Location of gravel pits VGP1 – VGP3



4.1.3 Gravel Pits

Gravel will be sourced from the four existing 1 ha borrow pits as outlined in Figure 3 and Table 2. Approximately 10,000m³ of gravel in total will be required to surface the lease, camp pads and access tracks. This may be extracted

4.1.3 Gravel Pits

Gravel will be sourced from one of the three gravel pits (VGP1, VGP2 or VGP3) as outlined in Figure 5 and Table 1. Approximately 10,000 m³ of gravel in total will be required to surface the lease, camp pads and access tracks. This may

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Current EMP text					Amended EMP text				
from one pit, or from multiple pits (Gravel pits 4 – 7) depending on the volume and quality of the gravel encountered at each proposed gravel pit location (Figure 3).					be extracted from one pit, or from multiple pits depending on the volume and quality of the gravel encountered at each proposed gravel pit location (Figure 4A).				
<p>4.1.4 Access tracks</p> <p>The access tracks used to access the site have been previously approved under the Velkerri 76 S2 Groundwater Monitoring Bore EMP (NT-2050-15-MP-017). No additional clearing is proposed under this EMP.</p> <p>It should be noted that large sections of the Velkerri 76 S2 access tracks are likely to become impassable during the wet season. To avoid constructing all weather roads, helicopters may be used to transport workers and materials in and out of sites when access tracks become impassable.</p> <p>Controls:</p> <ul style="list-style-type: none"> - Erosion and sediment controls will be implemented in alignment with the erosion and sediment control plan NT-2050-15-MP-019 (Appendix E) - A road corridor permit has been obtained from DPIL to manage all works within the Stuart Highway corridor; including the potential impacts on traffic. 					<p>4.1.4 Access tracks</p> <p>The access track used to access the site was previously approved under the Velkerri 76 S2 Groundwater Monitoring Bore EMP (NT-2050-15-MP-017) which is now fully subsumed under this EMP (ORI4-1).</p> <p>The breakdown of access tracks is:</p> <ul style="list-style-type: none"> • 0.5 km to VGP1 • 0.5 km to VGP2 • 1.4 km to VGP3 • 82 km between Kyalla 117 N2 and Velkerri 76 S2 well pad <p>It should be noted that large sections of the Velkerri 76 S2 access tracks are likely to become impassable during the wet season. To avoid constructing all weather roads, helicopters may be used to transport workers and materials in and out of sites when access tracks become impassable.</p> <p>Controls:</p> <ul style="list-style-type: none"> - Erosion and sediment controls will be implemented in alignment with the erosion and sediment control plan NT-2050-15-MP-019 (Appendix E) - A road corridor permit has been obtained from DIPL to manage all works within the Stuart Highway corridor; including the potential impacts on traffic. 				