

SUMMARY ENVIRONMENTAL SURVEY REPORT

SURVEY DETAILS																													
PACR (Block – Infra. Surveyed):	David-Sth, Gathering Corridor,																												
Type of Survey:	Ecological General																												
Scope of Activity:	Rapid ecological survey of approximately 1.8km of 30m-wide gathering right-of-way (RoW)																												
Lot Plan:		Date of Survey: 11 March 2018																											
Facility Type / Activity:	<table style="width: 100%; border: none;"> <tr> <td style="border: none;"><u>Wells</u></td> <td style="border: none;"><input type="checkbox"/> Core</td> <td style="border: none;"><input type="checkbox"/> Exploration</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Appraisal</td> <td style="border: none;"><input type="checkbox"/> Development / Production</td> <td style="border: none;"><input type="checkbox"/> Monitoring</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Microseismic</td> <td style="border: none;"><input type="checkbox"/> Directional</td> <td style="border: none;"><input type="checkbox"/> Tiltmeter Array</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Gravel Pit</td> <td style="border: none;"><input type="checkbox"/> Campsite</td> <td style="border: none;"><input type="checkbox"/> Access Track</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Seismic</td> <td style="border: none;"><input checked="" type="checkbox"/> Gathering System</td> <td style="border: none;"><input type="checkbox"/> Security Hut</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Trunkline</td> <td style="border: none;"><input type="checkbox"/> Gas Pipeline</td> <td style="border: none;"><input type="checkbox"/> Water Pipeline</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Comms Towers</td> <td style="border: none;"><input type="checkbox"/> Fibre Optic Cable</td> <td style="border: none;"><input type="checkbox"/> Pond</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> FCS (Field Compression Station)</td> <td style="border: none;"><input type="checkbox"/> CPP (Central Processing Plant)</td> <td style="border: none;"><input type="checkbox"/> WTP (Water Treatment Plant)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Other:</td> <td style="border: none;"></td> <td style="border: none;"><input type="checkbox"/> Frac Pond</td> </tr> </table>		<u>Wells</u>	<input type="checkbox"/> Core	<input type="checkbox"/> Exploration	<input type="checkbox"/> Appraisal	<input type="checkbox"/> Development / Production	<input type="checkbox"/> Monitoring	<input type="checkbox"/> Microseismic	<input type="checkbox"/> Directional	<input type="checkbox"/> Tiltmeter Array	<input type="checkbox"/> Gravel Pit	<input type="checkbox"/> Campsite	<input type="checkbox"/> Access Track	<input type="checkbox"/> Seismic	<input checked="" type="checkbox"/> Gathering System	<input type="checkbox"/> Security Hut	<input type="checkbox"/> Trunkline	<input type="checkbox"/> Gas Pipeline	<input type="checkbox"/> Water Pipeline	<input type="checkbox"/> Comms Towers	<input type="checkbox"/> Fibre Optic Cable	<input type="checkbox"/> Pond	<input type="checkbox"/> FCS (Field Compression Station)	<input type="checkbox"/> CPP (Central Processing Plant)	<input type="checkbox"/> WTP (Water Treatment Plant)	<input type="checkbox"/> Other:		<input type="checkbox"/> Frac Pond
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RECOMMENDATIONS:																													
<input type="checkbox"/> No Environmental issues on site	<input checked="" type="checkbox"/> Environmental issues identified & surveyed	<input type="checkbox"/> Other:																											
<input checked="" type="checkbox"/> Fauna spotter required	<input checked="" type="checkbox"/> Protected Flora Trigger Map Survey required																												
SUMMARY OF ISSUES:																													
<p><i>Detail significant issues e.g. Protected plants, infrastructure in buffers etc.</i></p> <p>Unmapped 11.4.10, which qualifies as Brigalow TEC, is traversed by the 100m of the RoW. There is an existing 4m-wide track through this polygon on the proposed gathering RoW. Taking this into account, and assuming a restricted 15m-wide RoW, it is estimated that up to approximately 900m² of this unmapped TEC would be cleared for the construction of the gathering.</p> <p>The southern 281m of the proposed RoW on the Lot and adjacent road reserve is shown as 'high risk' on the State DEHP flora survey trigger mapping. A follow-up protected plant survey would be required for approval of the proposed infrastructure.</p>																													

SPECIFIC ENVIRONMENTAL DETAILS	
Brief description of broader vegetation / land use:	The subject property is a 522ha grazing Lot, owned by QGC, which contains existing CSG infrastructure, including wells and pipelines. More half of the lot area is comprised of remnant or advanced regrowth woodland to open forest vegetation.
Were any REs identified and what are they? Are these correctly mapped by DERM? (Map new extents) Updates to DERM RE Mapping IDs: What is the vegetation currently mapped as (RE and status) and what should it be mapped as? Refer to VMA Mapping and Biodiversity Status.	Virtually the whole of the proposed RoW in 83DY100 is shown as non-remnant in the State mapping. The survey confirmed non-remnant for 1,280m of the RoW. Advanced regrowth RE 11.4.10 (endangered), a Category 'B' ESA, was partially surveyed at survey points 5536-5550. The RoW traverses 100m of this polygon. Following a subsequent desktop study of the imagery, the extent of the polygon is estimated at 2.6ha. The southern 360m was 11.5.1 (no concern) advanced regrowth. The road reserve at the southern end contained remnant 11.5.1 as mapped.
Threatened Ecological Communities (TEC) identified: (Map polygon for inclusion on survey sketch). <i>Note: If impacted by or adjoining infrastructure complete Quantification Report.</i>	The unmapped 11.4.10, detailed above, qualifies as Brigalow TEC. There is an existing 4m-wide track through this polygon on the proposed gathering RoW. Taking this into account, and assuming a restricted 15m-wide RoW, it is estimated that up to approximately 900m ² of this unmapped TEC would be cleared for the construction of the gathering.
Were any Zone 4a or b Areas and Impact Zones identified/impacted (provide justification):	A Zone 4a zone, associated with unmapped 11.4.10 brigalow TEC, is traversed by the proposed RoW; direct impact on the TEC would be reduced by limiting clearing width to 15m.
High Value Regrowth present / impacted:	The RoW does not cross any mapped HVR
Regrowth Present/Impacted: <i>(i.e. Species & Common name/rough estimate when cleared in years)</i>	Advanced regrowth was traversed by 460m of the RoW; age estimated 20 years-old to >40 years old; dominant species include the following Trees <i>Acacia harpophylla (brigalow)</i> <i>Allocasuarina luehmannii (bulloak)</i> <i>Callitris glaucophylla (white cypress pine)</i> <i>Casuarina cristata (belah)</i> <i>Eucalyptus crebra (narrow-leaved ironbark)</i> <i>Eucalyptus pilligaensis (Piliga box)</i> <i>Eucalyptus populnea (poplar box)</i> <i>Eucalyptus tereticornis (Qld blue gum)</i> Small trees and shrubs <i>Acacia crassa (black wattle)</i> <i>Acacia deanei (green wattle)</i> <i>Acacia spectabilis (glory wattle)</i>
EVNT Flora species present / impacted (EPBC or NCA): <i>Note: If impacted by or adjoining infrastructure complete Quantification Report.</i> Is proposed infrastructure in a High-Risk Area identified on a Protected Plant Trigger Map (If Yes, detailed Flora Survey required – refer to Flora Survey Guidelines – Protected Plants).	The southern 281m of the proposed RoW on the Lot and adjacent road reserve is shown as 'high risk' on the State DEHP flora survey trigger mapping. No EVNT flora species were detected in this area or in the rest of survey area during this rapid ecological survey. A follow-up protected plant survey would be required for approval of the proposed infrastructure.
EVNT Fauna – Is the area mapped as Indicative Habitat for any EVNT species (EPBC or NCA): If 'Yes', does the area contain microhabitat features as per the SSMP which would indicate likely habitat for the species OR was the	Indicative habitat for <i>Egernia rugosa</i> (yakka skink) is associated with the mapped remnant vegetation on the southern part of the Lot and the road reserve. The survey did not detect suitable habitat features for this species on the RoW traverse. No EVNT fauna species were detected during the survey.

<p>species sighted?</p> <p>Survey microhabitat features or fauna encounters for inclusion on survey sketch. Are impacts to MNES fauna habitat short-term, minimal and recoverable?</p>	
<p>Watercourses and Wetlands:</p>	<p>No watercourses or wetlands were intersected by the surveyed RoW.</p>
<p>Invasive plants: (Survey invasive plants for inclusion on sketch)</p>	<p><i>Opuntia aurantiaca</i> (tiger pear), <i>O. stricta</i> (common pest pear) and <i>O. tomentosa</i> (velvety tree pear) –Category 3 restricted invasive plants - occasional plants across survey area;</p> <p>other invasive plants include <i>Sclerolaena birchii</i> (galvanised burr) occasional to scattered in some pasture areas</p>
<p>Additional Considerations:</p>	<p>Sodic dispersible soils were identified across the survey area; refer to the separate Soils Report for locations and treatment recommendations</p>
<p>This report has been prepared in accordance with DSEWPAC Condition 5g (iii) for EPBC Approval 2008/4398.</p> <p>This survey has been completed by a qualified ecologist in accordance with QGC's certified survey methodology. Survey approval applies to the location & environmental constraints outlined in this report. At the time of submission, the ecologist deems the report to be satisfactory.</p> <p>Features of ecological and environmental significance were identified and mapped where present in accordance with QGC's Environmental Field Constraints Assessment Guidelines.</p>	
	<p>20 March 2018</p>
<p>Completed By</p>	<p>Date</p>
<p>¹Detail the rapid Fauna assessment: I.e. methodology and/or if a detailed, in-depth fauna survey is required prior to construction works. ²Quantification Methodology: I.e. individual counting, radius method, defining density/m² and multiply by total area</p>	