

14 June 2022

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Re: Replacement pipeline between Dungowan Village and Calala - Addendum REF #1

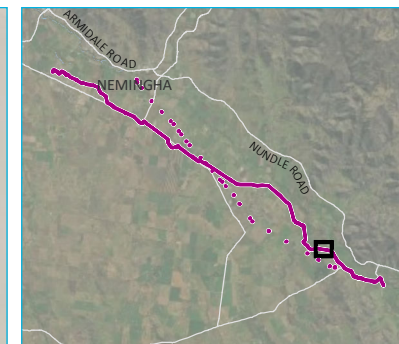
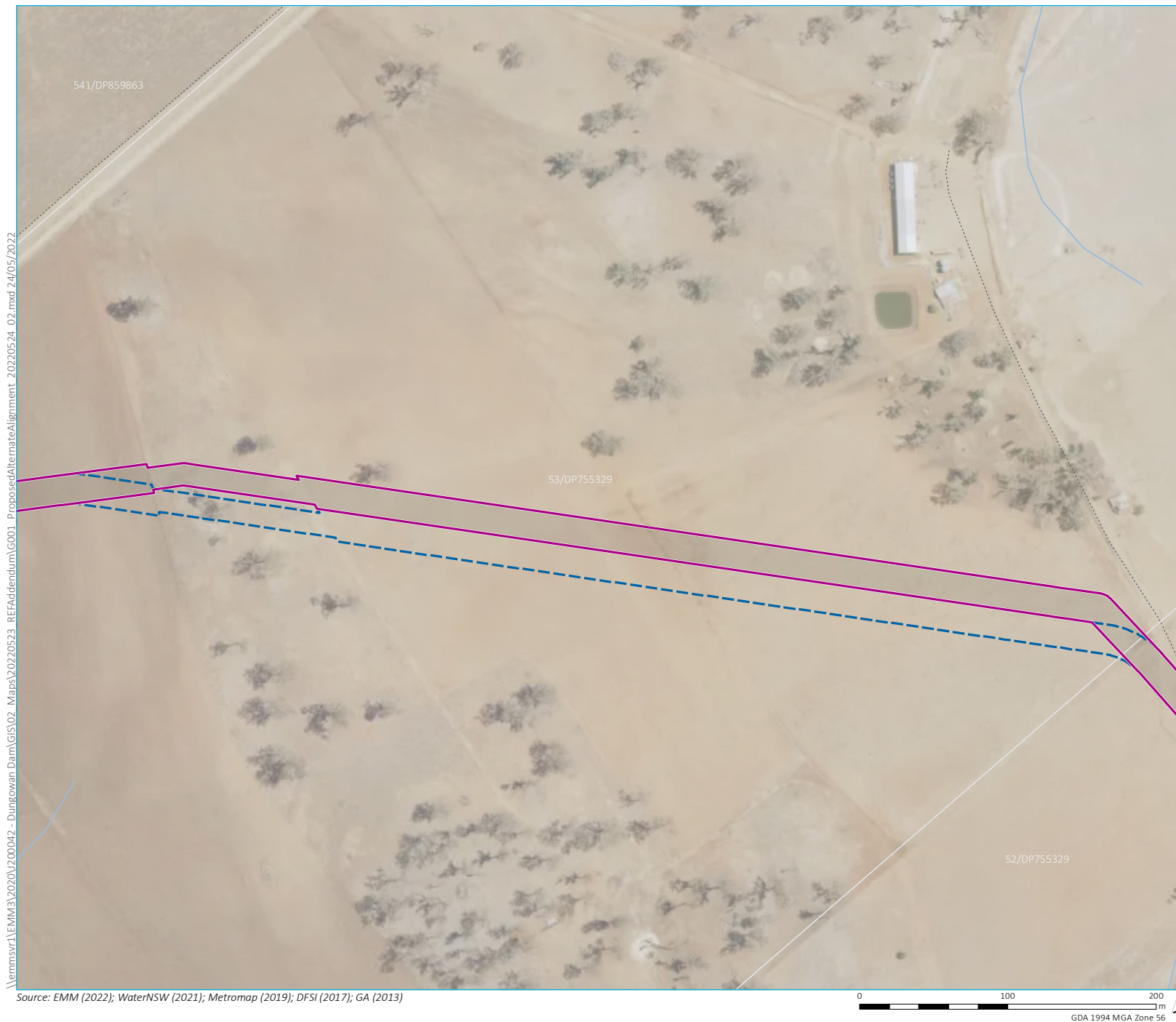
1 Introduction

Water Infrastructure NSW (WINSW) is responsible for leading the development and delivery of key government water infrastructure projects and programs across the state. WINSW is currently delivering a replacement pipeline and associated infrastructure between Dungowan Village and Calala to enable water from Dungowan Dam and Chaffey Dam to be supplied to Calala Water Treatment Plant (WTP). This section of the replacement pipeline will be about 21 km and extend from just west of the Peel River, through mainly private agricultural land, along some local road corridors and through parts of Calala, to the Calala WTP. Around 15 km of the existing Dungowan pipeline will also be upgraded through the insertion of a 'sleeve' and retained to provide continued water supply to Tamworth Regional Council customers.

EMM Consulting Pty Ltd (EMM) previously prepared the *Replacement pipeline between Dungowan Village and Calala Review of Environmental Factors* (Rev 6, January 2022) that considers the environmental impact of the construction and operation of the replacement pipeline and associated ancillary infrastructure. WINSW is the determining authority under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the proposed activity. In accordance with Section 5.5 of the EP&A Act, WINSW is also responsible for assessing all matters affecting or likely to affect the environment as a result of the proposal. The REF was determined by WINSW in January 2022 (WINSW CM9 ref: V21/74674#2) and construction has since commenced.

Construction planning and consultation with impacted landowners has identified a revised alignment for the replacement pipeline with changes proposed in three sections. The revised alignment for each of the three sections is shown in Figure 1.1, Figure 1.2 and Figure 1.3. Impacts to these areas were not assessed in the determined REF, therefore further assessment has been carried out to identify potential impacts of the revised alignment.

This report provides an assessment of impacts associated with the revised alignment and should be read together with and as an addendum to the *Replacement pipeline between Dungowan Village and Calala Review of Environmental Factors* (EMM, Rev 6 January 2022) (the determined REF).



KEY

- Proposed alternate alignment
- Existing construction footprint
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary

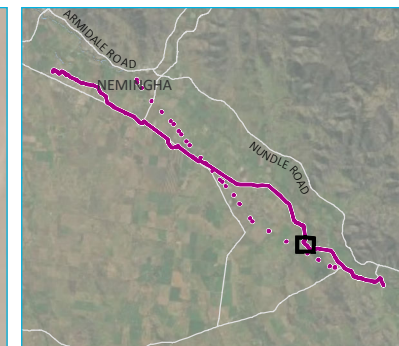
Proposed alternate alignment

Figure 1.1

\\lemmsvr1\EMM3\2020\200042 - Dungowan Dam\GIS\02 Maps\20200523 REFAddendum\0001_ProposedAlternateAlignment_20220524_02.mxd 24/05/2022



Source: EMM (2022); WaterNSW (2021); Metromap (2019); DFSI (2017); GA (2013)

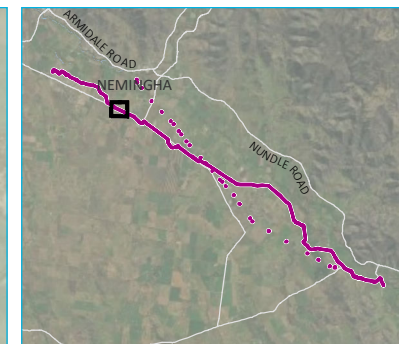
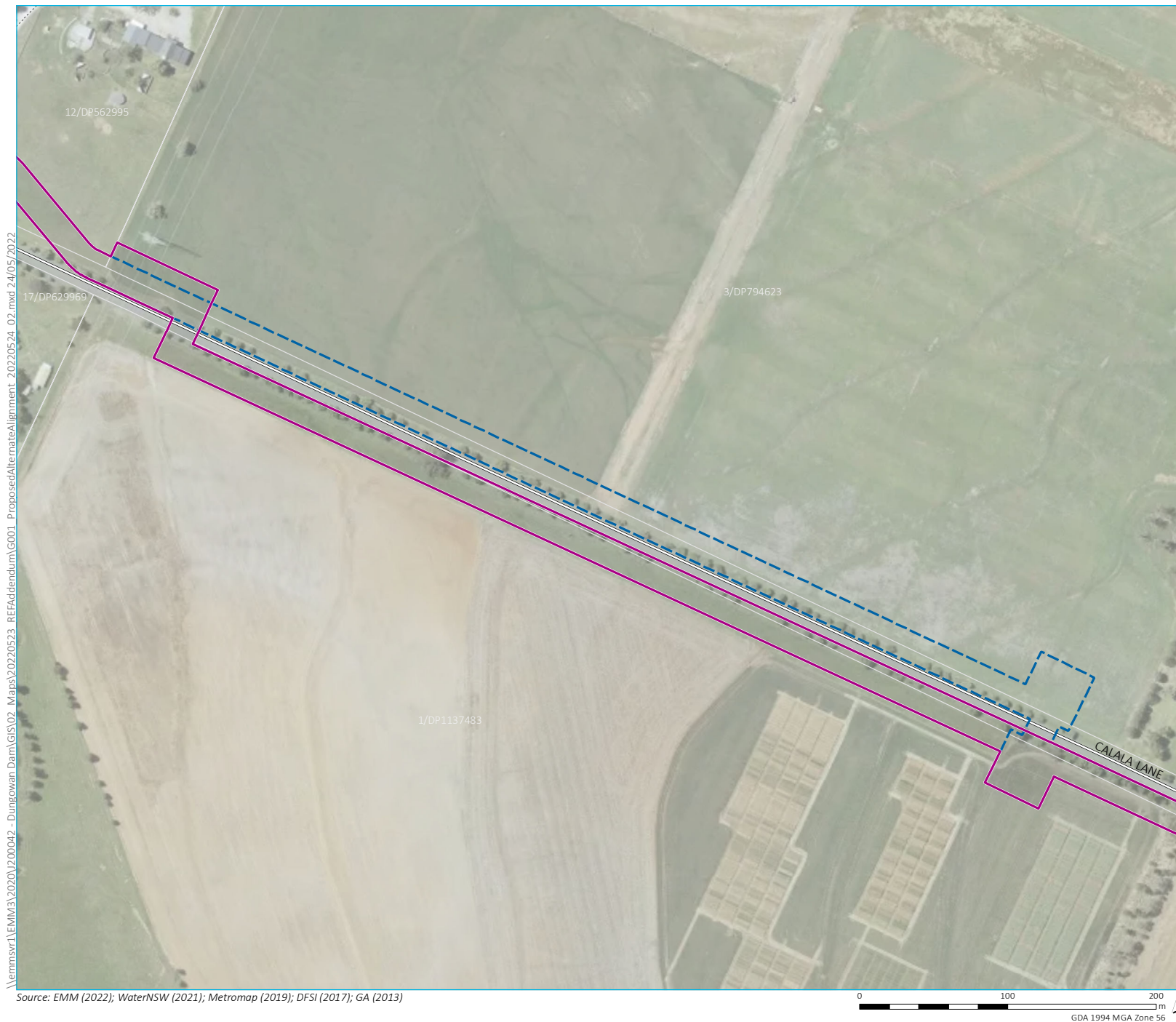


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Proposed alternate alignment

Figure 1.2



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Proposed alternate alignment

Figure 1.3

2 Description of the proposed change

The proposed works will involve three minor changes in pipeline alignment. The changes are required based on site specific constraints identified through construction planning and consultation with landholders. The proposed changes are outlined below:

- **Alignment 1** – within Lot 53/DP755329 and as shown in Figure 1.1, the revised alignment of the pipeline involves shifting a section around 725 m in length to the north of the existing alignment by approximately 20 metres (m). The revised alignment will allow for the avoidance of two trees, a rocky outcrop and recently installed irrigation infrastructure.
- **Alignment 2** – within Lot 541/DP859863 and as shown in Figure 1.2, the revised alignment involves shifting a pipeline section approximately 280 m in length to the north east of the existing alignment by approximately 10 m. The revised alignment will enable the works to avoid impacts to trees along the southern edge of the alignment.
- **Alignment 3** – currently within Lot 3/DP794623 and as shown in Figure 1.3, the revised alignment would shift a section of the pipeline approximately 630 m in length from the north to the south side of Calala Lane into Lot 1/DP1137483. There would also be a small increase in disturbance area on the northern side of the road where the pipeline crosses Calala Lane. The change is required based on current land use requirements and access.

The changes outlined above would result in an overall reduction in the construction footprint by 0.04 ha from 47.59 ha to 47.55 ha. There are no other changes to the project design or construction methods.

3 Environmental assessment

An assessment (Table 3.1) has been undertaken to compare the environmental impacts of the revised alignment relative to the environmental impacts of the project as described within the determined REF. The assessment focuses only on the environmental issues and impacts relevant to the revised alignment.

Table 3.1 Environmental assessment of proposed change

Issue	Assessment
Aboriginal cultural heritage	<p>An Aboriginal cultural heritage assessment (ACHA) was prepared as part of the determined REF. The ACHA involved desktop assessment, detailed consultation and field investigations in accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010). Seven Aboriginal heritage objects, site and/or potential deposits were identified within the original site study area with potential to be directly or indirectly affected by the replacement pipeline.</p> <p>Both Alignment 1 and Alignment 3 will not impact on any areas identified in the ACHA as having known Aboriginal heritage values or sensitivity. No previously identified Aboriginal objects, sites and/or potential deposits are located within the vicinity of these two proposed changes, with the nearest being several hundred metres away.</p> <p>Alignment 2 is in close proximity to an area adjacent Sandy Creek and its tributaries previously identified as having potential for surface and buried stone artefactual material to be present. The revised alignment is, however, within 10 m of archaeological surface and test excavations previously completed to validate these deposits and which found no cultural materials in this specific locale. The past activity along the creek appears to generally have been further northwest and closer the junction with Peel River. As such, it is considered of low risk for cultural materials to be present within this revised alignment.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential impacts to Aboriginal cultural heritage within the redesigned alignment locations. As such works may proceed with caution and in accordance with the following recommendations:</p> <ul style="list-style-type: none">• it is considered that there is a low risk of Aboriginal objects being present within the project area. However, the nature of disturbance does not preclude the potential for isolated finds, which is a common site type

Table 3.1 **Environmental assessment of proposed change**

Issue	Assessment
	<p>across the region, even in disturbed contexts. In the event of unexpected Aboriginal objects, sites or places (or potential Aboriginal objects, site or places) are discovered during construction, all works in the vicinity must cease and the WINSW guidelines for managing the unexpected discovery of Aboriginal objects, sites and/or human remains should be implemented.</p> <ul style="list-style-type: none"> if human skeletal material less than 100 years old is discovered, the <i>Coroners Act 2009</i> requires that all works should cease, and the NSW Police and the NSW Coroner's Office should be contacted. Traditional Aboriginal burials (older than 100 years) are protected under the <i>National Parks and Wildlife Act 1974</i> and should not be disturbed. Interpreting the age and nature of skeletal remains is a specialist field and an appropriately skilled archaeologist or physical anthropologist should therefore be contacted to inspect the find and recommend an appropriate course of action. Should the skeletal material prove to be archaeological Aboriginal remains, notification of Heritage NSW and the Local Aboriginal Land Council will be required. Notification should also be made to the Commonwealth Minister for the Environment, under the provisions of the <i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>.
Terrestrial biodiversity	<p>A Biodiversity Development Assessment Report (BDAR) was prepared for the determined REF to address the impacts of the project on terrestrial biodiversity. The BDAR was prepared using the Biodiversity Assessment Method (BAM) and included a desktop database review and four separate field investigations. The field investigations were undertaken to map the plant community Types (PCTs) within the study area and identify potential habitat for threatened fauna species under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) or <i>NSW Biodiversity Conservation Act 2016</i> (BC Act). Targeted surveys were also carried out as part of the field investigations to identify any threatened species. The vegetation mapping completed also covered the area of the revised alignment.</p> <p>Vegetation within the project footprint consists of non-native vegetation and two native plant community types (PCTs), comprising of PCT 599- Blakely's Red Gum - Yellow Box grassy tall woodland on flats and hills in the Brigalow Belt South Bioregion and Nandewar Bioregion and PCT 78- River Red Gum riparian tall woodland / open forest wetland in the Nandewar Bioregion and Brigalow Belt South Bioregion.</p> <p>One of the PCTs present is associated with the threatened ecological community, White Box Yellow Box Blakely's Red Gum Woodland, which is listed as a critically endangered ecological community (CEEC) under the NSW BC Act. All of PCT 599 is classified in the BioNet Vegetation Classification as 'wholly subset of' the CEEC and all occurrences of PCT599 in the project envelope, except for derived exotic grassland, are considered to be part of the BC Act listed CEEC.</p> <p>A wide variety of threatened species were predicted to be associated with the PCTs in the project footprint by the Biodiversity Assessment Method Calculator (BAMC).</p> <p>The revised alignment will reduce the amount of native vegetation clearing required for the project. Changes associated with Alignment 1 within Lot 53/DP755329 will also avoid impacts to an area of rocky outcrop that would provide potential habitat value. The proposed changes will not result in any additional impacts to threatened species habitat. The revised alignment will result in the following outcomes for native vegetation:</p> <ul style="list-style-type: none"> an overall reduction in clearing of PCT 599 from 46.5 ha to 46.45 ha; no change to the amount of clearing required to PCT 78. <p>The revised alignment would reduce the amount of native vegetation cleared by the project, which represents an improvement in outcomes for ecosystem and threatened species values. The revised alignment is considered to represent an improvement in the project's biodiversity outcomes.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential impacts to terrestrial biodiversity.</p>
Aquatic ecology	<p>An aquatic ecology assessment was completed for the determined REF and included desktop assessments and a field survey. The field survey assessed six sites across five 3rd order waterways and above that have the potential to intersect with the proposed pipeline alignment.</p> <p>The revised alignment will not involve any changes to existing waterway crossings or provide additional crossings of watercourses. Given the locality and minimal extent of the revised alignment, no additional impacts to aquatic ecology are expected.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential impacts to aquatic ecology.</p>
Surface water	<p>As part of the determined REF a desktop assessment was undertaken to assess the potential impacts of the project on flooding, surface water flows and surface water quality. Available information was supplemented with a review of photographs of the replacement pipeline alignment compiled during site investigations and field surveys.</p>

Table 3.1 **Environmental assessment of proposed change**

Issue	Assessment
	<p>The revised alignment will have no substantive effect on the pipeline's interactions with watercourses. The alignment will remain primarily located within the valley plains. Therefore, the locations of the proposed realignment will not result in any additional impacts to surface water to those that have been identified in the determined REF.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential impacts to surface water.</p>
Groundwater	<p>The determined REF identified the risk of the project affecting groundwater resources as low to negligible. Any negative groundwater interactions would be mitigated during construction through standard construction environmental management practices. The proposed changes in the replacement pipeline will not result in any changes to the project's potential to interact with groundwater resources. Impacts would remain consistent with those identified in the determined REF.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential impacts to groundwater.</p>
Soils, erosion and land capability	<p>The determined REF included an assessment of soils, erosion and land capability, that included both a desktop assessment and site inspections. The revised alignment, Alignment 3, will result in ground disturbance on Lot 1/DP1137483, which was not considered in the determined REF, however contains the same soil profiles as those previously assessed. No additional impacts of sedimentation or erosion are predicted as part of the revised alignment.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential impacts to soils, erosion and land capability.</p>
Contamination	<p>Existing potential contamination sources and impacts were identified in the determined REF. For the purpose of the contamination assessment, the site was divided into two sections: the north-western Calala section and the south-eastern Loomberah section. The determined REF identified a series of potential contamination sources and contaminants of potential concern (CoPC) in proximity to or intersecting the site.</p> <p>The revised alignment would involve no additional risks with respect to interactions with the identified potential contamination sources. The minor nature of the changes would result in no additional potential for the project to interact with unforeseen contamination sources. Therefore, the proposed change will have no additional impacts to contamination.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential impacts to contamination.</p>
Historical heritage	<p>The determined REF included a review of national, state and local heritage database registers and site surveys in June 2020 as well as November 2021. The determined REF identified 6 heritage items listed under Section 170 Register NSW Department of Primary Industries and 3 heritage items listed under the <i>Tamworth Regional Local Environment Plan 2010</i> within the vicinity of the survey area. The project would have no impacts on local or state listed historic heritage items, whilst 2 listed historic sites have the potential to be impacted by the project.</p> <p>The proposed changes are in locations distant to all of the heritage items identified in previous investigations on the alignment and as such no impacts to historic heritage are expected.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential impacts to historic heritage.</p>
Traffic and access	<p>The works would not result in any changes to the project access route or generate additional traffic beyond that envisioned in the determined REF. Alignment 3 would cross Calala Lane in a revised location, however would not change the nature of impacts assessed in the determined REF. No additional road closures would be required to facilitate the works.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential impacts to traffic.</p>
Noise and vibration	<p>A qualitative noise assessment was completed as part of the determined REF. The assessment found that construction of the pipeline would be transient, progressing along the alignment and is unlikely to impact sensitive receivers at any one location for more than a month. The construction noise assessment in the determined REF found that residences within 37m of pipeline construction activities may experience noise level above the 'highly affected' noise management level of 75dB LAeq,15min. The determined REF also found that residential receivers within 755m of pipeline construction may experience levels above the standard hours construction noise management level of 45 dB LAeq,15min. While some construction noise impacts were predicted for the pipeline construction, the overall level of impact was considered acceptable as the exposure period to such noise levels would be limited due to the transient nature of the works.</p>

Table 3.1 **Environmental assessment of proposed change**

Issue	Assessment
	<p>The revised alignment will not result in any additional sources of noise and vibration than previously assessed in the determined REF. However, there would be some minor changes in the distance of the pipeline construction to nearby residences. The revised alignment at Lot 53 / DP 755329 would result in pipeline construction works becoming closer to a nearby residence by 20 m. The alignment change at Lot 3/DP794623 would move a section of pipeline construction within around 70 m of a residence. This residence is already with 70 m of the pipeline so there would be no change to the maximum noise levels experienced at this receiver.</p> <p>The minor changes to distance of the works from nearby residences outlined above would remain within the tolerable level of noise impacts outlined in the determined REF.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential noise and vibration impacts of the works.</p>
Air quality	<p>An air quality assessment was prepared for the determined REF and found that the works would have a low to medium risk of dust soiling impacts, human health impacts and ecological impacts at surrounding sensitive receptors from uncontrolled emissions from earthworks, construction and truck track-out emissions. With the successful implementation of mitigation measures, the risk of impacts would be further reduced. Overall, construction dust is unlikely to represent a serious ongoing problem. Any effects would be temporary and relatively short-lived and would only arise during dry weather with the wind blowing towards a sensitive receptor, at a time when dust is being generated and if mitigation measures are not fully effective.</p> <p>The proposed realignment will result in minor changes to the distance of two residence to the works as outlined in the 'noise and vibration' section above. These minor changes would remain within the tolerable level of dust impacts outlined in the determined REF.</p> <p>The management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential air quality impacts of the works.</p>
Bushfire	The proposed realignment will not increase the projects potential bushfire risk.
Visual amenity	The proposed changes will not result in any changes to the overall visual amenity of the project.
Social and economic	The proposed changes have been implemented in response to consultation with impacted landowners and would have no additional social or economic impacts.

4 Conclusion

This addendum to the determined REF assessed the potential environmental impacts of a revised alignment for the Replacement pipeline between Dungowan Village and Calala. The assessment provided in Section 3 above found that the works would result in negligible changes to the project's environmental impacts. As a result, the management and mitigation measures specified in the determined REF are expected to provide suitable controls to manage potential impacts of the works.

Yours sincerely



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