

APA Technical Note - Western Outer Ring Main - Environment Effects Statement

TECHNICAL NOTE NUMBER: TN19

DATE: 16 September 2021

SUBJECT: Specialist Area: Groundwater
Response to RFI # 54-57 and update on groundwater monitoring completed post-EES exhibition.

SUMMARY This Technical Note provides responses to the request for information queries raised in relation to Technical Report C *Groundwater* and Chapter 8 *Water* of the Western Outer Ring Main (**WORM**) Environment Effects Statement (**EES**).

REQUEST:

54. Explain why there is a major discrepancy between the groundwater depth shown by the regional groundwater information (e.g. Table 8.6 and Figure 8-13) compared with the drilling and monitoring undertaken for the EES in the Kalkallo area (Table 8.7).

55. Explain whether the depths and histories of the existing bores in this area (e.g. as shown on Figure 8.16) help interpret the discrepancy in groundwater levels.

56. Explain what consultation has occurred with affected bore owners and the nature of potential or confirmed agreements with owners.

57. Advise whether APA has had any discussions with Southern Rural Water in relation to the groundwater assessment, and the status and outcomes of such discussions.

NOTE:

Response to RFI# 54 and 55 – Interpretation of discrepancy in groundwater levels

- 1 Regional information suggests a groundwater depth of less than 5 metres in the Kalkallo basin area (refer to Section 6.7 of EES Technical Report C *Groundwater* for an overview of regional groundwater depths). Regional groundwater depths are interpreted from bore information made available to government authorities, and interpretation based on landforms. Where such bore information is lacking, regional groundwater depth information may need to be interpolated between known (available) bore locations. The discrepancy in groundwater depths is most likely due to a lack of local bore water level information to use in the regional interpretation. No publicly available bore water level information was available in the vicinity of Kalkallo basin hence the regional information is assumed to be interpolated.
- 2 GHD has reviewed the bores shown in Section 8.5.4 of EES Chapter 8 *Water*, Figure 8-16 – Existing groundwater bores. No publicly available water level information was available for these bores hence they could not be used to aid interpretation of groundwater depths. As the area had been (regionally) mapped as having shallow groundwater levels, APA installed two monitoring bores in the Kalkallo Basin area (bores WORMBH09 and WORMBH32) in order to confirm the regional interpretation and provide more robust local data to assess if Project impacts were likely. Water level depths from these Project monitoring bores were reported between approximately 7 metres and 8 metres below ground level (**mbgl**), slightly deeper than the regional interpretation (Section 6.7 of EES Technical Report C *Groundwater*). The groundwater depths reported from Project

monitoring bores are not considered a major discrepancy, only being 2 metres to 3 metres deeper than the regional interpretation. The regional groundwater level information suggested that trenching through this area (to a depth of approximately 5 metres) would intersect groundwater, i.e., groundwater may need to be managed during construction of the pipeline. However, the site specific water level information has since confirmed that groundwater is unlikely to be intersected in this area. This indicates that management of groundwater is unlikely to be required.

- 3 Refer to Technical Note 11 – Groundwater monitoring investigations for an update on the additional groundwater monitoring undertaken following exhibition of the EES.

Response to RFI# 56 – Affected borehole owners

- 4 The EES report did not identify any bores expected to be impacted close to the construction corridor. There is one known bore located 55 metres from the Project alignment where potential for dewatering activities may occur during construction of the pipeline.
- 5 APA's consultation with existing land owners has not identified any additional relevant bores.
- 6 In accordance with EMM GW2, APA will consult with the landowner of the bore located within 55 metres near KP47.6 (Bore ID WRK990728). The property on which the bore is located is crossed by the pipeline, and any requirements related to the bore will be included in the landowner agreement.

Response to RFI# 57 – Engagement with Southern Rural Water

- 7 No engagement has been undertaken by APA with Southern Rural Water regarding the construction of the WORM. Engagement would be limited to seeking permits for Groundwater monitoring bore installation.