

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

TECHNICAL NOTE NUMBER: TN05

DATE: 13 September 2021

SUBJECT: Specialist Area: Groundwater
An update for the purposes of the *Environment Protection Act 2017 (Vic)* and response to RFI 58

SUMMARY This Technical Note outlines the implications of the *Environment Protection Act 2017 (Vic)* (as amended by the Environment Protection Amendment Act 2018) which came into effect on 1 July 2021, specific to Technical Report C *Groundwater* of the Western Outer Ring Main (WORM) Environment Effects Statement (EES).

REQUEST: 58. Advise whether the groundwater environmental management measures referred to within the EMF Table 19-10 Discipline Groundwater will be amended to apply the EP Act 2017, the EP Regulations 2021 and the ERS, as recommended by EPA (Submission 9).

ATTACHMENTS: Changes to EMM GW1, GW3 and GW7

NOTE:

Background

- 1 EES Technical Report C *Groundwater* and Chapter 8 of the WORM EES foreshadowed that the *Environment Protection Act 2017 (Vic)* (**new Act**) would come into effect on 1 July 2021 and that this would introduce the new General Environmental Duty (**GED**).
- 2 This note sets outlines the key implications of the new Act and relevant regulations, guidelines or standards that will be relevant to the assessment of the environmental effects of the WORM Project during construction and/or operation.
- 3 This note also sets out changes recommended to the exhibited version of the Environmental Management Measures (**EMMs**) to account for the new Act, regulations, guidelines or standards.

Implications of new GED

- 4 The new Act contains a **GED** that will be applicable to APA and all contractors carrying out the construction and operation of the WORM Project.
- 5 The GED (as defined in Section 25 of the new Act) requires a person or entity to:
 - Identify risks and hazards that may impact the environment or human health that arise from its operations; and
 - Eliminate or minimise those risks as far as reasonably practicable

- 6 The Environmental Management Framework and Construction Environment Management Plan (CEMP) developed as part of the EES and Pipeline Licence Application responds to the identified risks to the environment and human health that may arise from the construction and operation of the WORM Project, responding to the first aspect of the GED. It is considered that the risk assessments undertaken for groundwater as part of the EES does not need to be updated as it adequately identifies risks to the environment and human health from the Project.
- 7 The EMMs relevant to groundwater as identified in Technical Report C *Groundwater* have been developed to manage the identified risks to human health and the environment. In this Technical Note, consideration has been given to whether the EMMs require updating to comply with the GED or to ensure that the EMMs either eliminate or minimise the risks as far as reasonably practicable.

Relevant provisions of the new Act and Regulations

- 8 Relevant provisions in the new Act and Regulations relating to Groundwater include:
- Section 25 of the new Act (GED) which places a risk-based duty on a person to manage their activities to minimise the risk of harm to human health or the environment from pollution or waste so far as reasonably practicable;¹
 - Division 2, Part 3.5 of the new Act imposes duties on persons in ‘management or control’ of contaminated land to:
 - under section 40, notify the EPA of groundwater contamination (including historical contamination) that exceeds set thresholds. The EPA must be notified as soon as practicable after it becomes aware of, or reasonably should have been aware of, “notifiable contamination” (being groundwater contamination above the thresholds prescribed in regulation 10 of the new Regulations); and
 - under section 39, manage contaminated groundwater to the extent reasonably practicable;
 - Regulation 15 of the *Environment Protection Regulations 2021* which requires that, if non-aqueous phase liquid is present in soil or groundwater, it must be, so far as reasonably practicable: (a) cleaned up; and (b) if the source of the non-aqueous phase liquid is located on the land, the source of the liquid must be remove or controlled.

Relevant Standards or Guidelines

- 9 Technical Report C *Groundwater* and Chapter 8 refer to some EPA documents that have been replaced by new standards and guidance material.
- 10 Prior to the commencement of the new Act, the following Groundwater standard applied:
- State Environment Protection Policy (Waters) (**SEPP Waters**).
- 11 Upon commencement of the new Act, SEPP Waters was replaced with the following:
- Part 5 (Water) of the *Environment Reference Standard*, gazetted on 26 May 2021; and
 - the GED

¹ The GED replaces the clean water framework that existed under Part 5 of the *Environment Protection Act 1970*.

- 12 Regulation 7 of the *Environment Protection Transitional Regulations 2021* specifies that a number of provisions in SEPP Waters apply for a period of two years after the commencement of the *Environment Protection Regulations 2021* (1 July 2023). These provisions are not considered relevant for the Groundwater Technical Report.
- 13 The *Civil construction, building and demolition guide, 2020* (EPA publication 1834) provides guidance on eliminating or reducing the risk of harm to human health and the environment through good environmental practice during construction works. This guideline was referenced in the Groundwater Technical Report, and continues to apply.
- 14 These changes do not have any practical implications for the conclusions identified in EES Technical Report C *Groundwater*.

Response to RFI# 85 – Changes to EMMs

- 15 The following EMMs relating to Groundwater require amendment to reference the latest EPA standards and guidance documents or to update to meet the GED:
- GW1 - Minimising dewatering rates and impact to groundwater levels and flows;
 - GW3 - Minimise impacts associated with contaminated groundwater and disposal; and
 - GW7 - Design Requirements
- 16 Attached is a mark-up of the relevant EMMs showing the changes needed to include the updated requirements of the new Act and Regulations and to reference the new Guidelines and Standards.
- 17 Consideration has also been given to whether the EMMs reduce the risk of harm to human health and the environment to the extent reasonably practicable and therefore meet the GED. The attached mark-up of the relevant EMMs are proposed to reflect the language of the GED but do not impose additional requirements on the Project to further reduce risk.

Currency of Technical Report and Chapter

- 18 The replacement of SEPP Waters with new standards and guidance material was foreshadowed in the EES. For example, section 4.3.2 of the Groundwater Technical Report (page 18) provided that:
- “A review of the Environment Protection Act 1970 has resulted in the passage of the Environment Protection Act 2017 (EP Act 2017) which was scheduled to come into effect in July 2020, however this has been delayed until July 2021. The EP Act 2017 includes a new approach to environmental issues, focusing on preventing waste and pollution impacts rather than managing those impacts after they have occurred. The Act also includes the concept of general environmental duty (GED) which requires people to undertake reasonably practicable steps to eliminate, or otherwise reduce risks of harm to human health and the environment from pollution and waste. Unlike similar laws in other states and territories, a breach of the GED could lead to criminal or civil penalties, similar to those currently outlined in the Occupational Health and Safety Act 2004. Under the new Act, the beneficial uses of water, as outlined in the SEPP (Waters) will be known as environmental values.”*
- 19 Having considered the new provisions referenced at paragraph 8 and Part 5 of the *Environment Reference Standard*, it is considered that the assessment in Technical Report C *Groundwater* adequately addresses the new requirements and does not need to be supplemented with any additional analysis. The change in the Act does not alter any conclusions in the technical report.

Annexure 1
Changes to Groundwater EMMs

GROUNDWATER		
Ref.	Environmental controls	Project phase
GW1	<p>Minimising dewatering rates and impact to groundwater levels and flows</p> <p>Design and construct the Project to minimise changes in groundwater levels, flows and quality so far as reasonably practicable-, including by implementing the following measures during construction to minimise groundwater impacts:</p> <ul style="list-style-type: none"> Where excavations require dewatering, adopt a construction method that minimises the dewatering period and extraction volumes. The anticipated period is expected to be approximately four weeks at the creek crossings Install trench breakers adjacent to watercourses, wetlands and steep slopes as shown in the standard drawing (530-DWG-L7003) to minimise trench inflows. 	Construction
GW3	<p>Minimise impacts associated with contaminated groundwater and disposal</p> <p>Establish baseline groundwater level and quality conditions prior to the construction phase to assess any existing contamination or quality issues where groundwater is likely to be intercepted during construction and dewatering is expected, and also allow suitable disposal options to be assessed and planned.</p> <ul style="list-style-type: none"> Complete additional groundwater quality analysis in the existing bore network to confirm baseline conditions Investigate Bendigo Rail/Tame St Drain area further as regional data suggests dewatering may be necessary Investigate PFAS at Jacksons Creek so that any dewatering in this area can be informed about the presence of PFAS to allow for appropriate management of the groundwater, and sediments. Investigations must occur prior to construction in order to inform the CEMP and include shallow groundwater and sediment sampling. <p>Manage extracted groundwater to minimise impacts so far as reasonably practicable, including as follows:</p> <ul style="list-style-type: none"> Dispose groundwater in accordance with the Environment Reference Standard, Civil construction, building and demolition guide (EPA publication 1834)SEPP (Waters) and other EPA Guidelines and all relevant approvals processes with relevant authorities Groundwater from areas that have been identified as contaminated must not be discharged to the environment (land, waterways). If required, engage with the local water authority to develop a trade waste agreement for sewer discharge. This agreement would specify the levels of contamination to allow for sewer discharge Contaminated groundwater must either be treated onsite, depending on contaminant encountered (this may require approval from the EPA Victoria) or disposed offsite to an EPA Victoria licensed facility. Alternatively, a construction approach may be adopted where contaminated groundwater is left in-situ (i.e. not abstracted or disturbed). To the extent that non-aqueous phase liquid (eg oil, petrol, diesel and solvents) is present in soil or groundwater within the authorised project construction footprint and exposed during APA construction activities, it must be, so far as reasonably practicable: (a) cleaned up; and (b) if the source of the non-aqueous phase liquid is located on the land, the source of the NAPL must be removed or controlled (refer to EMM C1). <p>Manage dewatering of excavated trenches/bellholes to minimise sedimentation, including the use of sediment control devices to remove suspended solids and dissipate flow. Sediment control devices must be listed in site specific environmental management plans. Minimise the duration that trench sections and bell holes are open, and divert surface water runoff away from the excavations, to reduce the potential for poor quality runoff impacting groundwater.</p>	Construction

<p>GW7</p>	<p>Design Requirements</p> <p>The pipeline design shall consider where groundwater interaction is expected to occur and incorporate trench breakers or plugs, as well as suitable backfill compaction, to prevent preferential flow paths <u>so far as reasonably practicable</u>.</p> <p>Implement trench compaction procedures as detailed in GM4 including the design of the backfill to take into account the density and permeability of the surrounding soil.</p>	<p>Design, construction and operation</p>
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