

Environment Protection Act 2017

Notice ID	EAN-0005260-1
Date of issue	08/11/23
Date of amendment	27/11/23
Notice issued by	Name Matthew Kennedy Delegate of the Environment Protection Authority ('the Authority') T 1300 372 842 (1300 EPA VIC) E Matthew.Kennedy@epa.vic.gov.au
Notice issued to	Name VICTORIAN CANINE ASSOCIATION INC Address Epsom Road ASCOT VALE VIC 3032
ACN	
Place or premises	665 Dandenong-hastings Road Skye 3977
Legal reference	Environment Protection Act 2017 (the Act), s. 274
Service method	Electronic communication

For the purpose of this notice 'you' means the recipient of this notice or your authorised representative and 'place or premises' means the site at which the notice applies, as identified above.





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Grounds for issuing the original notice

The authorised officer reasonably believes that the following circumstances exist:

• land is or may be contaminated.

For the purpose of this notice VICTORIAN CANINE ASSOCIATION INC is the current owner of the land at which the relevant circumstances exist.

ASIC and Landata title searches conducted on 2 November 2023 confirmed that VICTORIAN CANINE ASSOCIATION INC is the current occupier of the premises located at 665 Dandenong Hastings Road, Skye 3977 known as the "KCC Park", and is the holder of the business name DOGS VICTORIA.

I have observed the following circumstances:

- The premises currently operates as a dog training facility.
- Fill material was imported to site as part of a redevelopment of the western portion of the site for further facilities relating to the current site use.
- In 2020 soil sampling undertaken at the premises identified Per- and polyfluoroalkyl substances (PFAS) were present at concentrations that exceeded the adopted criteria for interim reuse, ecological indirect exposure, health investigation levels A and leachability.
- Following detection of PFAS, several environmental site assessments were undertaken to determine the presence, nature and extent of contamination of land and groundwater on and from the premises and how to best manage the environmental risk.
- Based on soil analytical results, the PFAS Risk Assessment found that impacted material has been spread over an area of approximately 0.3-0.4 ha and is referred to as the "Site investigation area".
- Impacted soil currently exists at a depth of potential root zone for any plantings or could be brought to the surface because of minor site works. As such there is a potential exposure pathway for human users of the site and for ecological receptors.
- The receptors for plausible exposure are construction workers involved in the development of the park; commercial workers at KCC Park; recreational users of KCC Park; recreational users of downgradient surface water bodies; users of groundwater downgradient; users of surface water downgradient; canines being trained at KCC Park; native fauna; plantings that are part of final landscaping at the Investigation Area; native flora; aquatic organisms in downgradient surface waters.

EPA reviewed the document titled "PFAS Risk Assessment: KCC Park, 665 Dandenong-Hastings Road, Skye, Victoria, 754-MELEN279215_R01" (risk assessment) dated 7 October 2020 produced by Coffey Services Australia Pty Ltd for Lancore Group Pty Ltd (Lancore) as well as the document titled "Environmental Management Plan, KCC Park, 655 Dandenong-Hastings Road, Skye, VIC" (EMP) dated 27 October 2021 produced by ARC Environmental for Lancore, and noted:



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- That both the risk assessment and the EMP suggest that increasing the depth of the impacted material would provide a break in the source-pathway-receptor linkage for the majority of the identified on-site exposure pathways by ensuring that the depth of the soil would be below the root zone of most plants and unlikely to be brought to the surface due to minor site works. Further, the inclusion of an engineered low permeability soil layer above the impacted soil would significantly reduce the potential for migration of PFAS to the water table thereby reducing the potential for an impact to a beneficial use of groundwater.

EPA reviewed the document titled "Groundwater Monitoring Event, KCC Park - 665 Dandenong-Hastings Road, Skye" dated 1 April 2021 produced by Environmental Site Assessments Pty Ltd (ESA) for Lancore Group Pty Ltd (Lancore). Four groundwater wells were installed to the east and west of the impacted material, and no concentrations of PFAS were detected.

EPA reviewed the document titled "Groundwater Monitoring Event #2, KCC Park - 665 Dandenong-Hastings Road, Skye" dated 5 June 2022 produced by ESA for Lancore. A fifth groundwater well was installed north of the impacted material. PFAS was detected at 0.08ug/L within a groundwater well north east of the impacted material.

EPA reviewed the document titled "Groundwater Monitoring Report 655 Western Port Highway, Skye" dated 18 September 2023 produced by DRC Environmental Pty Ltd (DRC) for Dogs Victoria. PFAS was detected within the two eastern wells with 0.3ug/L (Sum of PFAS), south east of the impacted material and 0.52ug/L (Sum of PFAS), north east of the impacted material.

The groundwater monitoring conducted at the premises shows an increasing trend of PFAS impact within groundwater. Scientific studies within animals have shown some links between PFAS exposure and health effects. There is no consistent evidence that PFAS are harmful to human health, or cause any specific illnesses, however it is an anthropogenic emerging contaminant of concern which is why EPA takes a precautionary approach and advices Victorians to take care and reduce their exposure to PFAS.

On 13 October 2023, during a meeting with DRC and DOGS VICTORIA, I was informed that the current EMP may not be the best solution based on the risk profile. It was indicated that an updated cap design was to be submitted to EPA.

For the reasons outlined above, and pursuant to Section 274(1)(a) of the Environment Protection Act 2017, I reasonably believe that land at the premises is contaminated, and that physical containment actions must be undertaken to manage the risk of harm to human health and the environment from potential exposure of historically deposited contaminated fill.



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Reasons for amending this notice

The notice was reviewed by EPA as per internal notice review SIR-00001206, with a decision on 23/11/2023 to vary the original decision to issue the notice. The notice requirement has been amended for the reasons provided in the statement of the remedial notice review decision, attached as the Appendix to this notice.

Requirements

You are required to:

- 1. By 31/01/24 you must provide to EPA:
- a) a capping design plan in keeping with the specifications provided in the document 'Environmental Management Plan KCC Park, 655 Dandenong-Hastings Road, Skye, VIC', dated 27/10/2021, as prepared by Arc Environmental; and
- b) a capping project timeline for installation of capping as per the design plan described in requirement 1(a), and for completion of the project no later than 31/03/2024.

This environmental action notice takes effect from the date of service. Amendments to this environmental action notice take effect from the date of service of the amendment.

Matthew Kennedy

Delegate of the Authority

Penalty

If you fail to comply with this environmental action notice, you may be guilty of an offence and liable to pay a penalty of up to 500 penalty units (for an individual) or 2500 penalty units (for a body corporate).



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Right of review

Statutory internal review

If this amended notice was issued by an authorised officer, you have the right to apply to EPA for a review. Your application must be made in the approved form and be received by EPA within 10 business days of you being served the notice. The date you were served the notice may be different to the date of issue listed on page one of this notice depending on the method of service. Application forms and further information about the internal review process including application timeframes are available at www.epa.vic.gov.au.

Request for stay pending outcome of internal review

If you are eligible for internal review, you may also request a stay of this notice pending the outcome of the review. EPA must decide to grant a stay (with or without conditions), or not to grant a stay and communicate that decision within two business days of receiving the application. If the application was received outside of business hours, EPA must communicate its decision by 5pm on the second day after the application was received. If no decision is made by EPA after this time, EPA is considered to have granted a stay. If no stay is made, the notice remains in force.

VCAT review

If you have lodged an application for internal review of this notice and received a decision (other than for an extension of time), you may apply to the Victorian Civil and Administrative Tribunal (VCAT) for external review within 15 business days of being notified about the outcome of EPA's internal review. If this notice was issued by the Authority and you are eligible, you may apply to VCAT for an external review within 15 business days from the date on which it first came to your notice. For more information on your review rights, visit www.epa.vic.gov.au.

Amendment

You may apply for an extension of time for any requirement in the notice at least 10 business days before its due date. Your notice remains legally binding until EPA advises you of any change. Application forms and further information about time frames for the application are available at www.epa.vic.gov.au.

Additional information

Under part 10.3 of the Act this notice applies notwithstanding anything to the contrary in:

- a) the Planning and Environment Act 1987 or any regulations, planning scheme or permit made, approved or granted under the Planning and Environment Act 1987; and
- b) the Building Act 1993 or any regulations or permit made or granted under the Building Act 1993.

A person in management or control of land that has been contaminated may be eligible to recover reasonable costs in complying with this notice, against any person who caused or contributed to contamination of the land.

Under part 10.7 of the Act, EPA may redirect this notice to another relevant person, for example officers of a body corporate.

For more information, refer to www.epa.vic.gov.au.

Notification of future occupier

Under section 280, if someone plans to become the occupier of your place or premises, you must inform them of this notice and your progress towards compliance.



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Privacy statement

Section 455 of the Act requires EPA to maintain a public register where we may choose to publish environmental action notices.

Accessibility

Contact us if you need this information in an accessible format such as large print or audio.

Please telephone 1300 EPA VIC (1300 372 842) or email contact@epa.vic.gov.au

Interpreter assistance



If you need interpreter assistance or want this document translated, please call **131 450** and advise your preferred language. If you are deaf, or have a hearing or speech impairment, contact us through the <u>National Relay Service</u>.



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Appendix

Review ID	SIR-00001206
Reviewer	Matthew Kennedy
Review decision date	23 November 2023
Notice ID	EAN-00005260 (the Notice)
Date of issue	08 November 2023
Notice issued by	Dennis Catubig Authorised officer
Notice issued to	Name Victorian Canine Association Inc Address Epsom Road ASCOT VALE VIC 3032
Place or premises	665 Dandenong-Hastings Road, SKYE VIC 3977 (Traditional lands of the Bunurong People ¹ , Gippsland Plain Bioregion ²) (the Premises)
Service method	Electronic communication

Application for review

The Environment Protection Authority Victoria (EPA) received an internal review application on 9 November 2023 within the statutory timeframe for review under section 429 of the *Environment Protection Act 2017* (the Act).

Overview

² Based on Victorian bioregions map. See: https://www.environment.vic.gov.au/biodiversity/bioregions-and-evc-benchmarks, accessed 14/11/2023.



¹ Based on the Victorian Aboriginal Heritage Council, Registered Aboriginal Parties (RAPs) Map. See https://achris.vic.gov.au/weave/wca.html, accessed 14/11/2023. RAPs are representative corporations, inclusive of all Traditional Owners of an identified Country. Before being granted RAP status, they have undergone a rigorous review process, in which their relationship to Country, the inclusivity of their membership and proven link to Apical Ancestors have been considered. See https://www.aboriginalheritagecouncil.vic.gov.au/fact-sheet-registered-aboriginal-parties.

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The Notice recipient sought review of the decision to issue the Notice on the broad grounds in its review application that the Notice requirement was unreasonable.

The Notice recipient provided written submissions to support its application, which also included the following documents:

- 'PFAS Risk Assessment: KCC Park 665 Dandenong-Hastings Road, Skye, Victoria 754-MELEN279215_R01', dated 7 October 2020, prepared by Coffey Services Australia Pty Ltd (Coffey RA)
- 'Risk Assessment Report 655 Western Port Highway, Skye', dated 6 October 2023 prepared by DRC Environmental Pty Ltd (**DRC RA**)

The Notice recipient primarily contends that the DRC RA supersedes the Coffey RA, and identifies that an adequate remedial response may be achieved through minimal capping and additional monitoring, compared to the more expensive recommendations for capping, and unnecessarily conservative risk mitigation proposed by the Coffey RA. The Notice requirement specification that the recommendations of the Coffey RA are relied upon in preparation of an Environmental Management Plan (**EMP**) is therefore held to be unreasonable.

The submissions are discussed in the body of this statement of reasons for the review decision.

Decision

The decision of authorised officer Dennis Catubig (the **issuing AO**) to issue the Notice is **varied**, such that the Notice will be amended to replace the requirement/s with those provided in Appendix A of this statement.

Reasons for decision

Internal review of remedial notices

The Notice was reviewed under section 429 of the Act. Both the original decision to issue the Notice and this review involved exercise of discretionary powers created by the Act. The review decision is a 'merits review' of the original decision and must represent the 'correct or preferable' decision in the circumstances of the Notice recipient.

The review was conducted by a person under delegation of the EPA who was not involved in the making of the decision to issue the Notice. The conduct of the review was guided by EPA Publication 1926 *Remedial Notice Review Policy*, which supports the making of correct and preferrable decisions in relation to applications received for review.

Legislative framework of this decision

Remedial notices are one of a range of powers EPA and its authorised officers (**AOs**) can exercise to promote the purposes and objectives of the Act.

The purposes of the Act are set out in section 1. They include setting out a legislative framework for the protection of human health and the environment from pollution and waste, and enabling EPA and AOs

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to ensure compliance with the Act and require action to manage risks of harm to human health and the environment (sections 1(k) and (f)).

The statutory objective of the EPA is 'to protect human health and the environment by reducing the harmful effects of pollution and waste' (section 357).

EPA's functions include:

- to identify, assess and monitor risks of harm to human health and the environment
- to respond to harm and risks of harm to human health and the environment
- to identify and respond to opportunities to (i) eliminate or reduce risks of harm to human health and the environment; and (ii) improve environmental quality
- to promote, monitor and enforce compliance with this Act (section 358).

EPA's powers include the power to undertake monitoring, inspection, compliance, and enforcement actions and to do all things necessary or convenient to be done for or in connection with the performance of the EPA's functions and duties and to enable EPA to achieve its objective (section 359).

The legal basis for the Notice

An environmental action notice (**EAN**) may be issued under section 274(1) of the Act where an authorised officer reasonably believes any of the following circumstances exist -

- (a) land is or may be contaminated;
- (b) a pollution incident has occurred or is occurring that has caused, or is likely to cause, harm to human health or the environment;
- (c) industrial waste is at a place or premises unlawfully;
- (d) any other circumstances exist arising from pollution or the depositing, storage or handling of waste that have caused or are likely to cause harm to human health or the environment;
- (e) a person referred to in subsection (2) was issued with a notice to investigate and has failed to comply with that notice.

The Notice has been issued under section 274(1)(a), namely 'land is or may be contaminated' (the 'relevant circumstances').

An EAN can be issued to:

- (a) the person who the Authority or authorised officer reasonably believes caused or permitted the circumstances which are the subject of the notice;
- (b) the current owner or occupier of the land at which the relevant circumstances exist;
- (c) the owner or occupier of the land at which the relevant circumstances exist, at the time the relevant circumstances first came into being.

The Notice has been issued under section 274(2)(b), namely 'the current owner of the land at which the relevant circumstances exist'.

Notices issued under section 274 are intended to be remedial in nature and EPA's objective in issuing them is guided by its objective under section 357 to help ensure unacceptable risks of harm are prevented or otherwise mitigated. They are not intended to be punitive.



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A decision to issue a notice is discretionary, meaning such a decision must be a 'correct' decision (i.e., with correct legal basis and grounds to support that legal basis), and a 'preferrable' decision (i.e., when considered with respect to the options available to EPA to remedy the circumstances).

To determine the correct and preferrable decision I have considered:

- the submissions and evidence provided by the Notice recipient;
- as relevant, evidence provided by issuing AO and other AOs, and advisors involved in the matter, including EPA's internal specialists (Senior Scientist Water Sciences, Senior Scientist Land and Waste Sciences, Principal Health Risk Advisor Chemicals Health Advisory, Groundwater Scientist Land and Waste Sciences) 3,
- other relevant information, including guidance publications;
 - o 'PFAS National Environmental Management Plan Version 2.0', 2020 (**NEMP 2.0**) National Chemicals Working Group of the Heads of EPAs Australia and New Zealand.
 - 'National Environment Protection (Assessment of Site Contamination) Measure 1999, amended 2013.' NEPM(ASC)

Evidence and material facts

To determine if the AO's decision to issue the Notice was 'correct and preferrable', I must consider whether the elements of section 274 are supported by sufficient evidence to form a reasonable belief and determine that the issue of the Notice was preferrable in the circumstances.

Matters not in dispute

I note the following material facts appear not to be disputed by the Notice recipient:

- the Notice recipient is the owner and occupier of the Premises⁴
- the Notice recipient permitted its contractor Lancore Group Pty Ltd to deposit approximately 470m³ of soil excavated from the former Metropolitan Fire Brigade (MFB) fire station at 178 Foote Street, Templestowe (MFB site) and transported to the Premises in February 2020 ⁵
- the western third of the Premises, located on the west side of Rodds Drain has been elevated to
 provide additional space for dog training and events. In the centre of the property is a paddock
 with a large dam. See 'Figure 2.1: KCC Park development mud-map' reproduced below.⁶

⁶ Pages 4 and 5 of PFAS Risk Assessment: KCC Park 665 Dandenong-Hastings Road, Skye, Victoria 754-MELEN279215_R01, dated 7 October 2020 prepared by Coffey Services Australia Pty Ltd



³ EPA Applied Science Advice reports ASR0017618, dated 12/10/2023, and ASR0017898, dated 17/11/2023

⁴ Vic Lands title search report, dated 7/07/2023

⁵ Environmental Management Plan KCC Park, 655 Dandenong-Hastings Road, Skye, VIC, dated 27 October 2021 prepared by ARC Environmental and Risk Assessment Report 655 Western Port Highway, Skye, dated 6 October 2023 prepared by DRC Environmental Pty Ltd.

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PFAS Risk Assessment: KCC Park 665 Dandenong-Hastings Road, Skye, Victoria



Figure 2.1: KCC Park development mud-map

- the imported soil from the MFB site was used as part of the contracted works to raise the site surface in the western area, and specifically the location marked in the figure above as the Site Investigation Area ⁷
- the original 470 m³ of MFB soil is likely to have been partially mixed with other soil material brought onto the Premises during that period ⁸ (**contaminated soil**) and used as fill, placed below an uncontaminated soil fill layer
- the contaminated soil is estimated to be present at depths of between 0.5 m and 1.5 m below ground surface⁹
- subsequent investigations of residual soils at the MFB site identified contamination present¹⁰
- five rounds of soil sampling were undertaken at the Premises to try to characterise and delineate the impacted soil¹¹

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⁷ Risk Assessment Report 655 Western Port Highway, Skye, dated 6 October 2023 prepared by DRC Environmental Pty Ltd

⁸ Page 4 of PFAS Risk Assessment: KCC Park 665 Dandenong-Hastings Road, Skye, Victoria 754-MELEN279215_R01, dated 7 October 2020 prepared by Coffey Services Australia Pty Ltd

⁹ Page 5 Environmental Management Plan KCC Park, 655 Dandenong-Hastings Road, Skye, VIC', dated 27 October 2021, prepared by Arc Environmental

¹⁰ Page 1 of PFAS Risk Assessment: KCC Park 665 Dandenong-Hastings Road, Skye, Victoria 754-MELEN279215_R01, dated 7 October 2020 prepared by Coffey Services Australia Pty Ltd

¹¹ Page 1 and 3 of PFAS Risk Assessment: KCC Park 665 Dandenong-Hastings Road, Skye, Victoria 754-MELEN279215_R01, dated 7 October 2020 prepared by Coffey Services Australia Pty Ltd

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- these assessments reported detectable concentrations of perfluorooctane sulfonic acid (**PFOS**), perfluorohexane sulfonic acid (**PFHxS**) and perfluorooctanoic acid (**PFOA**)¹². These compounds are part of the group of per- and poly-fluorinated alkyl substances collectively known as **PFAS**.
- three rounds of ground water monitoring have been undertaken at the Premises¹³
- PFAS and heavy metals have been detected in groundwater¹⁴
- Rodds Drain, a surface stormwater channel, runs north-south through the property, flowing north to the Eastern Contour Drain approximately 5.4 km north-northwest of the site. The Eastern Contour Drain then flows into Eumemmering Creek a further 1.6 km to the west¹⁵
- A 'PFAS Risk Assessment: KCC Park 665 Dandenong-Hastings Road, Skye, Victoria 754-MELEN279215_R01', dated 7 October 2020 was prepared by Coffey Services Australia Pty Ltd
- An 'Environmental Management Plan KCC Park, 655 Dandenong-Hastings Road, Skye, VIC', dated 27 October 2021 was prepared by Arc Environmental (**Arc EMP**) and is the most current EMP.
- Auditor verification of the Arc Environmental EMP dated 28 October 2021 was prepared by Niboi Consulting Pty Ltd (the Auditor verification)
- An additional 'Risk Assessment Report 655 Western Port Highway, Skye', dated 6 October 2023 was prepared by DRC Environmental Pty Ltd

Contaminated land at the Premises

The Notice has been issued on the basis that the Premises 'is or may be contaminated'.

Section 35 of the Act defines land¹⁶ to be 'contaminated land' when:

- ...waste, a chemical substance or a prescribed substance is present on or under the surface of the land, and the waste, chemical substance or prescribed substance—
- (a) is present in a concentration above the background level; and
- (b) creates a risk of harm to human health or the environment.

The Notice identifies that PFAS, has been detected in soil sampled at the Premises and in two on-site groundwater wells. It is also noted that groundwater monitoring conducted at the Premises shows an increasing trend of PFAS contamination within groundwater to date ¹⁷. The presence of PFAS contamination is not in dispute, and is identified in the submitted DRC RA.



¹² Page 1 of Risk Assessment Report 655 Western Port Highway, Skye, dated 6 October 2023 prepared by DRC Environmental Pty Ltd

¹³ Groundwater Monitoring Event, KCC Park – 665 Dandenong-Hastings Road, Skye' dated 20 April 2021 and prepared by Environmental Site Assessments Pty Ltd, Groundwater Monitoring Event #2 KCC Park – 665 Dandenong-Hastings Road Skye' dated 5 June 2022 and prepared by Environmental Site Assessments Pty Ltd and Groundwater Monitoring Report 655 Western Port Highway, Skye" dated 18 September 2023 produced by DRC Environmental Pty Ltd

¹⁴ Risk Assessment Report 655 Western Port Highway, Skye, dated 6 October 2023 prepared by DRC Environmental Pty Ltd

¹⁵ Page 6 of PFAS Risk Assessment: KCC Park 665 Dandenong-Hastings Road, Skye, Victoria 754-MELEN279215_R01, dated 7 October 2020 prepared by Coffey Services Australia Pty Ltd

 $^{^{16}}$ Note the Act definition of 'land' includes groundwater, per section 3(1)

¹⁷ EPA Applied Science advice report ASR0017618, dated 12/10/2023

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With respect to any PFAS being in a concentration above the background level, I considered guidance NEMP 2.0 which states:

PFAS are synthetic organic compounds, for which there is no natural background level¹⁸

Furthermore, I note that NEMP 2.0 establishes that risks may be posed by PFAS to human health and the environment, through statements such as

the ability of some PFAS to bioaccumulate in humans, plants and animals, and biomagnify with each trophic level of a food chain...

...means that particular attention should be given to the potential risks of PFAS contamination for ecological values, both on and off-site. These potential risks may include risks to terrestrial and aquatic wildlife exposed through the food chain, and risks to aquatic wildlife exposed through the transport of PFAS into aqueous environments.¹⁹

I am satisfied that for the purposes of section 35, and section 274(1)(a) of the Act, the Premises is contaminated land.

Furthermore, the circumstances of the Notice recipient being the owner and occupier of the Premises provide grounds that meet the legal basis required to issue the Notice under section 274(2)(b).

The Notice recipient's submissions

The Notice recipient has provided submissions in support of its application for review, which I have summarised below. It is noted that the application submissions are worded from the perspective of the consultant DRC Environmental Pty Ltd (**DRC**) acting on behalf of their client the Notice recipient. The Notice recipient considers the Notice requirement unreasonable due to:

- the 2023 DRC RA reached very different conclusions to the 2020 Coffey RA (both reports were provided as submissions)
- the Coffey RA recommended extensive groundworks commensurate with a significant environmental issue that is disproportionate to the risk posed by the residual low level PFAS present in contaminated soil
- DRC dispute the recommendations of the Coffey RA and state 'it is unclear how the report's author arrived at the recommendations'
- the Coffey RA did not recommend groundwater or surface water investigation, therefore if the current EAN is complied with, there is no requirement to include monitoring of these media, which would result in a lower level of environmental protection
- the Notice recipient and DRC provided the issuing AO an alternative proposal prior to the Notice being issued ²⁰
- the DRC RA and recommendations ²⁰ 'consider the potential for mobilisation and seek to understand potential impact rather than relying on engineered solutions'

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¹⁸ Page 8, NEMP 2.0

¹⁹ Page 40, NEMP 2.0

²⁰ Note: from discussion with the issuing AO I understand this proposal was discussed during a meeting on 13/10/2023 and subsequently a letter prepared in support by DRC with subject title 'Environmental Works Plan for 655 Western Port Highway, Skye', dated 20/10/2023 was supplied to the AO. Although not provided as part of the submissions the letter is assumed to form a significant part of the detail of the recommendations and proposal referred to here.

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- a DRC proposed monitoring program is not in dispute and has already been agreed to with EPA
- the Notice recipient does not have the funding to complete the extensive earthworks program recommended by Coffey and would struggle to implement the Arc EMP
- an inability to implement the EMP would result in lesser environmental protection than redirecting available funds towards regular monitoring that will provide a clearer understanding of potential environmental impact
- it is unclear as to how EPA has determined the site is currently defined as a pollution source, as there is no evidence of offsite migration or inhibition to the site's protected environmental values, surface or groundwater environmental values or impacts to receptors that would be classifiable or defined as pollution

As the last submission point summarised above appears to be most obviously concerned with the legal basis of the Notice, I will address it first. The legal basis for contaminated land was considered in the previous section and found to be satisfied by the circumstances. The Notice was not issued on the basis that a pollution incident has occurred (per section 273(1)(b)) and so this submission is not relevant.²¹

Primarily all other submissions summarised above form the contention that the DRC RA and alternative proposal provide a superior and *preferable* approach to the circumstances of contamination of land and any associated risks. It is in this context that the sole Notice requirement to provide to EPA an 'Environmental Management Plan verified by an EPA appointed Auditor which addresses the recommendations provided within section 6.3 of [the Coffey RA]', is considered unreasonable by the Notice recipient.

Coffey vs DRC Risk Assessments and recommendations

In considering the environmental conditions reported to date for the Premises, and analysis of risks associated with PFAS contamination, I referred to EPA expert advice. I specifically supplied the two submissions Coffey RA and DRC RA, along with the most current site EMP, the Arc EMP, for review by EPA scientists with environmental and human health risk expertise ²². An EPA expert review of groundwater conditions (including data from groundwater monitoring events in 2021, 2022 and 2023) ²³ previously requested by the issuing AO was also referenced by the EPA scientists completing my advice request.

Key findings from the EPA Science advice are summarised as follows:

- EPA Science considers the Coffey RA to be a more reasonable assessment of PFAS risk and remedial approach to the PFAS contamination compared to the DRC RA.
- the DRC RA did not develop the conceptual site model further, despite having further data on groundwater levels and monitoring results. For example, no interpretation is provided to contextualise (with respect to background or the contaminated soil onsite) the PFAS compounds detected in groundwater.
- the ecological indirect exposure scenario soil guideline value (0.01 mg/kg) for PFOS was exceeded in two soil cores at depths of between 0.75-1.05 m below ground surface
- current conditions (site uncapped) indicate a potential for a risk of harm via indirect ecological exposure.

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²¹ Note: refer to ss 3 and 29 for definitions of *pollution* and *pollution incident* respectively.

²² EPA Science advice report ASR0017898, dated 17/11/2023

²³ EPA Science advice report ASR0017618, dated 12/10/2023

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- the Coffey RA, in relation to the final burial depth of >2 m (once recommended capping is completed), is correct in their assessment that this is sufficient to preclude the ecological indirect exposure scenario soil guideline value for PFOS.
- guidelines referenced in the NEMP 2.0 indicate that a 1.5 m depth is reasonable to preclude this pathway.²⁴
- NEPM(ASC) also addresses the depth of which ecological guideline values are relevant when it identifies the top 2 m of soil corresponds to the root zone and habitation of many species however this is as a generic depth and can be varied to be more site-specific considering the biota present at the site.
- no justification is provided in the DRC RA for the lower depth of soil at 0.15 m being most relevant to the ecological indirect exposure scenario soil guideline value for PFOS.
- the DRC RA assertion that only 0.15 m soil cover depth is required to preclude the ecological indirect exposure scenario soil guideline value for PFOS is not in accordance with the current state of knowledge.²⁴
- the DRC RA has information on groundwater level and quality, including some PFAS analysis. Bores MW4 and MW5 have some PFAS detected, however, no map of bore location is provided and no assessment of groundwater flow direction is given.
- EPA Science advice ASR0017618 indicated that the PFAS impacted bores appeared to be
 downgradient of the PFAS impacted soil. This may indicate an initial PFAS plume reaching the
 downgradient bores. It is also worth noting that the initial PFAS detected include mostly the short
 chain PFAS which are more mobile in the environment. This advice also indicated that the on-site
 Rodds Drain is connected to groundwater and downgradient of the contaminated soil, indicating
 a potential pathway from groundwater to surface water.
- concentrations in groundwater for PFOS, PFHxS and PFOA are below drinking water guidelines
 and the ANZ ecological 95% species protection concentrations. However, it is noted that neither
 Coffey nor DRC have adequately characterised leaching potential because they have not
 determined whether precursor (larger/complex) PFAS are present.
- the Coffey RA recommendations relating to documenting the impacted soil, management
 procedures to prevent unintended excavation of the soil, changes to future land use and
 covering with 2 m of soil appear to be reasonable considering the concentrations of PFOS are
 above the indirect ecological guideline values in NEMP 2.0, and that there is uncertainty
 regarding the presence of precursors.

I note here that the DRC RA provided no recommendations and proposed no further action required to remedy risk where it stated in conclusion:

Based on the reported analytical results and the identified potential exposure pathways, concentrations of PFAS in soils and heavy metals in groundwater are not expected to pose a risk to human and canine users of the site. No management or risk mitigation measures to prevent future exposure are required...²⁵

 25 Page 8 DRC RA

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²⁴ NEMP 2.0 references ecological soil guideline values set by Environment and Climate Change Canada (ECCC), and the value for exposure of a secondary consumer as the most sensitive exposure pathway was adopted as the PFOS indirect exposure value in the NEMP. Refer to; Canadian Council of Ministers of the Environment, 2006, 'A Protocol for the Derivation of Environmental and Human Health Soil Quality Guidelines'

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Subsequent to the DRC RA, the issuing AO was supplied a letter by the Notice recipient with the subject title 'Environmental Works Plan for 655 Western Port Highway, Skye', dated 20/10/2023 (**DRC Works Plan**). Although not provided as part of the internal review submissions the letter is assumed to form a significant part of the detail of the recommendations and proposal the Notice recipient has referred to in its written application submissions where it states:

...DRC's recommendations consider the potential for mobilisation and seek to understand potential impact rather than relying on engineered solutions...²⁶

In summary the DRC Works Plan document provided the following:

The [DRC] risk assessment, which referenced the latest groundwater monitoring results, identified potential pathways where contamination may become mobile as leaching of PFAS from soil into underlying groundwater and discharge of impacted groundwater into the onsite dam. The risk assessment concluded that current risks at the site are low and acceptable for all pathways and all receptors.

In a recent meeting between Dogs Victoria, EPA and DRC, EPA raised concerns regarding the potential for surface water to be impacted and mobilise offsite via Rodds Creek Drain. EPA also provided additional information that the latest groundwater results showed higher levels of detectable PFAS than had been previously reported.

As such, DRC suggest the below monitoring program to monitor these potential issues and meet Dogs Victoria's obligations under the Environment Protection Act 2017 to manage contamination.

Proposed Monitoring Program

DRC propose a six monthly groundwater monitoring program for PFAS to monitor concentration trends

The surface water monitoring program will be conducted concurrently with the groundwater program. Surface water samples will be collected from the dam, from Rodds Creek Drain at the inferred point of discharge, upstream of the site and downstream of the site to assess whether PFAS impacts are present in surface water.

After two rounds of monitoring are completed, a review of the data should be completed in consultation with EPA to assess data trends and future monitoring requirements.

Proposed Earthworks Program

In addition to the monitoring program, Dogs Victoria acknowledge they are permitted to elevate the level of the land surface by placement of additional clean fill across the area of residual PFAS impact. To support the earthworks program for the land, a risk review of the final site level and finish will be conducted to assess the risk of mobilisation of currently buried PFAS in soils. It is noted that after preliminary review, a low permeability landfill capping solution is unlikely to be necessary; rather a minimum 600mm placed clean fill soil layer combined with a suitable vegetation turf layer will significantly reduce effective rainfall infiltration through to depth.



²⁶ Notice recipient's application SIR-00001206, dated 17/11/2023

Environment Protection Act 2017

A management plan for the site may also be required to ensure the site surface is suitably graded to a minimum 1:100 fall, the site surface is permanently grassed, and erosion or pooling do not occur. ²⁷

From my review of site information and AO photos of the site investigation area ²⁸, I understand the proposed earthworks program of addition of soil and grading of the site to mean in simple terms raising the site investigation area surface to match the surrounding level to provide an overall finished grade / level site suitable for its intended use as an 'Agility Event Area' (see figure 2.1 reproduced above).

I note here also that the proposed 'minimum' 600mm soil fill would be substantially exceeded by necessity for the finished grade, due to the existing depression that forms the site investigation area currently appearing to be at levels of an estimated 1.42m to 2.25m lower than the adjoining ground surface levels.²⁹ This fact also appears to indicate the proposal, and the DRC RA, have failed to take into account the total depth of covering soil the Notice recipient will need to add just to make the site an appropriate surface for its intended land use. Furthermore, it appears that if this were to be acknowledged the justification of a lower depth of soil figure (0.15 m) provided in respect to the ecological indirect exposure scenario in the DRC RA would seem to be irrelevant.

In any event the primary contention of the Notice recipient that the Coffey RA findings and recommendations were disproportionate to the risk present has been assessed (to the extent possible on the current information) by EPA scientists with appropriate expertise and is not supported. This fact has great weight in my consideration of the submissions summarised above.

I find that it is appropriate to rely on an 'engineered solution' to the contaminated land in the site investigation area, and that the Coffey RA recommendations, and the subsequent Arc EMP, have provided an appropriate range of measures to address the level of risk posed. To be clear, those measures include that soil cover is to include a 1 m low permeability capping layer, and a further 1 m overlaying layer of soil, with a final surface gradient of at least 5% and no more than 20% ³⁰. In that respect the Notice requirement is reasonable.

I do not find the Notice recipient's alternative proposal provided in the DRC Works Plan is an adequate response to the circumstances, with the exception that further surface water and groundwater monitoring is necessary, including for reasons discussed further in the next section.

Having addressed the contentions of the submissions, I will now set out further facts and considerations that also informed my overall decision on whether the Notice and its requirement were preferable.

Grounds for timely remedial action

From discussion with the issuing AO, and review of correspondence, I am aware that opportunity was provided by EPA for the Notice recipient to remedy the circumstances in an appropriate manner for a significant period prior to the issue of the Notice. For example, I note the following advice provided by the issuing AO by email on 21/06/2022:



²⁷ DRC Works Plan 20/10/2023

²⁸ Issuing AO photos from inspection on 18/04/2023

²⁹ Arc EMP, Appendix A: PFAS Impact Area Survey, 27/10/2021

 $^{^{\}rm 30}$ Pages 8 and 9, Arc EMP, 27/10/2021

Environment Protection Act 2017

EPA will not be issuing further notices at this stage and would like to remind Dogs Victoria that you have a positive duty to manage contaminated land as per section 39 of the Environment Protection Act 2017. Note that management of contaminated land includes the implementation of the EMP prepared for the premises.

Noting that the Notice recipient had at that time held the current Arc EMP, along with its Auditor verification, since 28/10/2021.

Further correspondence provided by the notice recipient in response to a site inspection by the issuing AO on 18/04/2023 implied a timely resolution, as per the Notice recipient's email on 20/04/2023 which stated:

I am hopeful for the 'as constructed " plans to approved (sic) by council which will them (sic) allow us to move forward with applying the capping as per the EMP. As expressed in our earlier email I think we are still on track for a late April/early May notice from Council and once this is known we should be able to move forward with more momentum.

With the production of the DRC RA on 6/10/2023, the Notice recipient has subsequently updated EPA that its new approach to the circumstances does not include implementation of the Arc EMP measures. Furthermore, in a meeting with the issuing AO on 13/10/2023 the Notice recipient committed to providing an alternative proposal to the capping design and remedial measures in the Arc EMP. This proposal being the two-page DRC Works Plan discussed above.

I provide this summary of changes in plans and commitments communicated to EPA as context for the following discussion on an aspect of site conditions that has developed since March 2021, when the filling and shaping of the area surrounding the site investigation area appears to have been completed (as visible in a Nearmap image of that time³¹), and which is of significance to the development of risk posed by the contaminated soil at the site.

The EPA Science advice included the following statements:

The location of the impacted soil at the site has not been covered with further soil and forms a depression on the top of the raised soil platform. This prevents surface runoff and allows for ponding of water. This has been likely increasing infiltration through the contaminated soil and may be hastening the transport of PFAS to groundwater. Further delays in implementing management measures may further impact groundwater at the site.³²

and...

The absolute concentrations of PFAS in the groundwater are below adopted groundwater quality objectives (GQOs) (also referred to as guidelines or criteria), which the proponent has adopted from the PFAS NEMP 2.0. However, the increasing concentrations may indicate a plume from seepage/infiltration of rainwater from the contaminated material is developing...

... note that GQOs/adopted criteria should not be considered levels to "pollute up to" - they are indicators that risks of harm are evaluated against...³³



³¹ Page 3, Arc EMP Appendix B, '655 Dandenong Hastings Road, Skye, Victoria Capping Fill Specification - Filling, Testing and Reporting', dated 26 October 2021, prepared by PSM Consult Pty Limited

³² EPA Applied Science advice report ASR0017898, dated 17/11/2023

³³ EPA Applied Science advice report ASR0017618, dated 12/10/2023

Environment Protection Act 2017

EPA science advice on the groundwater observations, and the conceptual site model, indicate there is a potential pathway for groundwater to discharge to surface waters including the large on-site dam, and Rodds Drain which flows off-site. Uncertainties mean the potential impact on the groundwater and surface water is difficult to predict and the overall risk to ecological receptors in these environments is unknown. In addition, there has been a lack of monitoring and analysis for the surface water receptors at the site.

From the sequence of events provided above, and the observed development of what appears to be a plume from the contaminated material, it is apparent to me that the delay in actioning the capping of the site investigation area since early 2021 (such that it was exposed to repeated wet weather events) has contributed to a likely increase in risk of harm.

The grounds of the Notice set out observations and statements of fact that partially describe this change in risk over time. However, I find that the Notice grounds do not provide an overall picture, nor give adequate weight to the manner in which delayed action by the Notice recipient has contributed to that increased risk.

The Notice also does not identify that more work needs to be done to clearly understand the pathway and likely contamination of onsite and offsite surface waters. However, given the recent commitment by the Notice recipient to implement a monitoring program (as set out in the DRC Works Plan, and referred to in the submissions) it may be reasonable to consider these remedial works are 'underway' at this time.

Is the Notice requirement preferable?

On review of the background of the circumstances leading to the issue of the Notice, I identified an aspect that was of significant weight in my overall decision. The current Arc EMP, and the associated verification by an EPA Appointed Auditor ³⁴, were provided to EPA by the Notice recipient's contractor Lancore Group in response to a Clean Up Notice issued to it on 4/03/2021³⁵.

On review of that Clean Up Notice I noted the requirement wording was effectively the same as the requirement in the Notice under review. Therefore, the Notice (if reading the requirement in isolation) appears to seek a remedial outcome that EPA was satisfied had occurred when the previous Clean Up Notice was revoked on 18/11/2021. Though I am satisfied the issuing AO had justifiable reason for the wording of the requirement (it was in effect seeking an updated and re-verified version of the EMP), nonetheless it is confusing and unclear wording in the context of the previous notice and the existing Arc EMP and verification.

On that basis I find that the Notice requirement is not preferable. Furthermore, on consideration of the circumstances and evidence, as set out above, I also find that the Notice requirement is not preferable as it does not appropriately prioritise remedial works, in particular capping of contaminated soil, in a timely manner.



³⁴ 'Environmental Auditor Verification Environmental Management Plan KCC Park, 655 Dandenong-Hastings Road, Skye' prepared by Niboi Consulting Pty Ltd, dated 28/10/2021

³⁵ EPA Clean Up Notice 90012151, issued 4/03/2021 (and subsequently amended) and revoked 18/11/2021 under the Environment Protection Act 1970

Environment Protection Act 2017

The priority for on-ground works to achieve timely capping is primarily to avoid the likely continued charging of the groundwater via ponding of rainwater within the depression that forms the site investigation area. As identified by EPA Science advice above, further delays in implementing management measures may result in further impacts to groundwater at the Premises. Add to that the potential pathway for groundwater discharge to surface water, and the implications for escalating risk from the contaminated land forms a compelling reason for timely capping of the site investigation area.

There are some aspects of the Arc EMP and its supporting documents (particularly Appendix B Capping Fill Specifications) that reference EPA guidance documents, regulations or procedures that have since been superseded ³⁶. However, the Arc EMP may still be adequate as guidance for preparation of a capping design plan suitable for tender and procurement of construction services, such as to engage an earthmoving contractor familiar with capping construction.

The pressing need for timely installation of capping must also be balanced with a reasonable timeframe for preparation, procurement and implementation of the project ³⁷. I believe a reasonable timeframe can be provided if a project deadline for completion of all capping works were set for the end of March 2024 (i.e. 4 months) given the preferable weather of the summer months, and most importantly would provide functional capping prior to the onset of increased rainfall that typically occurs from April ³⁸.

Whilst the update of the Arc EMP is a valid requirement, with respect to new legislation and guidance (for example, it does not refer to NEMP 2.0, a key guidance document), further monitoring results, and the proposed monitoring program (especially for surface water and groundwater), it does not warrant any delay to on-ground works commencing whilst that review and update is undertaken. Further Auditor verification of an updated EMP and monitoring program is I believe also warranted, but again not at the expense of delaying the priority works of capping.

For the reasons set out above I therefore find that it is preferable that the decision to issue the Notice is varied, such that the Notice is amended to change the requirement to one that prioritises completion of capping of the contaminated soil in a timely manner, and in keeping with the original design of the Arc EMP. To that end I have set out the preferable requirement in Appendix A of this statement.

Whilst I found the Notice as originally written did provide sufficient grounds to meet the legal basis to be issued, I also provide the reasons set out in this statement as further grounds for the prioritisation of capping works. The urgency of avoiding further ponding within the site investigation area, and associated increased risk of contamination pathways, are also provided in this statement as grounds for the timely completion of the capping works. This statement is therefore to be provided as further grounds for the amended Notice and will form part of the amended Notice.

Other matters

³⁸ Cranbourne Botanic Gardens site data accessed 21/11/2023, http://www.bom.gov.au/climate/averages/tables/cw_086375.shtml





³⁶ For example references to EPA definition of 'fill material' should instead refer to <u>1828.2</u>: <u>Waste disposal categories</u> – <u>characteristics and thresholds | Environment Protection Authority Victoria (epa.vic.gov.au)</u>

Refer also to PFAS management guidance at https://www.epa.vic.gov.au/for-community/environmental-information/pfas/pfas-and-waste for regulatory requirements including EPA permissions

 $^{^{37}}$ I also note the Notice recipient indicated by email to the issuing AO on 1/11/2023 planned works (presumably per the DRC Works Plan proposal) were intended to commence in January 2024

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The Notice recipient has identified in its submissions and elsewhere that it does not have the funding to complete the capping works as recommended by the Coffey RA. I have noted this factor in my considerations but must also weight it against the Notice recipient's decision to delay since early 2021, which appears to have exacerbated conditions leading to groundwater contamination and has potentially progressed a PFAS pathway to ecological exposure via surface water through its inaction to date.

I note that the Notice recipient has elsewhere reported that in 2022 it attained a net surplus of \$175, 090 and 'ended the year with a healthy cash balance of \$2,462,713' 39.

I have also considered the objective of the EPA, the purpose of the Act and the principles of environment protection, and found relevant the following principles of environment protection from Chapter 2 of the Act:

- Decisions should effectively integrate environmental, social and economic considerations (s 12) and be proportionate (s14): I believe an appropriate balance between environmental, social and economic considerations can be found by providing a staged approach for remedy of existing conditions, and further assessment of risk. The amended Notice will not require all appropriate actions for the remedy to be implemented immediately, but rather prioritise what is urgent as immediate obligations.
- **Primacy of prevention** (s 15): For reasons set out above there is a strong case for actions to be taken in a timely manner to prevent impacts and avoid escalation of risk to human health and the environment.
- **Evidence-based decision making** (s 19): The notice recipient has been provided opportunity to present an alternative analysis of risk and conditions at the site. I have relied on the evidence of EPA Science experts, observations and records of EPA AOs, and other sources such as the Coffey RA and Arc EMP, as part of the decision-making process. I have documented the consideration of evidence in this statement.
- **Precautionary principle** (s 20): The concerns regarding PFAS and their impact on human health and the environment support an amended Notice requirement to mitigate the risk of that impact. A lack of full scientific certainty should not be used as reason for postponing controls or other remedial measures.
- Principle of equity (s 21): The present generation should ensure the state of the
 environment is maintained or enhanced for the benefit of future generations. PFAS are
 known to be long-lasting and persistent in the environment. The amended Notice
 requirement supports the protection of the environment for future generations.

I find the costs associated with completing capping works (or other remedial actions) do not outweigh the other factors considered in my decision. I have set out in this statement substantial reasons that provide a strong case in favour of the obligations that will be required in an amended Notice.



³⁹ Page 10, Dogs Victoria Annual Report 2022

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I note also that the Notice recipient may consider investigating the means available to it under the Act for redress for financial hardship, in relation to the previous actions of its contractor Lancore Group Pty Ltd (and potentially a failure by MFB). The Notice recipient is, as has previously been identified, obligated to act under section 39 Duty to manage contaminated land. The Act provides that per section 39(3) any reasonable costs incurred in complying with a duty under section 39(1) or 40(1), including any reasonable costs incurred by the person in taking action under this section, against any person responsible for causing or contributing to contamination of the land, may be recovered as a debt in a court of competent jurisdiction.

Findings and decision

I am satisfied that on consideration of the evidence and information on the circumstances, and the submissions provided, I find the decision to issue the Notice as written was correct in that the grounds satisfied the legal basis, but the requirement was not reasonable, and the overall objective of the Notice was not preferable.

My decision does not support the primary contentions made in the submissions that the DRC RA supersedes the Coffey RA, nor that an alternative to capping is justified.

My review decision is therefore to vary the original decision to issue the Notice as written, by amending the Notice requirement/s to those set out in Appendix A of this statement. This statement will also provide further grounds in support of the amended Notice to be issued.

Matthew Kennedy

Senior Internal Review Officer

Delegate of the Environment Protection Authority of Victoria (under instrument of delegation dated 4 November 2021)

23 November 2023



Amended environmental action notice Environment Protection Act 2017 Right of further review **VCAT** review You may apply to the Victorian Civil and Administrative Tribunal within 15 business days of receiving this remedial notice review decision for a review of this decision. For more information on your review rights, visit <u>www.epa.vic.gov.au</u>.

Environment Protection Act 2017

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Environment Protection Act 2017

Appendix A of the Statement of Review Decision– Amendments to the Notice

Requirements of the Notice are varied under section 429(4)(a) and replaced in their entirety with the following requirements:

You are required to:

- 1. By 31/01/2024 you must provide to EPA:
 - a) a capping design plan in keeping with the specifications provided in the document 'Environmental Management Plan KCC Park, 655 Dandenong-Hastings Road, Skye, VIC', dated 27/10/2021, as prepared by Arc Environmental; and,
 - b) a capping project timeline for installation of capping as per the design plan described in requirement 1(a), and for completion of the project no later than 31/03/2024.

