Niboi Consulting
Managing Sustainability Risk

1 Buckland Street, 20 Montis Lane, 28-46 Saade Street, Epsom, Bendigo

CONFIDENTIAL AND PRIVILEGED

OCTOBER 2024

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ATTACHMENTS

1 INTRODUCTION & SCOPE OF REVIEW

1. I, Geoffrey Michael Byrne, Principal with Niboi Consulting Pty Ltd, which has a business address of 25 Oak Crescent Templestowe Lower, Victoria, have been requested by the Russell Kennedy to provide opinion and advice in relation to soil contamination issues at a proposed residential located at 1 Buckland Street, 20 Montis Lane and 28-46 Saade Street Bendigo, hereinafter referred to as the 'site'.
2. Specifically, my review has focussed on reports prepared by Edwards Environmental dated July and October 2024.

1.1 Instructions and Independence

3. The instructions that I have received from the Russell Kennedy are presented in Attachment A to this report. Those instructions defined the review scope as follows:
    a. Review background materials as necessary and relevant to my expertise
    b. Undertake a peer review, any necessary field work, and prepare an expert evidence report
    c. identify what, if any, additional information would be generated by a preliminary risk screen assessment, that is not otherwise already available
    d. whether an environmental audit is necessary having regard to the information available.
4. Those instructions referred to the property 18-46 Saade St. I have been further advised that the property at 18-28 Saade St is proposed to be rezoned to the Public Parks and Recreation Zone and is in the Council's ownership or control. Russell Kennedy has further instructed me to exclude this title from my consideration of the matters put to me.
5. I confirm that I have no recent or ongoing work with any of the parties that would affect the independence or impartiality of my opinions.

1.2 Experience and Qualifications

6. I have over 45 years' professional experience and currently work in the fields of environmental auditing; risk assessment; mine closure cost estimating and liability assessment.
7. I have a Fellowship Diploma in geology from the then Royal Melbourne Institute of Technology (RMIT) and a Master of Science degree in Engineering Geology from the University of London (Imperial College).
8. I am a member of the Australasian Institute of Mining and Metallurgy and a member of Engineers Australia.
9. I have the following accreditations:
    a. Accredited auditor by the Victorian Environment Protection Authority in the categories of Contaminated Land, Industrial Facilities and Natural Resources

b. Approved Environmental Auditor by the Queensland Department of Environment, Science and Innovation.
c. General Certified Environmental Practitioner (CEnvP) and Site Contamination Specialist (Site Auditor) with the Environment Institute of Australia and New Zealand
d. Chartered Professional Engineer and listed on the National Engineering Register
e. Registered Professional Engineer, Queensland
f. Registered Professional Engineer, Victoria.

10. A copy of my curriculum vitae is included in Attachment B.
11. In preparing this report I have received assistance from Natalie Nunn of Niboi Consulting for statistical calculations and have had discussions with Therese Manning of EnRisks in relation to health investigation levels in soils.

2 SCOPE & METHODOLOGY

12. The scope of my work has consisted of a desk top review of the following documents:
    a. Edwards Environmental 2024a, *Preliminary Environmental Site Assessment 1 Buckland Street, 20 Montis Lane and 12-46 Saade Street, Epsom Victoria*, Version 4.0, July 2024
    b. Edwards Environmental 2024b, *Sample Exceedance Map*, Figure No.2 Rev D, 16 August 2024
    c. Edwards Environmental 2024c, *Preliminary Environmental Site Assessment 1 Buckland Street, 20 Montis Lane and 12-46 Saade Street, Epsom Victoria* , Version 5.0, October 2024
    d. Edwards Environmental 2024d, *Environmental Soil Classification Report 1 Buckland St, 36-46 Saade Street, Epsom 3551*, Version 1.0, October 2024.
13. I have not conducted a visit to the site.
14. I have reviewed site photographs provided to me by Russell Kennedy.
15. I have reviewed available aerial photography, specifically Nearmap imagery from January 2010 through to July 2024.
16. This report presents the findings of my review focused on the instructions provided to me by Russell Kennedy.
17. In my report I have used the following abbreviations:

ASC NEPM	National Environment Protection Measure (Assessment of Site Contamination)
EIL	ecological investigation level
ESL	ecological screening level
HIL	health investigation level
HIL(A)	health investigation level for low density residential setting
HSL	health screening level
M	metres
m^3	cubic metres
mg/kg	milligrams per kilogram
PESA	preliminary environmental site assessment
PRSA	Preliminary Risk Screen Assessment
PSI	preliminary site investigation
UniSA	University of South Australia

3 EDWARDS ENVIRONMENTAL JULY 2024 REPORT

3.1 Sampling Programme

18. The Edwards Environmental July 2024 Report (Version 4.0) contains results of an environmental investigation where field works were conducted in May and June 2019.
19. The cover of this report indicates previous versions were produced in July 2019 (Version1.0), September 2019 (Version 2.0) and January 2024 (Version 3.0). I have not reviewed these earlier report versions.
20. I note that the title of the report includes 12-46 Saade Street. As far as I can determine, the Edwards investigation and report have been limited to 28-46 Saade St. I have limited my review to what I have described as the 'site', being 1 Buckland Street, 20 Montis Lane and 28-46 Saade Street.
21. The report is titled as Preliminary Environmental Assessment and in summary comprised the following activities:
    a. Evaluation of site features including topography, climate, geology, hydrogeology and hydrology
    b. Description of site history
    c. Field investigations comprising 62 test pits excavated in June 2019 and a further 20 test pits in August 2019
    d. Logging of soil profiles of, and collection of soil samples from, each test pit
    e. Laboratory analyses of selected soil samples for a range of analytes comprising metals, hydrocarbons, pesticides/herbicides and semi- and volatile compounds
22. The additional 20 test pits excavated in August 2019 was reported to be due to elevated formaldehyde being detected in two samples from the June 2019 sampling programme.
23. The report also includes as an attachment a June 2024 report from the University of South Australia (UniSA) which is a determination of the bioaccessibility of arsenic in soils. The report was based on three samples submitted to UniSA by Edwards Environmental.

3.2 Results

24. The results of the soil analyses were compared to health investigation levels (HIL) described in the National Environment Protection (Assessment of Site Contamination) Measure 2013 – the ASC NEPM for low density residential use (NEPC 2013). These levels are often referred to as the HIL(A) levels.
25. No exceedances of the ASC NEPM health investigation or health screening levels were detected in the soil samples apart from arsenic elevated above the HIL(A) level of 100mg/kg. Of the 70 soil samples analysed for arsenic (excluding duplicate samples), 20 exceeded the NEPM arsenic HIL(A). The highest levels of arsenic in soils were recorded on the Saade St property (TP50-TP60 with an average arsenic detection of 220mg/kg).

26. The June 2024 UniSA bioaccessibility testing reported that the bioaccessibility of arsenic in the three samples analysed, ranged between 14.2% and 18.2%.
27. Based on the UniSA reports, the Edwards Environmental report then adopted a bioaccessibility factor of 18% to develop a site specific health investigation level of 400mg/kg instead of the ASC NEPM's HIL(A) of 100mg/kg for arsenic. Adopting this site specific criterion, Edwards reported that only two samples exceeded it, that no single sample exceeded 250% of the revised HIL(A) and that the standard deviation of all sample results was less than the site specific HIL(A). Further, the Edwards report calculated a 95% Upper Confidence Limit of the mean arsenic concentration of 157mg/kg, also below the site specific HIL(A).
28. Additionally, elevated formaldehyde was detected in two samples from test pits TP08 and TP40. This would have been unusual, as formaldehyde is not typically detected in soils (ASTDR 2008). The additional test pit investigation conducted in August 2019 focused on the areas where the elevated formaldehyde was detected as well as more broadly across the site. The results of that additional investigation (involving an additional 20 samples) did not detect formaldehyde. The Edwards report was unable to comment further on the source(s) of the apparent formaldehyde detected in the initial two samples.
29. Groundwater was not investigated during the field investigation, nor was it encountered in any of the test pits that were excavated on site. The Edwards report identifies that the groundwater beneath the site is likely to be categorised as Segment A1, for which the Environment Reference Standard (ERS) requires the following groundwater environmental values to be protected:
    a. Water dependent ecosystems and species
    b. Potable water supply (desirable)
    c. Potable water supply (acceptable)
    d. Potable mineral water supply
    e. Agriculture and irrigation (irrigation)
    f. Agriculture and irrigation (stock watering)
    g. Industrial and commercial use
    h. Water-based recreation (primary contact recreation)
    i. Traditional Owner cultural values
    j. Building and structures
    k. Geothermal properties.

3.3 Review of Report

30. Based on my review of the July 2024 Report (Version 4.0) my comments are discussed in the following paragraphs.

3.3.1 Adequacy of Investigations

31. There is an adequate areal coverage of test pits excavated in June 2019 across the site for a preliminary environmental assessment of soils on site. The test pit locations follow a general grid based approach which I consider to be appropriate based on the site history information presented in the report.
32. Samples from nearly every test pit were analysed for metals and I therefore would consider the results to be representative, apart from my comments regarding fill samples in paragraph 49.
33. A selection of samples from other test pits was analysed for a range of analytes – representing roughly 10% of the test pit locations, although testing for pesticides and polychlorinated biphenyls was carried out about 20% of the test pit locations. These provide a broad assessment for those analytes considering that the test pit log descriptions do not identify significant visible evidence of contamination and photoionisation detector (PID) results did not detect readings for volatile substances in the field at any of the test pit locations. The extent of laboratory testing for analytes other than metals would not, however, satisfy the requirements of a detailed site investigation.
34. In recent years (i.e. after 2019) it has become more common for environmental sampling programmes to include PFAS compounds in the analytical suite, unless it can be demonstrated through the detail of site history and distances to potential PFAS sources that PFAS is an unlikely contaminant to be present on site. PFAS was not included in the analytical suite, nor is its potential as a contaminant discussed in the Edwards report. The site history in the Edwards report does not indicate potential on-site sources of PFAS, although there has been no assessment of potential off-site sources that might have impacted the site.
35. Section 4 of the Edwards report discusses quality assurance and quality control measures that were adopted for the investigation. I consider those measures to have been adequate. Some relative standard deviation results (or relative percent differences) for duplicate samples exceeded the accepted range of 30% to 50%. I consider that these exceedances are not significant and agree with the Edwards report conclusion that '*…All exceedances were metals and in the most cases slightly above the 50% accepted range. Theses exceedances can be explained through the low concentrations of contaminants identified and also the heterogeneous nature of soils…*'.
36. Section 2.9 of the Edwards report states that '*…It is noted that on-site groundwater assessment is outside the scope of this report…*'.
37. As I have noted in paragraph 29 there is a number of environmental values that require protection for groundwater segment A1. Of those environmental values, I consider that those of Potable Mineral Water Supply (the site is not within a mineral spring district) and Geothermal Properties are unlikely to be realised. I note that the groundwater environmental value of Water Dependent Ecosystems and Species apply at the point of discharge to surface water (potentially Bendigo Creek). I also note that, in the absence

of other guidance, it is considered appropriate that the environmental quality indicators and objectives for water dependent ecosystems and species would likely be adopted for Traditional Owner Cultural Values.

38. Based on these observations, I consider that the following groundwater environmental values could be realised on site, are therefore relevant and require protection:
    a. Water dependent ecosystems and species
    b. Potable water supply (desirable)
    c. Potable water supply (acceptable)
    d. Agriculture and irrigation (irrigation)
    e. Agriculture and irrigation (stock watering)
    f. Industrial and commercial use
    g. Water-based recreation (primary contact recreation)
    h. Traditional Owner cultural values
    i. Building and structures.
39. As such, any environmental assessment should include a discussion on the potential risks to relevant groundwater environmental values.
40. The Edwards report limits discussion on ecological risk to petroleum hydrocarbons, assessing laboratory results against ecological screening levels (ESLs) that were developed for the site. It does not assess ecological risks either on the site or due to discharges from the site for other analytes, notably metals. I would expect any environmental assessment should include a discussion on the potential risks to ecological receptors both on- and off-site, including comparisons of soils analytical results to relevant ecological investigation levels (EILs).

3.3.2 Soil Arsenic Levels

41. The recent (2024) bio-accessibility testing that has been carried out by UniSA on the three samples provided by Edwards is consistent with recent EPA guidance on arsenic bioaccessibility in Bendigo soils impacted by mine wastes – viz, '…*Where a potentially contaminated site is being assessed for mine-contaminated arsenic-rich mine waste, no assumptions regarding arsenic bioaccessibility should be made without site-specific evidence. Where adjustments to the default health investigation level are being considered, site- and material-specific sampling and analysis is required*….' (EPA 2024a).
42. There are, however, no details of these three samples that were analysed in 2024 and therefore confirmation that:
    a. They have been retrieved from the site and are representative
    b. Quality control procedures as well as dates and locations
    c. They include one or more samples from the Saade St property which generally recorded higher arsenic levels.
43. Based on the assumption that the bioaccessibility testing is representative of the site, I consider that the revised site specific arsenic HIL(A) of 400mg/kg is appropriate and has been correctly calculated using the methodology described in the ASC NEPM.

44. I further note, however, that the UniSA report has the following disclaimer in part
    a. '*…This report is confidential and was prepared exclusively for the client named above. It is not intended for, nor do we accept any responsibility for its use by any third party. The report is Copyright to University of South Australia and may not be reproduced…*'.
    b. This suggests that further permission is required from the University of South Australia for reliance to be placed on the findings of the bioaccessibility testing.
45. In my review of the soil analytical data I noted that higher arsenic levels appear to occur within the surficial layer denoted as '*Fill*' in the test pit logs, which are contained in Appendix 11 of the Edwards report. I have reviewed the data for the soils denoted as Fill and carried out a statistical analysis using the ProUCL software 5.1 (USEPA 2015), a similar approach to that used by Edwards for all of the soil data and reported in their Appendix 15. My statistical review of those samples described as Fill resulted in a higher suggested Upper Confidence Limit of the mean arsenic concentration of 203mg/kg. This is still less than the site specific HIL(A) of 400 mg/kg that has been adopted.
46. As I have discussed in paragraph 25 higher arsenic readings were recorded in the soils on the Saade St property. I have also carried out a statistical analysis limited to the 11 samples that were analysed for arsenic from that property. This resulted in a higher suggested Upper Confidence Limit of the mean arsenic concentration of 286 mg/kg, less than the site specific HIL(A) of 400 mg/kg that has been adopted.

3.3.3 Fill Stockpiles

47. Photography contained in the Edwards report indicates the presence of a large stockpile of soil on the central portion of the 1 Buckland St property in 2019.
48. I have conducted a review of Nearmap aerial photography imagery. This suggests that this stockpile originated from earthworks on the western adjacent (i.e. off-site) residential subdivision development during the period after September 2018 to April 2019, as shown in Figure 1 below.
49. Figure No 2 of the Edwards report describes this stockpile area as '*Stockpile 1*' and '*Stockpile 2*'. Table 9 states that Stockpile 2 is an area of topsoil that was stripped from the area of Stockpile 1 prior to fill being placed on that area. Stockpile 2 is described as having dimensions of approximately 70m x 15m x 2m and Stockpile 1 is described as having dimensions of approximately 100m x 40m x 3.5m.
50. I calculate the approximate in situ volumes of Stockpile 1 and Stockpile 2 to be 14,000 m^3 and 2,100 m^3.
51. Stockpile 1 was evaluated by test pits TP27, TP28, TP30, TP31, TP33 and TP34. Based on the test pit log descriptions only one sample of this fill (TP30 0.2m) was submitted for laboratory analysis and this was limited to metals.
52. Stockpile 2 does not appear to have been sampled.
53. I do not consider that this provides an adequate representation of the environmental quality of either stockpile. As a guide, Schedule B2 of the ASC NEPM suggests a minimum

number of eight samples for a stockpile with a volume up to 200 m^3. EPA publication 702.2 recommends one sample per 250 m^3 for waste stockpiles with a volume in excess of 5,000 m^3, although this sample frequency relates to waste soils where there may be greater uncertainty over the history of the stockpile and its variability. I note that the test pits that have been excavated in Stockpile 1 provide a good indication of the soil profile within the stockpile and it would therefore be unlikely that a soil sampling frequency recommended in EPA publication 702.2 would be required.

Figure 1 Nearmap Imagery Sep 2018 to Apr 2019

Stockpiles 1 and 2

Nearmap aerial imagery of 26 September 2018

Nearmap aerial imagery of 25 April 2019

54. I have carried out a further review of Nearmap imagery which shows earthworks activity on the Montis Lane property during the period between May 2020 to March 2022 as well as an additional stockpile of fill being formed on the Buckland St property, to the north of Stockpile 1. This appears to show excavated fill being placed on the Montis Lane property from the subdivision development on the adjacent (i.e off-site) western property, as shown in Figure 2. These earthworks post-date the Edwards field investigation of 2019.

55. I am instructed by Russell Kennedy that the source of this fill material is from road works from the construction of a section of Napier Street located to the south-east of the site.
56. There are, therefore, soils that have been imported to the site that have not been assessed by the Edwards July 2024 report.

Figure 2 Nearmap Imagery May 2020 to December 2021

Earthworks on the Montis Lane property after 2019
Additional stockpile at the northern end of the Buckland St property

Nearmap aerial imagery of 26 September 2018

Nearmap aerial imagery of 25 April 2019

3.3.4 Data Gaps

57. In summary, whilst the investigation that has been conducted is of a high standard for a preliminary environmental site investigation, I have identified a number of data gaps that exist in relation to a full evaluation of the site's contamination status:
    a. The site received fill from an off-site source or sources after the 2019 field investigation which has not been further evaluated
    b. There is minimal (one sample) laboratory data on the fill stockpiles that were formed on site in late 2018 to early 2019
    c. There is no discussion or evaluation of ecological risks presented by analytes other than petroleum hydrocarbons
    d. There is no discussion on whether relevant groundwater environmental values are potentially protected or threatened
    e. Lack of leachability testing on metals and an associated discussion on risks to groundwater
    f. There is no information on the sampling dates, locations, depths and nature of the three samples that were submitted to UniSA for bioaccessibility testing

g. Reliance on the results of the UniSA for bioaccessibility testing needs to be extended to other parties.

4 ENVIRONMENTAL SOIL CLASSIFICATION REPORT BY EDWARDS ENVIRONMENTAL

58. I have reviewed an additional report by Edwards Environmental titled *Environmental Soil Classification Report, 1 Buckland St, 36-46 Saade Street, Epsom 3551*. It is dated October 2024 and denoted as Version 1.0.
59. The report relates to a 2019 soil investigation of what are termed three stockpiles, described as follows:
    a. *'Stockpile 1 (approximately 100m x 40m x 3.5m) – was located in the centre of site at 1 Buckland Road, Epsom. The stockpile was accessed via an entry road from Buckland Road across neighboring* [sic] *vacant farmland. The stockpile contained a variety of imported fill material including sands, clays, weathered rock and gravels. Test pit analysis of Stockpile 1 identified small volumes of asphalt, plastic, red brick, steel, tree roots and a single piece of asbestos.*
    b. *Stockpile 2 (approximately 70m x 15m x 2m) – was located directly east of Stockpile 1 in the center* [sic] *of site at 1 Buckland Road, Epsom. The stockpile appeared to contain topsoil previously stripped from below Stockpile 1 and surrounds.*
    c. *Stockpile 3 (approximately 40m^3) – was located in the northern portion of 36-46 Saade Street Epsom. The stockpile appeared to contain topsoil fill.'*
60. Stockpiles 1 and 2 appear to be the same stockpiles described in the Edwards Environmental July 2019 report. Stockpile 3 was not identified in the July 2019 report. The stockpile locations are shown on Figure No. 2 of the October 2024 soil classification report.
61. As part of this soil classification investigation, additional sampling was conducted in 2019 as follows:
    a. 18 test pits in Stockpile 1
    b. 10 test pits in Stockpile 2
    c. Two sample locations in Stockpile 3.
62. In total 31 samples were submitted for laboratory analysis.
63. The analyses detected the following:
    a. Arsenic ranging from 36 mg/kg to 550 mg/kg with a 95% Upper Confidence Limit of the mean concentration being 116 mg/kg
    b. A single sample with elevated benzo-a-pyrene and sum of polycyclic aromatic hydrocarbons
    c. Manganese concentrations ranging from 44 mg/kg to 290 mg/kg.
64. Notably, field observations recorded small volumes of asphalt, plastic, red brick, steel, tree roots and a single piece of asbestos in Stockpile 1. In my opinion this indicates that the fill has been placed on site in an uncontrolled manner.

65. The report concluded that if the stockpiles were to be removed from site, then the soils would be classified as Category C contaminated soil. This would require disposal to a landfill licensed to accept this category of contaminated soils
66. The report recommended that if the stockpiles were to be re-used on site '*…All solid inert waste (including asphalt) and ACM should be appropriately screened, removed and disposed as far as reasonability practicable from Stockpile 1 prior to the reuse of soil onsite...*'.
67. In summary the October 2024 soil classification report addresses the following June 2024 report gap that I identified paragraph 57:
    a. There is minimal (one sample) laboratory data on the fill stockpiles that were formed on site in late 2018 to early 2019.
68. I note that this report does not address the areas of fill that were imported to the site after the 2019 soil sampling programme, as discussed in paragraph 54. That is, there are four stockpiles on site and an area on the Montis St property that contains post 2019 fill. Of these, only three (Stockpiles 1,2 and 3) have been tested.

5 EDWARDS ENVIRONMENTAL OCTOBER 2024 REPORT

5.1 Report Changes

69. The October 2024 Edwards Environmental report is denoted as version 5.0.
70. The version 5.0 report does not discuss what changes have been made compared to the version 4.0 report.
71. My review of the two reports indicates the following:
    a. The report structure and table of contents remain unchanged
    b. Table 10 has been expanded to summarise all test pits samples where arsenic results exceeded the NEPM HIL(A) of 100 mg/kg
    c. Section 3.9 has been expanded to provide commentary on ecological risks due to elevated arsenic in soils
    d. Section 5, Conclusions, includes a summary discussion on ecological risks due to elevated arsenic in soils.
72. Figure No. 2 Rev. D shows the locations of the three samples submitted for bioaccesibility testing at UniSA. This figure shows samples BIO-01 and BIO-02 weer samples from the Saade St property and sample BIO-03 was sampled from the Montis Lane property. I have sighted received a subsequent email dated 14 October 2024 from Edwards Environmental (and forwarded by Russell Kennedy) that contained a copy of the chain of custody document relating to these samples. This is chain of custody document shows the time and date of sampling to ne between 13.05 and 13:15 on 11 June 2024. The UniSA report is dated 24 June 2024 and UniSA's chain of custody report for the submission of their analyses was dated 19 June 2024.
73. I do not understand why the results and conclusions of the October 2024 soil classification report (based on 2019 sampling) were not incorporated into this revised October 2014 Version 5.0 environmental assessment report - nor why they were not incorporated into the July 2024 Version 4.0 environmental assessment report.

5.2 Report Review

74. I consider the changes that have been made to Table 10 provide useful information on the soil arsenic levels at the site with respect to human health risks. I continue to agree with the approach adopted by Edwards Environmental as I have discussed in paragraph 43.
75. Section 3.9 of the Version 5.0 Edwards report refers to a '…generic Ecological Investigation *Level (EIL) for aged arsenic in an urban residential and public open space setting*…' of 100mg/kg. The reference for this EIL is not quoted in the report, although I presume that it refers to Table 35 of Schedule B5C, *Guideline on Ecological Investigation Levels for Arsenic, Chromium (III), Copper, DDT, Lead, Naphthalene, Nickel & Zinc*, of the ASC NEPM.

76. Section 3.9 also states that 20 samples exceeded this EIL and that the 95% Upper Confidence Limit of the mean arsenic concentration of 157mg/kg for all samples also exceeds the EIL.
77. I note that my own statistical review of the samples collected at the Saade St property calculates a 95% Upper Confidence Limit of the mean arsenic concentration to be 286 mg/kg – approaching three times the EIL.
78. Section 3.9 of the Version 5.0 report further concludes, however, that the risk is considered to be low due to '…*Ecological receptors on the site and surrounds will be highly modified as a result of the long term presence of elevated arsenic in the site soils and on that basis, will have acclimatised to the presence of the contamination*...'.
79. This conclusion may ultimately prove to be correct, but it is essentially an opinion and not substantiated by references to other relevant studies.
80. It appears to be somewhat at odds with the following recommendations made in Section 3.9:
    a. '…*The primary ecological receptors of consideration would be any vegetation which may be established as part of the site redevelopment. Sourcing vegetation from the local Bendigo region would therefore be recommended*…'
    b. '…*site requires the existing levels of soil to be built up for flood mitigation purposes. The soils used should be clean fill and will also act as a capping layer to provide an additional control measure for the site*…'.
81. The above recommendations are similar to recommendations included in a 2023 environmental audit of a proposed residential development in Bendigo (AAA 2023), which recommended a 0.5m thickness of Fill Material cover over exposed areas of that audit site.
82. I acknowledge that other areas of Bendigo have reported very high levels of arsenic in soils, in some cases multiple orders of magnitude greater than those recorded on site, particularly in calcine sand areas. I further note that the levels of arsenic in soils detected on site are not unusual.
83. I do, however refer to a recent EPA investigation on soil arsenic concentrations across Bendigo (EPA 2024b) which concluded that "…*The 95th percentile of the ambient background surface soil (< 2mm) dataset in Study Area 2 (14 mg/kg) is deemed to be a suitable value to be used as an upper threshold for ambient background across the whole of the City of Greater Bendigo local government area*…'.
84. I consider, therefore, that further evaluation is required to reach a conclusion that the soil arsenic levels do not represent an unacceptable ecological risk for current or future land uses. If this conclusion cannot be reached, then the evaluation needs to consider what remediation or management measures need to be implemented to achieve an acceptable risk.
85. My review of other analytes assessed by Edwards shows that manganese levels in soils range from 51 mg/kg to 1,000 mg/kg, with an average of 171 mg/kg. There is no

definitive EIL for manganese in soils and it requires site specific evaluation assessing soil profile, clay content and pH, amongst others. I note that the 2023 McColl St audit (AAA 2023) adopted an ESL of 108 mg/kg, based on a USEPA soil invertebrate criterion. The ecological risk of manganese in soils requires further assessment.

86. I consider that the October 2024 environmental assessment addresses the following June 2024 report gap that I identified paragraph 57:
    a. There is no information on the sampling dates, locations, depths and nature of the three samples that were submitted to UniSA for bioaccesibility testing.

6 ISSUES REQUESTED FROM INSTRUCTIONS

87. As I have stated in paragraph 3, my instructions from Russell Kennedy have included the following two questions:
    a. identify what, if any, additional information would be generated by a preliminary risk screen assessment, that is not otherwise already available
    b. whether an environmental audit is necessary having regard to the information available.

6.1 Preliminary Risk Screen Assessment

88. I consider that it is important to clarify that the preliminary environmental site assessment (PESA, or PSI as described in the NEPM) that has been conducted at the site is not a preliminary risk screen assessment (PRSA) as defined by the Environment Protection Act (2017).
89. The data that have been collected in the PESA would form part of the PRSA.
90. Based on EPA's guideline for conducting a risk screen assessment (EPA 2023), I consider that the main additional items that would be included in a PRSA for the site would comprise:
    a. Auditor site inspection
    b. Review of the data by an environmental auditor appointed under section 208 of the Environment Protection Act (2017)
    c. Complete list of standards and guidelines considered in the assessment
    d. Description of assumptions made by the environmental auditor during the assessment or any limitations on the assessment
    e. Listing any exclusions from the assessment and the rationale for these exclusions
    f. Inclusion of the surface water element and associated environmental values
    g. Consideration of threats to the groundwater and surface water elements
    h. Development of a Conceptual Site Model
    i. Clarification that reliance can be placed on the UniSA accessibility report, since it is a key component leading to the development of a higher HIL(A) for the site
    j. Completion of data gaps as defined in paragraphs 57,84 and 85 of this report.
    k. Preparation of the PRSA statement and PRSA report by the environmental auditor
    l. Auditor conclusion on one of three outcomes, viz:
        i. Unlikely that contaminated land is present and no environmental audit is required
        ii. Likely that contaminated land is present but no environmental audit is required
        iii. Likely that contaminated land is present and an environmental audit is required
    m. Environmental audit scope if the PRSA conclusion is that an audit is required.

6.2 Environmental Audit

91. EPA's guideline for conducting a risk screen assessment (EPA 2023) states that its purpose is:
    a. '*to assess the likelihood of the presence of contaminated land; and*
    b. *to determine if an environmental audit is required; and*
    c. *if an environmental audit is required, to recommend a scope for the environmental audit*'.
92. I also note that an environmental audit can proceed without the completion of a PRSA. Indeed, EPA's guideline states that '…*If an environmental auditor has been requested to conduct a PRSA, and it is clear that the outcome is the need for an environmental audit, it is not necessary to complete a PRSA*…'.
93. Since a PRSA has not been completed for the site, I am therefore unable to reach a definitive conclusion as to whether an environmental audit is needed. However, I further discuss aspects of assessing the need for an environmental audit in the following paragraphs.
94. EPA's PRSA guideline reiterates the Environment Protection Act's definition of contaminated land, being where a waste, a chemical substance or a prescribed substance:
    a. '*is present at a concentration above the background level; and*
    b. *creates a risk of harm to human health or the environment'*
95. The data from the investigations conducted to date show that there are chemicals on site that are present in concentrations above the background level, specifically arsenic and potentially manganese.
96. EPA's PRSA guideline clarifies that risk of harm does not just mean **unacceptable** risk of harm, that is risk of harm equates to a hazard. I am of the opinion that the levels of arsenic in soil present a risk of harm to human health and the environment, even though I agree with the conclusion that there is likely an acceptable risk of harm to human health due to the adoption of the site specific HIL(A) of 400 mg/kg. It is possible that elevated levels of manganese in soils present a risk of harm to the environment.
97. Additionally, the investigation of the stockpiles on site identified waste that could impact the land environmental value of aesthetics.
98. The presence of a piece of asbestos in stockpile material raises concern about the potential lack of quality control during emplacement of the stockpiles.
99. Based on paragraphs 95, 96, 97 and 98 above, I think that it is reasonable to conclude that there is contaminated land as defined by the EP Act at the site.
100. That would indicate that of the three outcomes of a PRSA as discussed in paragraph 90.l two potential outcomes remain:
    a. no environmental audit is required
    b. an environmental audit is required.

101. The PRSA guidelines provide a scenario for where the outcome is no environmental audit is required:
    a. '*…assessment has concluded that site is likely to be contaminated land, however the contamination is expected to be at levels that will not prevent or restrict the use or proposed use of the site…*'
102. Any requirement to cap or cover soils with elevated contaminants or limitations on the types of vegetative plantings (as discussed in the Edwards October 2024 environmental assessment report) would, in my opinion, classify as a restriction or limitation on the use or proposed use of the site.
103. Additionally, the October 2024 soil classification report recommends management measures to screen the stockpile soils that exist on site. In my opinion, this also classifies as a restriction or limitation on the use or proposed use of the site.
104. I therefore consider that it is more likely than not, that an environmental auditor would conclude that an environmental audit is required for the site for the following reasons:
    a. Outstanding data gaps listed in paragraph 57, viz:
        i. The site has received fill from an off-site source or sources after the 2019 field investigation which has not been further evaluated
        ii. There is no discussion or evaluation of ecological risks presented by analytes other than petroleum hydrocarbons.
        iii. There is no discussion on whether relevant groundwater environmental values are potentially protected or threatened
        iv. Lack of leachability testing on metals and an associated discussion on risks to groundwater
        v. Reliance on the results of the UniSA for bioaccesibility testing needs to be extended to other parties.
    b. It is likely that contaminated land occurs on site since testing of Stock 1 and 2 confirm the presence of analytes (arsenic and potentially manganese) above background levels
    c. Potential for future management measures.

6.3 Site Management

105. I have been further requested by Russell Kennedy for an opinion on what conditions might apply to the site for residential redevelopment.
106. These could involve some or a combination of:
    a. Testing of post 2019 fill soils assessment of their risks to relevant land, surface water and groundwater environmental values
    b. Assessment of ecological risk posed by elevated arsenic and potentially manganese in soils

c. Assessment whether relevant groundwater and surface water environmental values are protected
d. Removal or remediation of existing stockpiles and post 2019 fills that show contaminant levels greater than background and that pose unacceptable risks to relevant land, surface water and groundwater environmental values
e. What site management measures (such as capping or vegetarian selection) are needed, if any.

107. I further consider that all of the issues listed in paragraph 106 would be addressed if:
a. an environmental audit was to be completed for the site, *or*
b. a condition was imposed to the planning permit that those matters are addressed to the satisfaction of the responsible authority as a pre-condition to the development.

7 REFERENCES

ATSDR 2008, *Public Health Statement Formaldehyde*, US Agency for Toxic Substances and Disease Registry, September 2008.

AAA 2023, *Environmental Audit, 20-24 McColl Street, Bendigo, Victoria, Environmental Audit ID: EA001376*, AAA Environmental Pty Ltd, 6 April 2023

EPA 2023, *Guideline for conducting preliminary risk screen assessments*, Environment Protection Authority, Publication 2021-1, September 2023.

EPA 2024a, *Characterising arsenic bioaccessibility in legacy gold mine wastes*, Environment Protection Authority, Technical report, 29 February 2024.

EPA 2024b, *Investigating soil arsenic concentrations across Bendigo,* Environment Protection Authority, Technical report, March 2024.

EPA 2024c, *Soil sampling for waste soils,* Environment Protection Authority, Publication 702.2, 17 May 2024.

ERS 2021, *Environment Reference Standard*, Victoria Government Gazette, May 2021

NEPC 2013, *National Environment Protection (Assessment of Site Contamination) Measure 1999*, National Environment Protection Council amended May 2013 (ASC NEPM 2013).

USEPA 2015, *ProUCL Version 5.1.002, Technical Guide, Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations*, U.S. Environmental Protection Agency, October 2015.

8 LIMITATIONS & EXCLUSIONS

This report has been prepared as a desktop review and has been limited to the instructions received from Russell Kennedy. The report is neither a Preliminary Risk Screen Assessment nor an environmental audit report pursuant to Part 8.3 the Environment Protection Act 2017.

I have not visited the site and have relied on the data and findings reported in the two Edwards Environmental reports that I have reviewed. I have not conducted independent field investigations to test the veracity of statements made in those reports. This report is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It does not provide legal or financial advice.

Subsurface conditions, including contaminant concentrations, can change in a limited time and there are always some variations in subsurface conditions across a site that cannot be fully defined by sampling. Hence it is possible that the measurements and values obtained from sampling and testing during the investigations may not necessarily represent the extremes of conditions that exist within the site.

Conclusions on environmental risk have been based on current regulatory standards and guidance. Regulatory criteria often change, particularly for classes of chemicals described as emerging contaminants. Therefore, concentrations of contaminants considered acceptable at the time of this report may become subject to different regulatory standards and guidance and which could lead to different risk conclusions in the future.

****

Geoff Byrne
Principal
Niboi Consulting

14 October 2024

ATTACHMENT A

LETTER OF INSTRUCTIONS FROM RUSSELL KENNEDY

Russell Kennedy

RK reference DZV 362064-00001

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23 September 2024

BY EMAIL **geoff.bryne@niboi.com.au**

Geoffrey Byrne
Principal
Niboi Consulting Pty Ltd
28 Olympus Drive
Templestowe Lower VIC 3107

Dear Geoff

Letter of Instruction
Greater Bendigo Planning Scheme Amendment C248gben
Planning Permit Application No. DS/207/2019
1 Buckland Street, 20 Montis Lane, 18-46 Saade Street, adjoining reserves and road reserves, Epsom

1 We act on behalf of Law Serve (Bendigo) Pty Ltd, Beardall and Smith (**Proponent / Client**) in the above matter.

2 This matter concerns a combined Planning Scheme Amendment (**Amendment C248gben**) and Planning Permit Application No. DS/207/2019 (**Planning Application**) which aims to facilitate residential development at 1 Buckland Street; 20 Montis Lane; 18-26, 28-34, 36-46 Saade Street, adjoining reserves and road reserves, Epsom (**Subject Land**). The combined request was made on behalf of our Client under section 96A of the *Planning and Environment Act 1987* (Vic) (**PE Act**).

3 Greater Bendigo City Council (**Council**) is the Planning Authority for Amendment C248gben.

4 This correspondence outlines your instructions to provide expert evidence in relation to environmental issues in this matter.

The Proposal

Amendment C248gben

5 Amendment C248gben concerns the entirety of the Subject Land being the land at Buckland Street, 20 Montis Lane, 18-26, 28-34 and 36-46 Saade Street and Montis Lane, Epsom as well as the adjoining reserves and road reserves. It proposes to:

(a) rezone the land at 1 Buckland Street, 20 Montis Lane, 28-34, 36-46 Saade Street, Epsom, and parts of the adjoining road reserves of Buckland Street, Montis Lane and Saade Street from the Farming Zone (**FZ**) to the Neighbourhood Residential Zone 2 (**NRZ2**) as shown on Planning Scheme Map No. 15;

(b) rezone the land immediately abutting the western side of the Bendigo Creek which includes part of the land at 18-26 Saade Street, Crown Allotment 19, No Section, Township of Epsom, Crown Allotment 20, No Section, Township of Epsom and Crown Allotment 2024, No Section, Township of Epsom, Parish of Sandhurst from the Farming Zone (**FZ**) to the Public Park and Recreation Zone (**PPRZ**) as shown on Planning Scheme Map No. 15 and

(c) rezone the reserves and road reserves adjoining the land to reflect the zone of the adjoining private property.

6 The existing planning overlays are not proposed to be changed by Amendment C248gben.

Planning Application

7 The Planning Application concerns the land at 1 Buckland Street, 20 Montis Lane, 18-26, 28-34 and 36-46 Saade Street and Montis Lane, Epsom. It seeks approval to:

(a) subdivide the land into 78 residential lots and an open space reserve in six stages;

(b) remove 0.812 hectares of native vegetation, including dead vegetation;

(c) carry out works including earthworks, roadworks, fences, and other works ancillary to the subdivision; and

(d) create a drainage reserve.

Subject Land

8 The Subject Land comprises thirteen parcels with a total area of approximately 8.91 hectares within the suburb of Epsom, located immediately west of the Bendigo Creek, described as follows:

(a) 1 Buckland Street, Epsom which is comprised in Certificate of Title Volume 8274 Folio 871 and formally described as Crown Allotment 20A, Township of Epsom, Parish of Sandhurst;

(b) 20 Montis Lane, Epsom which is comprised in Certificate of Title Volume 11335 Folio 620 and formally described as Lot 1 on Title Plan No. TP949533H;

(c) 18-26 Saade Street, Epsom which is comprised in Certificate of Title Volume 9792 Folio 960 and formally described as Reserve 1 on Plan of Subdivision No. LP210004M;

(d) 28-34 Saade Street, Epsom which is comprised in Certificate of Title Volume 9792 Folio 962 and formally described as Lot 2 on Plan of Subdivision No. PS210213C;

(e) 36-46 Saade Street, Epsom which is comprised in Certificate of Title Volume 9792 Folio 963 and formally described as Lot 3 on Plan of Subdivision No. PS210213C, and Certificate of Title Volume 9792 Folio 964 and formally described as Lot 4 on Plan of Subdivision No. PS210213C;

(f) the land comprised in Certificate of Title Volume 5061 Folio 015 and formally described as Lots 1 and 2 on Title Plan No. TP747978S;

(g) the land comprised in Certificate of Title Volume 8782 Folio 139 and formally described as Lots 1 and 2 on Title Plan No. TP743178Y;

(h) the land comprised in Certificate of Title Volume 11796 Folio 179 and formally described as Crown Allotment 2024, Township of Epsom, Parish of Sandhurst;

(i) the land formally described as Crown Allotment 19, No Sec, Township of Epsom (General Law Land); and

(j) the land formally described as Crown Allotment 20, No Sec, Township of Epsom (General Law Land).

9 The Subject Land is shown in the red outline below:

Figure 1: NearMap satellite image showing the Subject Land in red as at 30 July 2024.

10 The Subject Land is located within the Farming Zone (**FZ**). In terms of overlays:

(a) the site is almost entirely affected by the Land Subject to Inundation Overlay - Schedule 1 (**LSIO1**) for flooding from waterways with depths up to and including 350 millimetres], or the Land Subject to Inundation Overlay - Schedule 2 (**LSIO2**) for flooding from waterways with depths greater than 350 millimetres. The area within the site proposed for residential development / zoning is only affected by the LSIO1; and

(b) the site is also partially affected be the Environmental Significance Overlay - Schedule 1 (**ESO1**).

11 The Subject Land has previously been used for farming purposes and is largely cleared of vegetation, with no existing dwellings or structures present. Scattered trees exist throughout the site, with vegetation present along the eastern boundary adjacent to Bendigo Creek and within the northern portion of the site. The Montis Lane road reserve extends through a portion of the site (at the northern end). This road reserve is currently used as a shared path which provides a link to the Bendigo Creek Trail, which runs along the Bendigo Creek from the Epsom Shopping Centre to Lake Weeroona.

12 The surrounding area includes a mixture of residential and commercial land uses, with public open space along Bendigo Creek. The land immediately west of the site is within the General Residential Zone (**GRZ**) with developed and developing residential lots as part of the 'Elmwood Estate'. The Bendigo Creek adjoins the site to the east and separates it from land within the Commercial 2 Zone (**C2Z**) further east. The land to the south of the site is within the Low Density Residential Zone (**LDRZ**) and comprises larger residential lots. The land to the north of the site is also within the FZ and includes an existing drainage basin, owned and managed by the Council, which is proposed to be utilised as part of this proposal.

Background and Chronology

Lodgement of combined Planning Application and Amendment C248gben application

13 In August 2018, Spiire reached out to Council seeking a pre-application meeting in relation to a combined permit application and rezoning of the Subject Land. On 11 September 2018, Council provided its response indicating its support. **(See Tab 2)**

14 On 22 March 2019, the combined application was lodged on behalf of our Client seeking to use and develop the Subject Land for the Proposal. **(See Tab 3)**

15 On 26 March 2019, Council issued an acknowledgement letter. **(See Tab 4)**

Request for Further Information

16 On 15 April 2019, Council issued a Request for Further Information (**RFI**). **(See Tab 5)**

17 On 11 October 2019, a response to Council's RFI was submitted which included an updated Town Planning Report, a Preliminary Environmental Site Assessment, a Soil Management Plan, Explanatory Report, Amendment Instruction Sheet and Amendment Map. **(See Tab 6)**

Referrals / Key Issues

18 The application was referred internally to Council's Drainage Engineer, Traffic Engineer, Sustainable Design Officer. **(See Tab 7)**

19 The application was referred externally to the North Central Catchment Management Authority (**NCCMA**), the Country Fire Authority (**CFA**), the Department of Environment, Energy and Climate Action (DEECA), the Environment Protection Authority (**EPA**), the Department of Transport and Planning (**DTP**), Coliban Water, Dja Dja Wurrung, Downer Utilities and Goulburn Murray Water. **(See Tab 8)**

20 On 17 December 2019, a response to the EPA referral was submitted. There was a range of correspondence between the EPA and Edwards Environmental to determine if a Soil Management Plan (**SMP**) was in fact required for the site, given the background arsenic levels and placement of clean fill on the site. The EPA ultimately advised that they don't review SMP's and that Council should undertake a peer review of the submitted Preliminary Environmental Site Assessment (**PESA**) and SMP. Council arranged for a peer review of the revised SMP which confirmed that the originally proposed Post Construction Management Measures were not required. Council was satisfied with the updated information provided by our Client in response to the EPA's advice. **(See Tab 9)** In July 2024, Edwards Environmental prepared an updated PESA. **(See Tab 24)**

21 Although, DEECA initially consented to the Proposal subject to conditions, following receipt of the various referral responses the treatment of the open space area along the Bendigo Creek was reviewed. Specifically, the engineering design was revised to avoid the removal of vegetation, with the initial swale drain proposed along the site's eastern boundary replaced with a piped drainage system discharging to the drainage reserve. The non-swale design has avoided the clearance of various trees and as such, an updated Ecological Report was provided to Council on 28 August 2020. **(See Tab 10)**

22 On 14 March 2023, DEECA provided its review and comments on the updated report. On 22 March 2023, Practical Ecology provided its response. On 29 March 2023, DEECA provided its final referral response which reinstated its consent to the Proposal subject to conditions. **(See Tab 11)**

23 On 28 August 2020, a response to the NCCMA referral response (which comprised of an updated Stormwater Management Strategy prepared by Afflux and dated August 2020) was submitted. On 20 October 2020, NCCMA provided a further response requesting further information. In response, Afflux updated their report (dated March 2022) and Terraco prepared a subsequent SMP which provides proof of concept for stormwater detention and treatment solution, in particular for the existing drainage basin. On 1 March 2023, the NCCMA issued a final referral response. **(See Tab 12)**

24 Correspondence regarding the use of Council's Drainage Reserve is provided at **Tab 13**.

25 The site has a Heritage Inventory listing HI as the Epsom Hotel, H7724-0637. On 17 May 2021, Heritage Victoria wrote to the Applicant's project team acknowledging that the site may formerly have been the location of the Epsom Hotel known to have operated during the gold rush years of the mid-late 1850s. It is possible that significant archaeological remains of the hotel complex survive buried at depth across the site.

26 On 9 July 2024, Heritage Victoria wrote to Council confirming that it does not object to the issuing of the planning permit application, but it is important that any interested parties are aware of the requirement to obtain a Heritage Act Consent that applies to this site. **(See Tab 14)**

Council's resolution to prepare

27 On 24 July 2023, Council resolved at its Ordinary Meeting to request the Minister for Planning to authorise Council to prepare a combined planning scheme amendment and planning permit application under section 96A of the PE Act. **(See Tab 15)**

Minister's authorisation to proceed

28 On 28 November 2023, DTP, on behalf of the Minister for Planning, authorised Council to prepare the combined application subject to a range of conditions. **(See Tab 16)**

29 The explanatory report addresses DTP's authorisation conditions in tracked changes, a copy of which is provided at **Tab 17**. There have subsequently been some minor changes to the report prior to exhibition. Other authorisation conditions were addressed through changes to the subdivision layout plan and the draft permit conditions.

Exhibition of combined Planning Application and Amendment C248gben application

30 On 22 February 2024, Amendment C248gben and the Planning Application were exhibited. The exhibition process comprised of letters to affected landowners / occupiers, a notice in the Bendigo Advertiser, an A3 notice on the subject site and a notice in the Government Gazette. A copy of the notice in the Government Gazette and a list of the landowners/occupiers that were notified in the post is provided at **Tab 18**.

31 A copy of the exhibited documents is provided at **Tab 19**.

32 During exhibition, fifteen submissions were received in total. Thirteen submissions opposed the combined application or sought clarification / changes, and two were in support. **(See Tab 20)**

33 Following exhibition, the Applicant was required to obtain written consent from the landowners of 28-34 Saade Street, Epsom. **(See Tab 21)**

34 A response to the submitters and DEECA is provided at **Tab 22** and a response to the EPA is provided at **Tab 23**.

Council's Resolution to Refer to Panel

35 On 26 August 2024, Council resolved at its Ordinary Meeting to refer all submissions to an independent planning panel. **(See Tab 25)**

Panel Hearing

36 On 6 September 2024, Planning Panels Victoria (**PPV**) confirmed the referral and set out draft directions for the Hearing in this matter. On 9 September 2024, PPV confirmed that the Panel for this matter has now been appointed. Kathy Mitchell AM will be the Panel Chair, with Rodger Eade as the member. **(See Tab 26)**

Key Dates

37 This matter is listed for a Directions Hearing at 10:00am on 23 September 2024. The purpose of the Directions Hearing is to consider procedural requirements and conduct for the Hearing, in addition to confirming key dates ahead of the Hearing.

38 At present, the Panel has proposed the following dates:

Time	Date	Action
12:00pm	19 September 2024	Parties to file *Request to be Heard* form
10:00am	23 September 2024	Directions Hearing
12:00pm	23 September 2024	Parties to provide expert witness details

Time	Date	Action
12:00pm	9 October 2024	Proponent to file expert witness report(s)
12:00pm	9 October 2024	Council to file Part A (background and context) submission
12:00pm	14 October 2024	Council must provide a submitter location map to the Panel only
12:00pm	14 October 2024	Other parties to file expert witness report(s)
12:00pm	18 October 2024	Any parties not appearing at the Hearing to file supplementary submission
12:00pm	18 October 2024	Council to file 'Day 1' version of the Amendment documentation
12:00pm	18 October 2024	Parties to file documents or material to be presented at the hearing
TBC	23 October 2024	Accompanied site inspection
All day	23 October 2024 24 October 2024 25 October 2024	Hearing

39 We will provide an update to you once procedural dates have been confirmed.

Brief of Materials

40 Please find enclosed to this letter an index of documents which includes material for you to consider to the extent that you deem relevant.

41 The material can be accessed at the below link:

https://russellkennedylawyers.sharefile.com/d-sbab69bc69cc74f3bb169ef798e080f85.

Please note that this link will expire on **26 March 2025**.

Instructions

42 You are instructed to:

(a) review background materials as necessary and relevant to your expertise;

(b) undertake a peer review, any necessary field work, and prepare an expert evidence report for circulation by 14 October 2024. If this date is not feasible, but a similar date is feasible, please note this;

(c) identify what, if any, additional information would be generated by a preliminary risk screen assessment, that is not otherwise already available;

(d) whether an environmental audit is necessary having regard to the information available; and

(e) appear as an expert witness at the hearing of this matter on 24 or 25 October 2024. If you are only partly available, please let us which dates are suitable for timetabling purposes.

43 At this stage, we are required to circulate your expert witness by **14 October 2024**. We request that you provide your draft expert report to us at least 2 business days ahead of circulation.

44 The content, format, and layout of your expert report, the manner of expression, and the way in which you seek to address yourself to the tasks you have been engaged to undertake are all matters for you. However, your report must be prepared in compliance with *Planning Panels Victoria – Practice Note 1 – Expert Evidence* (**PPV PN1**) and the duties outlined therein.

45 It will be apparent to you that not all the materials which have been provided to you will be necessarily relevant to the task which you have been asked to undertake. You are instructed to examine the material and to determine for yourself what is relevant to the formulation of your conclusions, including any other matters you consider relevant. If you require any further information to complete the tasks you have been instructed to undertake, or if you require any assistance in understanding the nature of the tasks you have been asked to undertake, please contact us.

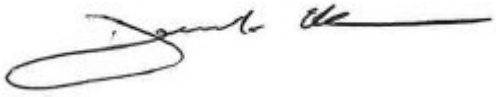
Billing

46 In the first instance, please provide us with your fee estimate addressed to our firm as follows:

Lawserve, Beardall and Smith
C/- David Vorchheimer
Russell Kennedy
Level 18, 500 Bourke Street
Melbourne VIC 3000

47 Please contact us if you have any queries.

Yours faithfully
RUSSELL KENNEDY



David Vorchheimer
Partner

Stefan Fiedler
Partner

INDEX TO BRIEF OF MATERIALS

Tab	Document
Subject Land	
1.	Planning Property Reports.
Combined Planning Application and Amendment C248gben Application	
2.	Council's Response to Proponent's Pre-Application Request, dated 11 September 2018.
3.	Lodgement of Combined Application, dated 22 March 2019, including: • Cover Letter, prepared by Spiire, dated 22 March 2019; • Application for a Planning Permit Form, prepared by Spiire, dated 22 March 2019; • Current Certificates of Title for the Subject Land; • Town Planning Report, Revision No. B, prepared by Spiire, dated March 2019; • Overall Layout Plan, Version 2, prepared by Terraco Pty Ltd, dated 19 March 2019 (*refer to Appendix B of Town Planning Report*); • Clause 56 Assessment, prepared by Spiire (*refer to Appendix C of Town Planning Report*); • Traffic Impact Assessment, Version 2, prepared by Trafficworks Pty Ltd, dated 18 September 2018; • Flora and Fauna Assessment and Native Vegetation Impact Assessment, Version 1.0, prepared by Practical Ecology, dated 19 March 2019; • Bushfire Risk Assessment, Version 1.0, prepared by Practical Ecology, 28 dated February 2018; • Stormwater Management Plan, Version V02a, prepared by Afflux Consulting Pty Ltd, dated 14 September 2018; and • Cultural Heritage Management Plan Approval Letter, prepared by Dja Dja Wurrung Clans Aboriginal Corporation, dated 6 March 2019.
4.	Council's Acknowledgement Letter, dated 26 March 2019.
Request for Further Information	
5.	Council's Request for Further Information, dated 15 April 2019.

Tab	Document
6.	Proponent's Response to Request for Further Information, dated 11 October 2019, including: • Cover Letter, prepared by Spiire, dated 11 October 2019; • Town Planning Report, Revision No. C, prepared by Spiire, dated 10 October 2019; • Preliminary Environmental Site Assessment, Version 2.0, prepared by Edwards Environmental, dated September 2019; • Soil Management Plan, Version 1.0, prepared by Edwards Environmental, dated September 2019; • Native Vegetation Removal Report, Report ID: PRE_2019_020, issued 5 March 2019; • Draft Combined Application Explanatory Report, prepared by Spiire, undated (*PDF and Word versions*); • Draft Amendment C248gben Instruction Sheet, prepared by Spiire, undated (*PDF and Word versions*); and • Amendment C248gben Map No. 15, Version 1, dated 10 October 2019.
Referrals / Key Issues	
7.	Internal Referrals, including: • Internal Referral Comments, prepared by ESD Department, dated 17 December 2019; • Internal Referral Comments, prepared by Traffic Engineering Department, dated 20 December 2019; • Internal Referral Comments, prepared by Parks and Open Space Department, dated 20 December 2019; • Internal Referral Comments, prepared by Drainage Engineering Department, dated 7 February 2020.
8.	External Referrals, including: • External Referral Comments, prepared by Downer, dated 9 November 2019; • External Referral Comments, prepared by Coliban Water, dated 4 December 2019; • External Referral Comments, prepared by CFA, dated 5 December 2019;

Tab	Document
	• External Referral Comments, prepared by Regional Transport Planning Loddon Mallee c/- Department of Transport, dated 5 December 2019; • External Referral Comments, prepared by Head, Transport for Victoria c/- Department of Transport, dated 5 December 2019; • External Referral Comments, prepared by Dja Dja Wurrung Clans Aboriginal Corporation, dated 5 December 2019; • External Referral Comments, prepared by EPA, dated 6 December 2019; • External Referral Comments, prepared by North Central CMA, dated 6 December 2019; • External Referral Comments, prepared by Goulburn Murray Water, dated 14 January 2020; • External Referral Comments, prepared by DELWP / DEECA, dated 28 April 2020; • DELWP / DEECA Mapping Request.
9.	Proponent's Response to EPA External Referral Comments, including: • Emails between Council and EPA, dated between 2 February 2023 – 22 March 2023; • Peer Review of Proposed Soil Management Plan, prepared by Tetra Tech Coffey, dated 6 June 2021; • Letter to Spiire, prepared by Edwards Environmental, dated 17 December 2019; • Soil Management Plan, Version 2.0, prepared by Edwards Environmental, dated February 2020; • Email attaching Updated Soil Management Plan from Edwards Environmental to EPA, dated 12 March 2020; • Emails between Edwards Environmental and EPA, dated between 12 March 2020 – 7 April 2020; • Emails between Spiire, Edwards Environmental and EPA, dated between 12 March 2020 – 19 May 2020.
10.	Proponent's Response to DELWP / DEECA External Referral Comments, including: • Flora and Fauna Assessment and Native Vegetation Impact Assessment, Version 2.0, prepared by Practical Ecology, dated 27 August 2020.
11.	Correspondence between Practical Ecology and DELWP / DEECA, including:

Tab	Document
	• Flora and Fauna Assessment and Native Vegetation Impact Assessment, Version 2.0, prepared by Practical Ecology, dated 21 March 2023; • Letter from DELWP / DEECA to Council, dated 14 March 2023; • Letter from DELWP / DEECA to Council, dated 29 March 2023.
12.	Proponent's Response to North Central CMA External Referral Comments, including: • Letter from North Central CMA to Council, dated 6 December 2019; • Stormwater Management Plan & Future Strategy, prepared by Afflux Consulting, Version V01c, dated 24 August 2020; • Letter from North Central CMA to Council, dated 20 October 2020; • Revised Stormwater Management Plan, Version 7, prepared by Afflux Consulting, dated 6 March 2022; • Stormwater Management Plan, Version 1, prepared by Terraco Pty Ltd, dated October 2022; • Letter from North Central CMA to Council, dated 1 March 2023.
13.	Correspondence regarding Council Drainage Reserve, including: • Proponent's Written Agreement, dated between 3 January 2023 – 12 January 2023; • Council Meeting Minutes, dated 22 May 2023 (*refer to PDF page 44*); • Council Meeting Agenda, dated 22 May 2023 (*refer to PDF page 144*); • Letter from Council to Spiire, dated 30 June 2021; • Letter from Spiire to Council, dated 22 April 2021.
14.	Heritage Inventory Listing, including: • Letter from Heritage Victoria c/- DELWP / DEECA to Terraco Pty Ltd, dated 17 May 2021; • Letter of Advice, prepared by Heritage Insight, dated 15 July 2021; • Site History Report Advice, prepared by Dr Susan Walter, dated November 2021; • Letter from Heritage Victoria to Council, dated 9 July 2024; • Historical Archaeological Site Card Form, undated;

Tab	Document
	• Obtaining a Heritage Act Consent Brochure, prepared by Heritage Victoria c/- DELWP / DEECA, undated.
Council's Resolution to Prepare	
15.	Council Meeting, dated 24 July 2023, including: • Council Meeting Minutes, dated 24 July 2023 (*refer to PDF page 33*); • Council Meeting Agenda, dated 24 July 2023 (*refer to PDF page 90*).
Minister's Authorisation to Proceed	
16.	Authorisation to Prepare Amendment and Conditions, dated 28 November 2023, including: • Letter under Delegation from the Minister for Planning c/- Department of Transport and Planning, dated 28 November 2023.
17.	Response to Preparation of Amendment Conditions, including: • Draft Updated Combined Application Explanatory Report, prepared by Spiire, dated 7 December 2023.
Exhibition of Combined Planning Application and Amendment C248gben Application	
18.	Notice Documents, including: • Map of Notified Landowners and Occupiers, prepared by Strategic Planning, dated 9 February 2024; • Notice in Government Gazette, No. G 8, dated 22 February 2024 (*refer to PDF page 279*).
19.	Amendment C248gben Exhibition Documents, including: • Explanatory Report; • Instruction Sheet; • Map No. 15; • Schedule 2 to Clause 32.09 – Neighbourhood Residential Zone; • Draft Conditions for Planning Permit No. DS/207/2019; • Overall Layout Plan, Version 12, prepared by Terraco Pty Ltd, dated 14 December 2023; • Stormwater Management Plan, Version 2, prepared by Terraco Pty Ltd, dated December 2023;

Tab	Document
	• Town Planning Report, Rev No. J, prepared by Spiire, dated 10 January 2024; • Bushfire Risk Assessment, Version 2.0, prepared by Practical Ecology, dated 22 January 2024; • Flora and Fauna Assessment and Native Vegetation Impact Assessment, Version 2.0, prepared by Practical Ecology, dated 22 January 2024; • Preliminary Environmental Site Assessment, Version 3.1, prepared by Edwards Environmental, dated January 2024.
20.	Submissions, including: • Collated Submissions, dated between February 2024 – March 2024; • Letter from DELWP / DEECA to Council, dated 11 April 2024; • Letter from EPA to Council, dated 30 April 2024.
21.	Written Consent of Maria and Giuseppe Dimasi, dated 19 April 2024.
22.	Proponent's Response to Submissions, including: • Native Vegetation Impact Assessment Amendment, prepared by Practical Ecology, dated 7 June 2024; • Letter from Spiire to Council, dated 21 June 2024.
23.	Proponent's Response to EPA Submission, dated 26 June 2024, including: • Email from Edwards Environmental to EPA, dated 26 June 2024; • Table regarding Derivation of Investigation Levels HIL A Calculations, undated; • Determination of As Bioaccessibility in Impacted Soil, prepared by University of South Australia, dated 24 June 2024.
24.	Updated Preliminary Environmental Site Assessment, including: • Preliminary Environmental Site Assessment, Version 4.0, prepared by Edwards Environmental, dated July 2024; • Sample Exceedance Map, Rev. D, prepared by Edwards Environmental, dated 16 August 2024.
Council's Resolution to Refer to Panel	
25.	Council Meeting, dated 26 August 2024, including: • Council Meeting Minutes, dated 26 August 2024 (*refer to PDF page 86*);

Tab	Document
	• Council Meeting Agenda, dated 26 August 2024 (*refer to PDF page 114*).
Panel Hearing	
26.	Panel's Directions, including: • Directions Hearing Notification, prepared by Planning Panels Victoria, dated 6 September 2024.

ATTACHMENT B

CURRICULUM VITAE

Geoff Byrne

Principal

Overview

Geoff Byrne is the Principal Consultant at Niboi Consulting. He has over 40 years' professional experience and works in the fields of environmental auditing; risk assessment; mine closure cost estimating and liability assessment.

Geoff has worked globally in the construction, mining, metals, manufacturing and resource development sectors.

Professional Affiliations & Registrations

- Member, Institution of Engineers, Australia
- Member, Australasian Institute of Mining and Metallurgy
- Registered Professional Engineer, Queensland
- Registered Professional Engineer, Victoria
- Chartered Professional Engineer and NER
- Environmental Auditor (Contaminated Land, Industrial Facilities & Natural Resources) appointed pursuant to Environment Protection Act, 2017 (Vic)
- Approved Environmental Auditor (Contaminated Land) by Queensland Department of Environment and Science
- General Certified Environmental Practitioner (CEnvP) and Site Contamination Specialist (Site Auditor) – EIANZ.

Fields of Competence

- Environmental auditing
- Risk analysis
- Sustainability strategies
- Liability assessment.

Education

- Fellowship Diploma (Geology), RMIT, 1974
- Master of Science, University of London, 1980
- Diploma of Imperial College, 1980.

Previous Employment

- Partner & Global Mining Director, *Environmental Resources Management*
- Vice President, *URS Corporation*
- Managing Consultant, *Dames & Moore*
- Director, *Hollingsworth Consultants*
- Senior Engineering Geologist, *McMahon Burgess & Yeates*
- Engineering Geologist, *Geological Survey of Papua New Guinea*
- Engineering Geologist, *Golder Associates.*

Key Projects

- Environmental auditor, Fiskville off-site PFAS remediation programme.
- Independent environmental auditor road construction projects Victoria.
- Statutory risk of harm audit, PFAS off-site impacts, former Fiskville fire fighter training facility, Victoria.
- Numerous statutory environmental audits (since 1999) to assess contaminated land status for project developments in Victoria under the former Environment Protection Act (1970) and the current Environment Protection Act (2017).
- Environmental auditor ongoing residential/commercial medical development over closed landfill.
- Contaminated land audits under the Queensland Environmental Protection Act (since 2015), for various sites in north Queensland and Brisbane.
- Multi-criteria assessment, mine closure project, Victoria.
- Review of environmental issues current and former landfills, south eastern Melbourne.
- Review of closure relinquishment liabilities and costs for bauxite mining operations and alumina refinery, Suriname.
- Statutory risk of harm environmental audit closed landfill and residential/commercial/medical development, Victoria.
- Risk of environmental harm audits of waste receival and processing facility, Victoria.
- S53V audit of current and historical wastewater treatment and disposal facility, Victoria.
- Review of closure relinquishment liabilities and costs for alumina refinery, USA.
- Statutory environmental audit mine site rehabilitation, Victoria.
- Review of closure risks for coal mine, Victoria Australia.
- S53V Statutory environmental audit, former fire fighter training facility,

Victorian Emergency Training Campus, Fiskville ("Off-Site Audit").
- Environmental auditor verification of landfill cell design, Melbourne.
- Auditor verification of financial assurance for former landfill, Melbourne
- S53V operational audit landfill and recycling facility, eastern Victoria.
- Verification of Clean Up Notice actions landfill and recycling facility, eastern Victoria.
- S53V operational audits of Wonthaggi Landfill, Victoria.
- Verification of hydrogeological assessment landfill and recycling facility, eastern Victoria.
- S53V Statutory environmental audits, former fire fighter training facility Victorian Emergency Training Campus, Penshurst.
- Chair, Independent Technical Review Panel – proposed mining development, Victoria.
- Environmental audits of polymetallic mine, Luzon, The Philippines.
- Evaluation of environmental liabilities for mining and mineral processing operations, Suriname.
- Statutory environmental audits of timber production on public land in Victoria.
- Expert witness testimony to Hazelwood Mine Fire inquiry.
- Evaluation of environmental compliance for mining operations, Georgia.
- Member of Expert Panel, Sustainable Development Framework for Indian mining sector.
- Corporate audit of sustainable development risks and management standards for Qld coal operations.
- Project Director for Environmental, Social and Health Impact Assessment for proposed nickel mine and processing plant, Indonesia.
- Periodic reviews of closure plans and closure costs for aluminium smelters in South Africa and Mozambique.
- Expert testimony for environmental panels and commissions of inquiry in Australia.

Publications & Presentations

- Byrne G. M., Forth J. and Smyth B. *Portsmith Landfill, Cairns, Far North Queensland, Australia,* HAZPAC '91, Cairns 1991.
- Byrne G. M. and Scells P. K. *Typical Investigation Procedures for the Evaluation of Contaminated Sites*, presented at "Engineering to Sustain the Environment", Society of Professional Engineers of Papua New Guinea conference, Lae, December 1992.
- Byrne G. M., Dasika R, and Renfrey G. *The Eastern Gas Pipeline: Environment and Engineering Studies Techniques*, Changing Pipeline Horizons, APIA International Convention, Adelaide, Australia, November 1997.
- Byrne G.M. and Hancock S.J. *Environmental Technology Co-Operation – Global and Local,* presented at World Energy Council Asia Pacific Forum, Tokyo, Japan, October 2000.
- Byrne G.M., Salmon R. and Jones C. *The Public Sustainability Reporting Process,* Enviro 2002, Melbourne, Australia, April 2002.
- Byrne G.M., Glover A., Macdonald C. & Sheehy B., *Social Performance Indicators: A Management Framework for Measuring and Reporting Stakeholder Interaction*, Minerals Council of Australia Sustainable Development Conference, Newcastle, Australia, November 2002.
- Byrne G.M., *Brown Coal- A Sustainable Future - Perceptions & Reality*, presentation to Engineers Australia Regional Infrastructure Solutions Forum, Traralgon, Australia, 2003.
- Reisinger R, Van Zyl D & Byrne G. *Mine Closure Planning in Today's Global Environment: A Risk-Based Approach*, Short Course presented in conjunction with 2008 SME Annual Meeting & Exhibit, Salt Lake City, USA, February, 2008.
- Bingham E, Byrne G & Reisinger R, *Closure Planning under the BHP Billiton Closure Standard*, presented at 2008 SME Annual Meeting & Exhibit, Salt Lake City, February, USA, 2008.
- Byrne G., *A Risk-Based Approach to Closure Planning,* Mine Closure 2011, Lake Louise, Canada, October 2011.
- Byrne G., *How Well are Closure Risks Identified – and Acknowledged?* presented at International Finance Corporation Workshop, Mining Indaba 2013, Cape Town, South Africa, February 2013.

- Byrne G. & Guaraldo L, *What Are The Big Ticket Items In Mine Closure*? Presented at CleanUp 2013, Melbourne, Australia, August 2013.
- Byrne G., *Long Term Water Management – The Forgotten Legacy of Mine Closure,* Water in Mining 2013, Brisbane, Australia, November 2013.
- Participating author, *Hazardous Materials Management Handbook, Leading Practice Sustainable Development Program for the Mining Industry*, Australian Government, September 2016.
- Webinar presentation to AusIMM Consultants Society and Environment and Community Society, *Planning for Mine Closure – An Outline*, October 2016.
- Byrne G.M. and Hancock J.S, *Long Term Water Management – The Forgotten Legacy of Mine Closure,* From Start to Finish: Life-of-Mine Perspective, Australasian Institute of Mining & Metallurgy, Spectrum Series 24, 2018.
- Bowden A.R and Byrne G.M., *Mine Closure Bonds (Financial Assurances) - The "How Much?" Conundrum*, Life of Mine 2018, Brisbane, Australia, July 2018.
- Byrne G.M., *Benchmarking Closure Provisions*, Mine Closure 2018, Leipzig, Germany, September 2018.
- Byrne G.M., *Mine Closure Plans: Assumptions and Optimism*, Mine Closure 2019, Perth, Australia, September 2019.
- Byrne G.M., *In Defence of NPV*, Mine Closure 2023, Reno, USA, October 2023.