REPORT

Expert Witness Report - Amendment C164 Brunswick Moreland Industrial Land Strategy (MILS) Rezonings - Assessment of Potential for Contamination

Mr. Ian M Kluckow

Submitted to:

Planning Panels Victoria

Submitted by:

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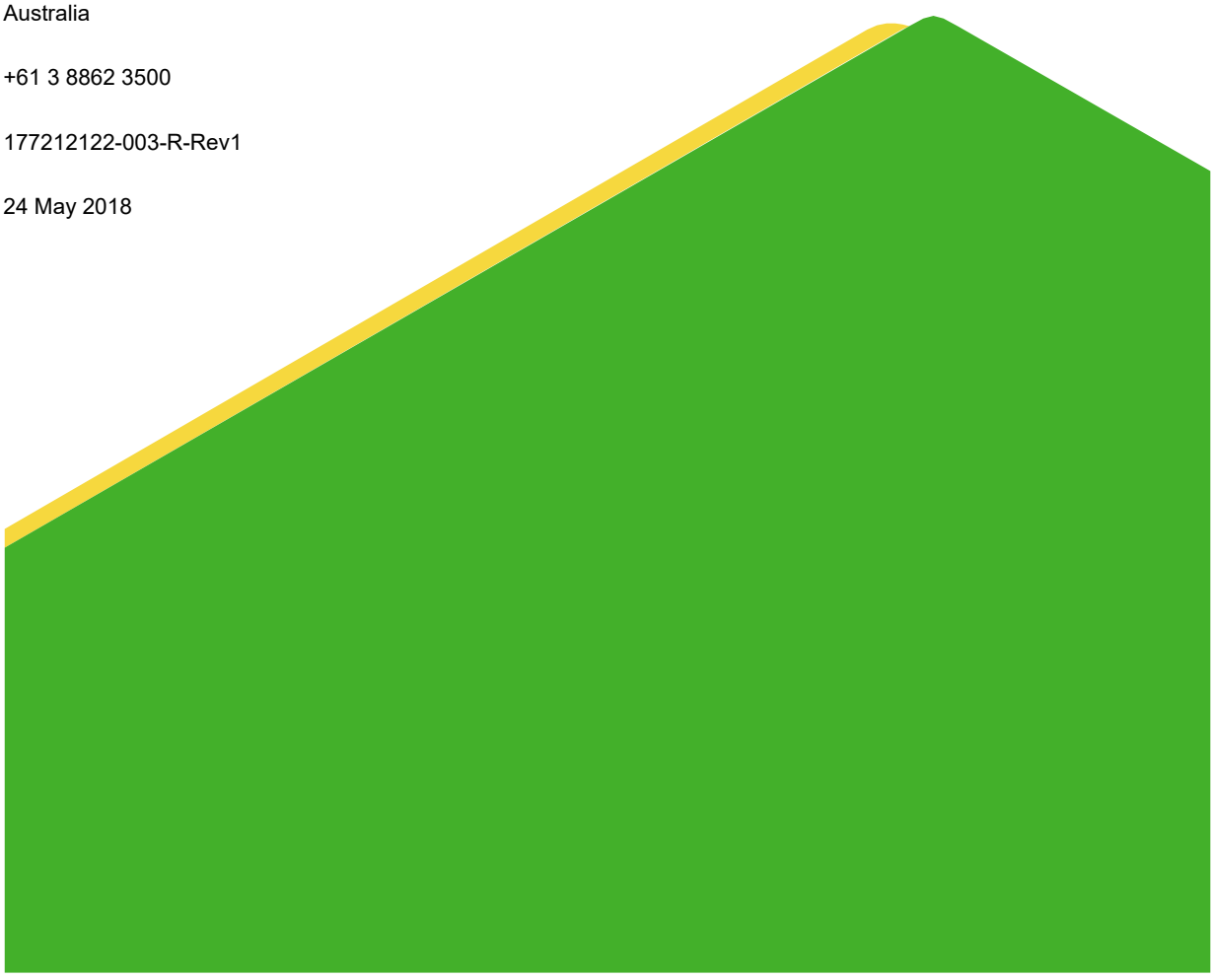

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1.0 DECLARATIONS

1.1 Name and Address of Expert

1) My name Ian Matthew Kluckow and I am a Principal of Golder Associates Pty Ltd (Golder Associates) of Building 7, Botanicca Corporate Park, 570 – 588 Swan Street, Richmond, Victoria 3121.

1.2 Expert's Qualification and Experience

2) I am a Civil Engineer with over 28 years' experience providing consulting services for site contamination projects in Victoria and elsewhere in Australia. I have a Bachelor of Engineering (Civil) from the University of Melbourne. I am a Member of the Institution of Engineers Australia and a Chartered Professional Engineer (CPEng). My qualifications are further described in my professional resume which is attached as Appendix A.

3) I am experienced in the investigation, assessment and remediation of site contamination especially in Victoria. I have lead or managed many projects including the remediation of the 470 hectare Albion Explosives Factory for redevelopment into a residential and commercial subdivision, the rehabilitation of the Scoresby quarry and brickworks site and the remediation of the Kodak Coburg manufacturing facility, both to create a new residential subdivisions. I have also undertaken many site history and due diligence reviews for sites to assess potential contamination risks for Councils, developers and State Government entities. The range and scope of some site contamination projects which I have been involved are further described in my resume.

1.3 Expert's Area of Expertise

4) Site Contamination Investigation, Assessment, Remediation and Management.

1.4 Scope and Instructions to the Expert

5) I was instructed by the Moreland City Council in an email dated 15 May 2018 (Appendix B) to prepare an Expert Witness Report including:

- A brief explanation of Golder Contamination Report (P1772122-001-P-Rev1) including:
  - Council brief (Methodology, Ministerial Directions, Practice Note)
  - Brief explanation of the methodology in the report;
  - Acknowledgement of previous SKM recommendation where Golder has disagreed (highlight this is covered in original report)
  - Revision made post exhibition (P1772122-001-P-Rev2)
- Response to each of the three submissions received by Council in relation to the report

1.5 Facts and Matters Relied Upon and References

6) The facts and scientific information relied upon my reaching my opinion are set out as follows:

a) Instructions provided by the Moreland City Council (Appendix B).

b) A reference list of documents reviewed (Appendix C).

2.0 EXPERT OPINIONS

2.1 Explanation of Golder Contamination Report

2.1.1 Council Brief

7) Moreland City Council (Council) engaged Golder Associates Pty Ltd (Golder) to provide consultancy services to support Amendment C164 – Brunswick Moreland Industrial Land Strategy (MILS) Rezonings. The works involved the assessment for potential contamination of 16 nominated industrial areas (approx. 138 properties) within the Brunswick Activity Centre (BAC).

8) The key objective of the project as identified by Council in its brief for the project (MCC, 2017) "*was to identify land within the study area that should be included in or excluded from the Environmental Audit Overlay (EAO) as part of any rezoning which would allow for sensitive uses. The project should:*

- *identify land within the study area with potential for contamination and as such would require the application of the EAO to allow for sensitive uses; and*
- *identify land within the study area that does not require the application of the EAO to allow for sensitive uses."*

9) The brief (MCC, 2017) also set out the methodology to be used as follows:

10) In April 2010, DPCD [Department of Planning and Community Development] *in consultation with the Environment Protection Authority (EPA), agreed on a four step methodology by which those properties which are unlikely to have any potential for contamination (and should therefore be excluded from an EAO) could be identified. The methodology follows the four steps outlined below:*

a. *Visual inspection of all properties in the precinct to identify those that appear to have long standing non-polluting activity, e.g. residential use;*

b. *Research the land use history of 'non-polluting' sites, using Council rates records and similar data from the Public Records Office and State Library;*

c. *Confirm those properties that have had continuous residential or otherwise non-polluting land uses since first developed;*

d. *Gain advice from an environmental consultant on potential for sub-soil / groundwater transport of contamination from adjoining properties.*

11) As part of the Golder brief, Council confirmed that the above methodology was established by the DPCD with Council as part of the DPCD Brunswick Industrial Land Rezoning Project (MILUS Pilot Project) in 2010 and was considered at the time as being the correct interpretation and application of the guidelines outlined in Ministerial Direction No.1 Potentially Contaminated Land and the General Practice Note on Potentially Contaminated Land (Department of Sustainability and Environment, June 2005).

12) In my opinion, the brief requested a screening review of the potential for contamination at each of the sites based on the four step process with the result being a recommendation of one of two outcomes:

i) Application of an EAO If the site had potential for contamination; or

ii) No application of an EAO.

2.1.2 Methodology

13) Under the requirements of Ministerial Direction No.1 - Potentially Contaminated Land (amended 2001) , "*in preparing an amendment which would have the effect of allowing (whether or not subject to the grant of a permit) potentially contaminated land to be used for a sensitive use, agriculture or public open space, a planning authority must satisfy itself that the environmental conditions of that land are or will be suitable for that use.*"

14) Ministerial Direction No.1 - Potentially Contaminated Land defines "potentially contaminated land" as "*land used or known to have been used for:*

a) industry,

b) mining, or

c) the storage of chemicals, gas, wastes or liquid fuel (if not ancillary to another use of the land)."

15) In my opinion, the definition of potentially contaminated land in Ministerial Direction No. 1 is narrower than the definition required by the project brief. The definition in Ministerial Direction No.1 - Potentially Contaminated Land is confined to an assessment of the use of the site itself. The methodology in the project brief (MCC 2017) required an additional element; an assessment of subsoil or groundwater contamination transport from adjoining properties on to the site which could impact on the site contamination status and potentially impact upon the suitability of the site for a sensitive use.

16) This broader definition is provided in the Potentially Contaminated Land Practice Note (DSE 2005) which uses the Ministerial Direction No. 1 – Potentially Contaminated Land definition but also "*deals with land that may have been contaminated by other means such as by ancillary activities, contamination from surrounding land, fill using contaminated soil or agricultural uses.*"

17) In considering the potential for contamination at a site, the methodology adopted was a screening assessment whereby a review of information was undertaken only to the point where the potential for contamination to exist was established or not. The methodology did not seek to prove whether or not contamination existed but only to establish whether or not there was the potential for contamination. In accordance with the Potentially Contaminated Land Practice Note (DSE 2005), a full contamination site assessment was not required to be undertaken by Council to assess the application of an EAO. The approach adopted was that where there was some evidence to indicate that the site could be affected by an offsite source of contamination in particular, in discussion with Council, a conservative position regarding the application of the EAO was taken.

18) In undertaking this approach, the burden of proof for confirming whether or not the site is contaminated lies with the landowner and not with Council. In my opinion, it is Council's obligation as the Responsible Planning Authority to satisfy itself regarding the suitability of the contamination status of the site should the site be redeveloped for a sensitive use but it is the landowner's opportunity and responsibility to provide the information for Council to make that assessment.

19) In line with the definition of potentially contaminated land in Ministerial Direction No.1 - Potentially Contaminated Land, the screening assessment sought to establish:

i) Past industrial use; and

ii) Evidence of past quarrying and filling;

20) The former can be identified in historical aerial photographs and maps. The latter is much harder to identify given most sites are filled. However, in areas in the north of Melbourne and in the vicinity of the

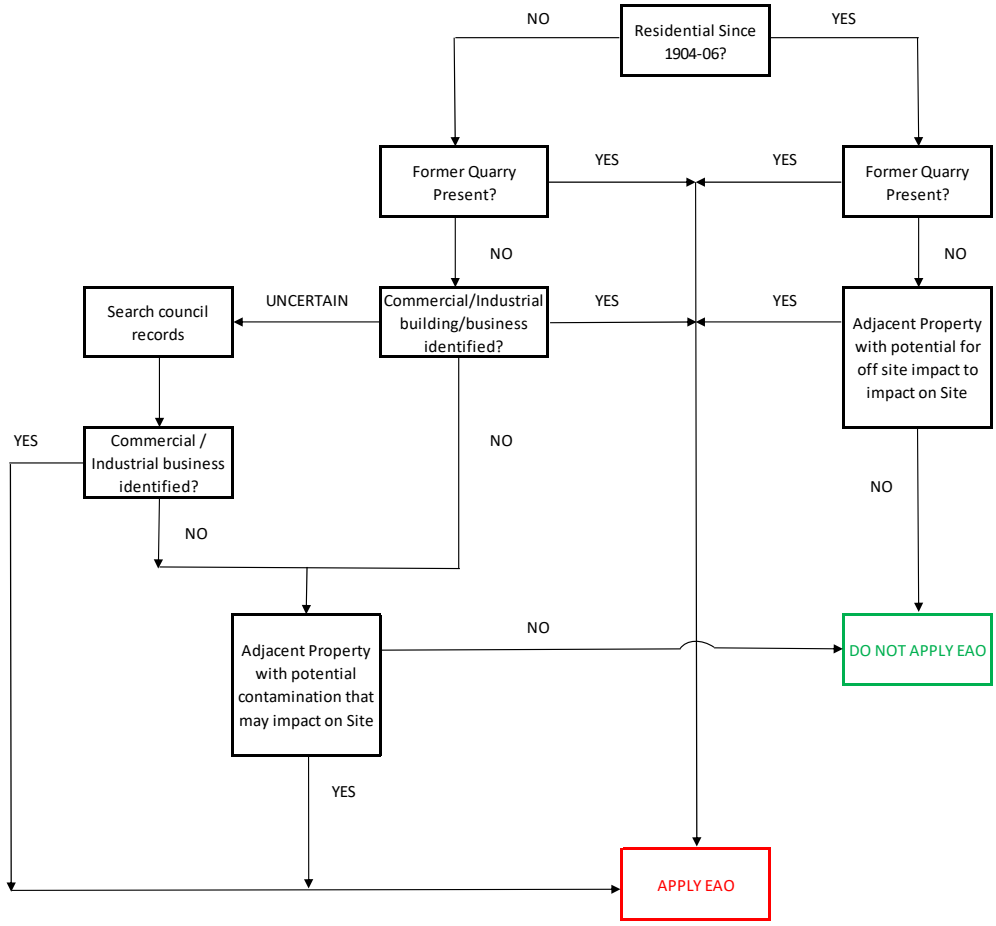
study area in particular, there are specific areas of quarrying and filling that can be identified from past maps and photos.

21) Sites where there has been no history of these two factors, especially those that can be shown to have a documented long history of residential use, would generally represent a low risk of contamination. These sites were then assessed in context of their surrounds should adjacent potentially contaminated sites impact upon the site contamination risks which is consistent with the Potentially Contaminated Land Practice Note (DSE 2005). Such risks posed by adjacent potentially contaminated sites include migration of contamination via groundwater or vapour. In assessing the potential risk associated with an adjacent use, the following factors were considered:

- The type of adjacent use and the likelihood of the presence of sufficient volumes of chemicals that could migrate via vapour or groundwater pathways. Such uses and chemicals would include fuel storage tanks.
- The likely direction of migration such as the groundwater flow direction. Groundwater flow direction was estimated from surrounding information;
- The proximity of the potentially polluting site to the site being considered. Generally, only sites adjacent to the potential source site were considered potentially affected.

22) These factors were assessed and where the potential for contamination to exist under a site was identified, a recommendation for an EAO was made in line with the conservative approach adopted.

23) The Golder assessment methodology used is shown below in Inset 1.



Inset 1: Property assessment methodology

24) Each of the sites was assessed using this methodology. As required by the brief, there were only two recommendations considered:

a. application of an EAO for the sites where there is potential for contamination on site or evidence for potential contamination from an adjacent site; or

b. no application of an EAO for the remaining sites.

A recommendation was made for each site.

25) Golder (2018) identified a number of existing residential or apparently residential properties where application of the assessment framework resulted in the recommendation of application of an EAO . These were discussed with Council as part of finalising the report and Council confirmed that a conservative approach to the final recommendation of application of an EAO should be adopted in the case where there is some evidence of potential contamination especially in relation to adjacent offsite contamination sources.

26) The methodology, information, assessment and recommendations are provided in the Golder Associates Pty Ltd , Assessment of Potential for Contamination, Amendment C164 – Brunswick Moreland Industrial Land Strategy (Mils) Rezonings (Revision 2) dated 21 March 2018 (“the Golder Assessment Report”).

27) It is my opinion that the methodology adopted met the requirements of the brief for the project and is consistent with Ministerial Direction No.1 - Potentially Contaminated Land and the Potentially Contaminated Land Practice Note (DSE 2005). Further, it is my opinion that the outcome of the assessment met the project objectives.

2.1.3 Review of Outcome against Previous SKM Assessment

28) In 2011, Sinclair Knight Merz (SKM) undertook a review of 35 of the same properties reviewed by Golder (2018). Of those properties, 23 were assessed by Golder (2018) to have the same outcome as the SKM (2011) recommendation of no EAO. However, Golder (2018) recommended that 12 properties have an EAO applied which differs from the SKM (2011) conclusion.

29) Six of the properties have a differing assessment to SKM (2011) potentially because different information was sourced by Golder (2018) that confirms a potential quarrying or industrial past use and six are due to the Golder (2018) assessment of the potential for groundwater from an adjacent contaminated site impacting upon the site which was not considered or may have differed from the SKM (2011) assessment.

30) These properties and their reasons for the different recommendation based on the methodology adopted are summarised in Table 1 below.

Table 1: Properties where EAO Recommendation Differs from SKM (2011)

MILS Area Number	Property Address	Reason for EAO Recommendation
a) Evidence of Contaminated Land potentially not considered by SKM		
45	11 Ann Street Brunswick 3056	Current building is of a commercial/industrial nature
47	6 Pitt Street Brunswick 3056	Currently vacant, however historically the property was a quarry
47	8 Pitt Street Brunswick 3056	Currently vacant, however historically the property was a quarry
47	10 Pitt Street Brunswick 3056	Currently residential, with an apparent residential historic use, however quarry was present in the south east, dry cleaning related business to the south at 145 Glenlyon Road
47	12 Pitt Street Brunswick 3056	Appears residential, however rates cards indicate a previous ground floor factory.
44	148 Victoria Street Brunswick 3056	Property has been residential since 1905/6, however adjacent to car mechanic (150-152 Victoria St) which is possibly upgradient with potential for groundwater contamination.
b) Assessment of Offsite Risk different to SKM		
45	6 Ann Street Brunswick 3056	Currently residential, with an apparent residential historic use, however adjacent to car mechanic (150-152 Victoria St) which is possibly upgradient with potential for groundwater contamination.
45	8 Ann Street Brunswick 3056	Currently residential, with an apparent residential historic use, however adjacent to car mechanic (150-152 Victoria St) which is possibly upgradient with potential for groundwater contamination.

MILS Area Number	Property Address	Reason for EAO Recommendation
47	7 Pitt Street Brunswick 3056	Currently residential, with an apparent residential historic use, however adjacent property (5 Pitt St) may contain underground tanks with potential for groundwater contamination
52	126 Barkly Street Brunswick East 3057	Property has been residential since 1905/6, however adjacent and likely downgradient of former car mechanic (128 Barkly Street) with potential for groundwater contamination.
57	134 Barkly Street Brunswick 3056	Currently residential, with an apparent residential historic use, however adjacent uses on are former car mechanic (132 Barkly Street) to the east and former electroplating (140 Barkly Street) and manufacturing (138 Barkly St) to the west leading to potential for groundwater contamination.
57	136 Barkly Street Brunswick 3056	Currently residential, with an apparent residential historic use, however adjacent uses on are former car mechanic (132 Barkly Street) to the east and former electroplating (140 Barkly Street) and manufacturing (138 Barkly St) to the west leading to potential for groundwater contamination.

31) In my opinion, the Golder (2018) assessments which differ from SKM (2011) are defensible on the information reviewed and are in line with the adopted methodology but may also reflect the final recommendation being more conservative, at the request of Council, where there was uncertainty regarding the potential for contamination especially in relation to the potential for contamination from adjacent offsite contamination sources.

2.1.4 Revision Made Post Exhibition

32) The final version of the Golder Report used for exhibition of Amendment C164 was Revision 1 dated 28 March 2017. Following exhibition, Council received some submissions from affected landowners at 10 Pitt Street Brunswick, 6 Ann Street Brunswick and 8 Ann Street Brunswick. Based on those submissions, the Golder report was revised at the request of Council (16 March 2018) as follows:

i) Correcting an error relating to 10 Pitt Street Brunswick where the Revision 1 assessment referred to a “dry cleaner to the south on Brunswick Road“ which was amended in Revision 2 to read “a dry cleaning related business to the south a 145 Glenlyon Road”

ii) Further clarification of the methodology section regarding when the EAO is proposed to be applied to a site which adjoins a property that has potential for contamination and in particular the expansion of Table 4 to note these properties and the reason for the assessment.

33) Revision 2 of the Golder report was issued on 21 March 2018.

34) In my opinion, the changes made to the report did not affect the recommendations regarding the EAO but were made to clarify the assessment process.

2.2 Response to Three Submissions

2.2.1 Response to Submission #97 – 10 Pitt Street, Brunswick

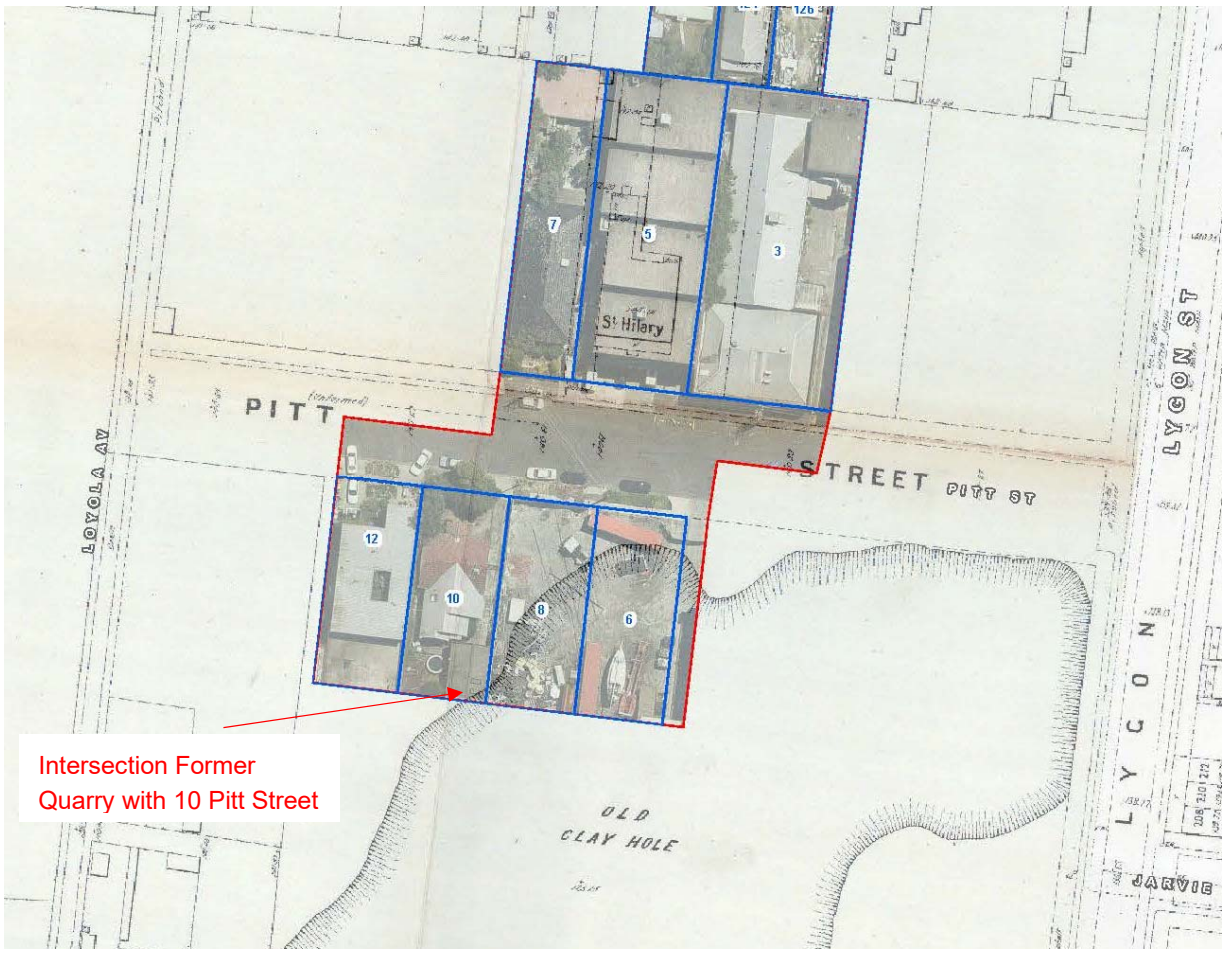
35) Council has provided a submission from the landowner at 10 Pitt Street Brunswick. The landowner has objected to the recommendation of an EAO. I understand that the objection is based on the long standing residential use of the land and the lack of evidence provided regarding the potential for contamination.

36) The primary basis for the recommendation of an EAO in the Golder Report (2018) is that based on the screening methodology adopted, there is evidence of a former quarry intersecting the southeast corner of the site as shown in Inset 2 below. Whilst there is only a small intersection with the quarry, the plan used is a point in time picture of the quarry around 1904 to 1906. It is possible that the quarry was once larger or subsequently made larger than that shown and there is uncertainty regarding the accuracy of the location.

37) Whilst I recognise the uncertainty in this assessment, under the methodology adopted, the presence of the quarry on site I consider to be evidence of potential contamination based on mining activity and the potential for filling and so in my opinion, a recommendation of an EAO is appropriate for 10 Pitt Street Brunswick.

38) I note that in the submission, the owner of 10 Pitt Street queried the reference to a nearby dry cleaner on Brunswick Road. This was amended in Revision 2 of the report to 145 Glenlyon Road which was a dry cleaner manufacturer adjacent to 10 Pitt Street to the south.

39) In my opinion this revision does not change the recommendation for 10 Pitt Street to apply an EAO due to the presence of the quarry beneath part of the site which is evidence of potential contamination.



Inset 2: Excerpt from Golder (2018) Figure 3-10 - MILS NO. 47 - MMBW Historic Maps 1904-1906

2.2.2 Response to Submission #130 – 6 Ann Street and Submission #77 - 8 Ann Street Brunswick

40) Council has provided a submission from the landowner at 6 Ann Street Brunswick and 8 Ann Street Brunswick. Whilst the two landowners have submitted separate submissions, the key information provided regarding the objection to the recommendation of an EAO is a letter from an environmental consultant, Atma Environmental (2018) prepared for both 6 and 8 Ann Street, Brunswick. As such I have addressed the submissions together.

41) The basis for the recommendation of the EAO in accordance with the assessment methodology is not the potential for contamination from the past use of the site but rather the potential for an offsite source of contamination impacting on the two sites.

42) The identified potential offsite contamination source is the car mechanic “Mondiale Motors” at 150-152 Victoria St, Brunswick which is directly to the west of 8 Ann Street. Motor mechanics in my opinion have a generally high risk of contamination of groundwater due to their use and storage of liquid fuels and solvents. This is supported by the General Practice Note – Potentially Contaminated Land (DSE 2005) which has a table of site uses and their potential for contamination (Table 1). I note that “Automotive Repair/Engine Works” is considered to have a “High Potential” for contamination consistent with my assessment.

43) In reviewing the Atma (2018), one objection to the EAO is that Atma assess the use of the 150-152 Victoria St, Brunswick as “Medium Potential” for contamination based on the DSE General Practice Note – Potentially Contaminated Land (DSE 2005). As Automotive Repair is listed as “High Potential”, I do not agree with the Atma assessment.

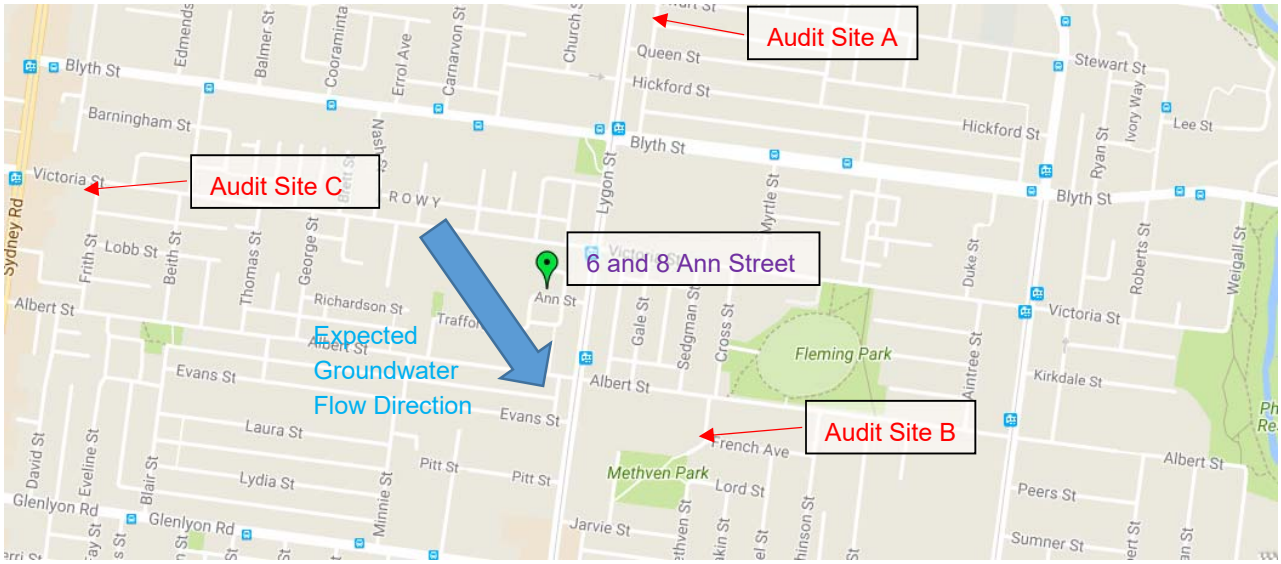
44) The second component of the assessment of the offsite contamination source is the risk that should 150-152 Victoria St, Brunswick have contaminated the groundwater, that the contamination is flowing towards 6 and 8 Ann Street, Brunswick. This requires an estimation of the direction of groundwater flow.

45) In order to assess the likely groundwater flow direction, consistent with the Golder Report (2018), I have reviewed surrounding Environmental Audits that are publicly available on the EPA Victoria website. I have reviewed three nearby Audits that surround the site as listed below in Table 2.

Table 2: Properties where EAO Recommendation Differs from SKM (2011)

Audit Site ID (Inset 3)	EPA CARMS	Address of Audit Site	Date of Audit	Groundwater Flow Direction
A	52816-1	408-432 Lygon Street, Brunswick East, Victoria	2004	South East
B	57084-1	22 French Avenue, Brunswick East	2007	South East
C	68776-2	29–31 Frith Street, Brunswick	2014	South East

46) The locations of these Audits are shown in Inset 3.



Inset 3: Plan of Reviewed Audit Report Sites and Inferred Regional Groundwater Flow Direction

47) Based on the review of the Audit reports, the groundwater in the area surrounding the site is consistently reported as flowing to the south east towards Merri Creek.

48) In reviewing the properties at 6 and 8 Ann Street Brunswick in relation to the source site and the groundwater flow direction I am of the opinion that there is a potential for contaminated groundwater from

the site at 150-152 Victoria St, Brunswick (Inset 4) to flow beneath 6 and 8 Ann Street. I recognise there is uncertainty in both the degree of contamination and the groundwater flow direction. However, there is potential for contamination to impact upon these two sites and that is the basis for the EAO Recommendation.

Inset 4: Inferred Regional Groundwater Flow Direction (Nearmap 2018)

49) In further consideration of some of the other sites that are mentioned by Atma and the landowners at 6 Ann Street and 8 Ann Street, Table 3 below undertakes a screening review of the source site mentioned, the potentially impacted site mentioned and an assessment of the potential for contamination based on the methodology adopted by Golder (2018).

Table 3: Screening Assessment of Properties Mentioned by Atma and Landowners from 6 and 8 Ann St Brunswick

Primary Site Address (Atma and/or 6/8 Ann Street Landowners)	Inferred Source Site (Atma and/or 6/8 Ann Street Landowners)	Assessment under Screening Methodology	Recommendation in Golder Report (2018)
33 Trafford Street Brunswick	35 Trafford Street Brunswick	Primary Site (33 Trafford Street, Brunswick) was not part of the Golder Assessment	No part of Golder Assessment
35 Trafford Street Brunswick	164 Victoria Street, Brunswick	Primary Site assessed as potentially contaminated based on its current and industrial use without the need for further consideration of offsite sources.	Apply EAO
36 Trafford Street Brunswick	38 Trafford Street Brunswick	Inferred Source Site is expected to be downgradient of Primary Site based on south easterly groundwater flow so Primary Site unlikely to be impacted.	Do Not Apply EAO
1 Ann Street, Brunswick	305-307 Lygon Street, Brunswick	Inferred Source Site is expected to be downgradient of Primary Site based on south easterly groundwater flow so Primary Site unlikely to be impacted.	Do Not Apply EAO
38 Victoria Street, Brunswick East	32-36 Victoria Street, Brunswick East	Inferred Source Site is expected to be downgradient of Primary Site based on south easterly groundwater flow so Primary Site unlikely to be impacted.	Do Not Apply EAO
122 Albert Street, Brunswick	101 Evans Street, Brunswick	Inferred Source Site is expected to be downgradient of Primary Site based on south easterly groundwater flow so Primary Site unlikely to be impacted.	Do Not Apply EAO
99 Evans Street, Brunswick	101 Evans Street, Brunswick	Inferred Source Site is expected to be downgradient of Primary Site based on south easterly groundwater flow so Primary Site unlikely to be impacted.	Do Not Apply EAO
42 Victoria Street, Brunswick	44 Victoria Street, Brunswick	Inferred Source Site at 44 Victoria Street considered lower risk of groundwater impact affecting the Primary Site as it was residential up until the 1950s and the adjacent site appears to be of a more commercial rather than industrial nature.	Do Not Apply EAO
9 Gale Street, Brunswick East	7 Gale Street, Brunswick East	The property at 7 Gale Street is likely downgradient of the primary site (9 Gale Street) based on south easterly groundwater flow.	Apply EAO

Primary Site Address (Atma and/or 6/8 Ann Street Landowners)	Inferred Source Site (Atma and/or 6/8 Ann Street Landowners)	Assessment under Screening Methodology	Recommendation in Golder Report (2018)
		The Golder assessed potential contamination source site for 9 Gale Street is 11 Gale Street where the former factory use is unknown and which is expected to be upgradient of 9 Gale Street based on south easterly groundwater flow.	

50) The above review in Table 3 in my opinion provides further support as to the consistency of application of the adopted methodology in assessing the potential for contamination and associated EAO recommendation.

51) I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.

Signature Page

Golder Associates Pty Ltd

Ian Kluckow
Principal

IMK/sa/IMK

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APPENDIX A

Professional Resume – Mr. Ian Kluckow

Qualifications and affiliations

BEng (Hons), University of Melbourne, 1989)

Areas of expertise

Detailed Site Investigation
Remediation Design and Implementation
Remediation Cost Modelling

Certifications

Member, Engineers Australia
Member, Australasian Land & Groundwater Association

Employment History

Golder, 1994 to present, Principal Environmental Engineer
GHD, 1990 to 1994, Project Environmental Engineer

Years in Industry

28

Ian Kluckow

Principal Environmental Engineer

PROFESSIONAL SUMMARY

Ian Kluckow is a Principal of Golder Associates. He has almost 30 years' of experience in the implementation and management of site investigations and remediation and risk-based assessments related to geotechnical and environmental engineering. Ian has lead and/or managed a number of landmark projects in Australia including the remediation of the 470 hectare Defence Albion Explosives Factory for redevelopment into a residential and commercial subdivision, the remediation of the Orica chemical and explosives facility in Deer Park, the design of the remediation of Defence Site Maribyrnong, the assessment and remediation of Quarantine Station at Point Nepean and the assessment and remediation other complex sites such as the Scoresby Quarry and brickworks site, the Kodak Coburg manufacturing facility and the Highett Gasworks.

Ian specialises in the efficient assessment of sites with a view to the development of cost-effective remedial solutions and the design, management and quality assurance systems required to implement them. Some of the tools he has developed to manage risk and uncertainty include the use of risk-based volume and costing models to assist in the communication of cost risk related to various remedial options and outcomes to allow more educated decision making to be undertaken.

RELEVANT EXPERIENCE

CONTAMINATED LAND MANAGEMENT PLAN

City of Maribyrnong

Ian is currently the Project Director for the development of a Contaminated Land Management Plan for the City of Maribyrnong. MCC would like to better understand, and to prioritise proactive management of environmental risk and liability inherent in MCC's property portfolio, allowing it to achieve the following objectives:

- Provide a user-friendly interface for key MCC personnel to access and interrogate available contaminated land data through development of a web-portal based, Geographical Information System (GIS) database;
- Identify known high contamination risk sites or areas;
- Identify sites and areas where insufficient information is available to rank the risk;
- Prioritise resources (effort and expenditure) to reduce risk and/or uncertainty; and
- Set and report against risk reduction measures.

The project involves mapping and risk prioritisation of over 120 sites both owned by Council and within the vicinity of Council legacy sites. The deliverable will be a plan that outlines the contaminated land risks within the municipality of with cost prioritised program for the reduction of uncertainty and the remediation of high risk sites.

FISHERMANS BEND URBAN RENEWAL PRECINCT
Places Victoria and DELWP

Ian was also the project director for the strategic review of the contaminated land risks across a significant inner urban renewal precinct encompassing multiple suburbs (Fishermans Bend Urban Renewal Precinct). The study area was over 100 ha and included hundreds of properties. The study included a high level assessment of the risks and potential costs associated with key environmental issues given the range of potential development scenarios across the precinct. The report can be viewed at: https://vpa.vic.gov.au/wp-content/uploads/2015/03/Preliminary-Land-Contamination-Study-Golder-Associates_June-2012.pdf

The outcome of the study was the development of:

- Contamination and geotechnical risk maps in Geographical Information System (GIS).
- Risk based cost estimates to support current and future remediation and multi-storey building planning for large scale developments.
- A long term planning strategy for management of modified industrial environments relating to contaminated land, geotechnical issues, groundwater protection and use, hazardous waste minimisation and aesthetic issues (dust and noise).
- A framework document to assist with stakeholder engagement between government departments to support more efficient and cost effective risk management.

The study findings have been used to support the strategic facilitation of urban renewal as part of the overall master planning for the urban renewal precinct.

MONTAGUE COMMUNITY PARK
City of Port Phillip

Ian has been involved with the Montague Community Park project as Project Director since 2014 initially providing peer review of environmental site assessment works and costing advice undertaken for the site vendor. This proposed public space comprises both a former industrial site and land associated with the closure of surrounding streets.

Works undertaken have included investigation and assessment of soil and groundwater and geotechnical investigation.

The key issue associated with the site was the potential for contaminated fill, associated historic regional filling and former site uses, requiring either excavation and off-site disposal or management via installation of a separation layer.

The recommended strategy for the proposed Montague Community Park development was presented by Golder in 2016 and described a process for management to address the contaminated nature of the underlying soils.

The adopted capping strategy and associated refinement, working with the site's Environmental Auditor, has saved the project millions of dollars to date.

FORMER MANUFACTURING FACILITY, COBURG
Kodak Australia Pty Ltd

Golder was engaged during the operational closure of the 77 hectare Melbourne manufacturing facility for Kodak. Ian was the project director for the project and worked with Kodak to develop a remediation, divestment and land development strategy.

As part of this process, Ian assisted in integrating planning decisions to optimize the remediation and land use outcomes. A remediation approach was developed and negotiated with the regulator which significantly reduced the overall costs. Ian oversaw the design and specification of the remediation including assisting with the procurement decision analysis. Golder provided the technical supervision of the remediation contract involving the removal over 55,000 cubic metres of fill and provision of specialist soil remediation services using our global experience in a timely manner. Our contracting skills were used to install and operate a groundwater remediation system. The site was remediated and Audited for residential use and is now being developed.

FORMER AUTO MANUFACTURING
Goodman Property Services (Aust) Pty Ltd

Golder is supporting Goodman with environmental and geotechnical site assessment and remediation processes for master planning, financing and eventual Environmental Audit of a mixed residential, retail and commercial precinct. The 30 hectare site is located in Clayton Victoria and former uses included vehicle manufacturing by Volkswagen and Nissan.

Ian is the project director for this project and part of an integrated development team during the master planning and feasibility stages. Golder's involvement created opportunities through the development design to reduce remediation cost and reduce long term contamination risks at the site, in turn maximising land value and minimising remediation cost. Risk-based cost estimates were used to assess the financial feasibility of the development. This process assessed potential probability of various risks and the possible range of costs where likely. It considered risks associated with site assessment, regulators, remediation, validation, long term management and third party review. The costing, quantity, scenario and regulatory risk factors were combined to provide a probabilistic estimate of the remediation cost

DEFENCE SITE MARIBYRNONG

Department of Defence

Ian initially assisted VicUrban in negotiations for the priority purchase of the 127 ha Defence Site Maribyrnong. Advice included a review of existing reports, gap analysis, development of a remediation strategy, targeted site assessment and risk-based cost estimates.

In 2012, Ian became the Project Director assisting Defence in bringing the site to remediation and sale. Golder's role was to develop the strategy for the site remediation to meet Defence's aims and to obtain regulator (EPA and Auditor) agreement to that strategy prior to public Works Committee hearing. This involved the development of strategies and implementation plans for a range of key issues including CWA, explosives risk, radiation, UXO and asbestos. The work involved the development of integrated data systems to maximize the value of existing data and organization of that data to confirm existing data gaps and issues for Environmental Audit completion. The resulting strategies and data were used to develop risk-based cost estimates for the project. Golder also commenced the development of the technical specification as well as the documentation required to take the project to PWC prior to Defence deciding to sell the site prior to remediation in 2017.

APPENDIX B

Instructions from Moreland City Council

Kluckow, Ian

From: Richard Tolliday <rtolliday@moreland.vic.gov.au>
Sent: Tuesday, May 15, 2018 4:40 PM
To: Kluckow, Ian
Cc: Kim Giaquinta
Subject: Moreland C164 - Expert Witness Services
Attachments: Amendment C164 Submission #77 Bernard de la Coeur.PDF; Amendment C164 Submission #97 Erica Plompen.PDF; Amendment C164 Submission #130 Sue Zivkovic.PDF; P1772122-002-P-Rev0.pdf; SKM EAO Report (15 December 2011).pdf; moreland-city-council-purchase-order-terms-and-conditions (3).doc; G2-Guide-to-Expert-Evidence-Apr-2017.docx; Response to my questions from Council Meeting 11 April

Follow Up Flag: Follow up
Due By: Wednesday, May 16, 2018 4:00 PM
Flag Status: Flagged

Hi Ian,

Further to our discussion earlier we would like to formally acknowledge the requested provision and acceptance of your services as outlined in this email and the attached documents.

Description of services:

Summary
Expert Witness services for the Amendment C164 Panel Hearing including:

- Preparation of an expert witness statement, and
- Appearance at the Panel Hearing for Amendment C164

Detailed
Expert Witness Report including:

- Brief explanation of Golder Contamination Report (P1772122-001-P-Rev1) including:
    - Council brief (Methodology, Ministerial Directions, Practice Note)
    - Brief explanation of methodology
    - Acknowledgement of previous SKM recommendation where Golder have disagreed (highlight this is covered in original report)
    - Revision made post exhibition (P1772122-001-P-Rev2)
- Response to each of the three submissions (attached)
- CV attached as an appendix – refer to Guide to Expert Evidence (attached)

Terms of appointment:
Moreland's Standard Purchase Order Terms and matters outlined in the attached proposal supplied by Golder (P1772122-002-P-Rev0).

Agreed costs:
As per charges outlined in the attached proposal

Agreed dates:
Commencement of Services: 15th May 2018
Draft expert witness report 8:30am Wednesday 23rd May

Phone Meeting to discuss draft: 9:30am Thursday 24th May
Council to provide comments: COB (or earlier if possible) Thursday 24th May
Finalised report: 12pm (noon) Friday 25th May

Attendance at Panel Hearing: TBD (likely 6th or 7th of June)
Completion of services: Conclusion of Panel Hearing (estimated Friday 8th June)

Attached documents:

- Golder – Proposal for expert witness services (23 March 2018 P1772122-002-P-Rev0)
- Moreland Standard purchase order terms
- Panel Guidelines for Expert Witnesses
- SKM Report 2011
- Submissions 77, 97, 130
- Additional email from submitter relating to 145 Glenlyon Road

Any variations to these documents/agreements to be agreed to in writing by both parties.

Please acknowledge via return email that you accept these terms.

We will provide you with a purchase order number which must be referenced in any invoice you provide to council in future.

Any further questions please contact me on 924 1167 or via return email.

Kind regards

Richard
Richard Tolliday | Senior Strategic Planner | City Strategy & Design
Moreland City Council | 90 Bell Street, Coburg VIC 3058
T: 03 9240 1167 | **E:** rtolliday@moreland.vic.gov.au

APPENDIX C

Documents Reviewed

List of documents reviewed for this report as part of my engagement:

- Moreland City Council, Request for Quote Brief, Environmental Consulting Services For Amendment C164 – Brunswick Moreland Industrial Land Strategy (Mils) Rezonings dated 5 January 2017
- Sinclair Knight Merz, Brunswick Major Activity Centre – Environmental Audit Overlay Assessment dated 15 December 2011
- Golder Associates Pty Ltd , Assessment of Potential for Contamination, Amendment C164 – Brunswick Moreland Industrial Land Strategy (Mils) Rezonings (Revision 1) dated 28 March 2017
- Golder Associates Pty Ltd , Assessment of Potential for Contamination, Amendment C164 – Brunswick Moreland Industrial Land Strategy (Mils) Rezonings (Revision 2) dated 21 March 2018
- Department of Sustainability and Environment, General Practice Note, Potentially Contaminated Land dated June 2005
- Planning and Environment Act 1987, Section 12 (2) (a), Direction No.1, Potentially Contaminated Land (As amended) 27 September 2001
- Landowner Submission – 10 Pitt Street, Brunswick
- Landowner Submission – 6 Ann Street, Brunswick
- Landowner Submission – 8 Ann Street, Brunswick
- Atma Environmental, Proposed Environmental Audit Overlay – No. 6 & 8 Ann Street Brunswick dated 22 January 2018
- GHD Pty Ltd, Environmental Audit Report, Bensons Property Group Pty Ltd, 408-432 Lygon Street, Brunswick East, Victoria, May 2004
- Coffey Pty Ltd Environmental Audit Report, 22 French Avenue, Brunswick East, January 2007
- Australian Environmental Auditors Pty Ltd, Environmental Audit Report, 29–31 Frith Street, Brunswick, Victoria, 7 April 2014

golder.com