

Planning and Environment Act 1987

Panel Report

Monash Planning Scheme Amendment C129 Former Talbot Quarry and Landfill Redevelopment

11 September 2018


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Panel Report pursuant to section 25 of the Act

Monash Planning Scheme Amendment C129

Former Talbot Quarry and Landfill Redevelopment

11 September 2018



Jenny Moles, Chair



Catherine Wilson, Member

Contents

	Page
1 Introduction.....	1
1.1 The Amendment.....	1
1.2 The subject site.....	4
1.3 The surrounds of the site	6
1.4 Historical land uses on the site	7
1.5 Recent proposals and current use of the site	12
1.6 Council processing and referral to Panel	15
1.7 Panel process and late submissions	18
1.8 Comments on the process.....	20
1.9 Summary of issues raised in submissions	23
1.10 The Panel’s approach	24
1.11 Issues dealt with in this Report	24
2 Strategic policy context	25
2.1 Policy framework.....	25
2.2 Ministerial Directions and Planning Practice Notes.....	30
2.3 Other contextual reports and statutory policies.....	32
3 Soil contamination	35
3.1 The issues	35
3.2 Submissions and evidence	35
3.3 Discussion	37
3.4 Conclusions.....	38
4 Landfill gas.....	39
4.1 The issues	39
4.2 The current landfill gas situation across the site	39
4.3 Is the site suitable for residential development in light of the LFG results?	43
4.4 Is there a need for landfill buffers?.....	47
5 Groundwater	49
5.1 The issues	49
5.2 Evidence and submissions.....	49
5.3 Discussion	52
5.4 Conclusions.....	53
6 Leachate, sediment and surface water	54
6.1 The issue	54
6.2 Evidence and submissions.....	54
6.3 Discussion and conclusions	55
7 Geotechnical issues.....	56
7.1 The issues	56

7.2	Feasibility of building on the site	56
7.3	Zone 4 batters and interface with Centre Road apartments	64
7.4	Potential seismic events and liquefaction.....	66
7.5	Harris (Blue) train carriages and other landfill materials.....	68
8	The site assessment and audit process	71
8.1	Introduction.....	71
8.2	Definitions of assessment processes.....	72
8.3	The assessment process for this site.....	74
9	Ongoing management of the site	88
9.1	The issue	88
9.2	Evidence and submissions.....	88
9.3	Discussion	94
9.4	Conclusions.....	96
10	Zoning and drafting difficulties.....	97
10.1	The issue	97
10.2	Evidence and submissions.....	97
10.3	Discussion	98
10.4	Conclusions.....	100
11	The need for open space	101
11.1	The issue	101
11.2	Evidence and submissions.....	101
11.3	Discussion	103
11.4	Conclusions.....	103
12	Other issues.....	104
12.1	Ecology.....	104
12.2	Development contributions	106
12.3	Subdivision.....	107
12.4	Impacts of post-remediation development	107
12.5	Community consultation	108
13	Overall assessment	111
13.1	The Panel’s assessment.....	111
13.2	An alternative approach.....	111
13.3	Recommendation	113

Appendix A **Submitters to the Amendment**

Appendix B **Expanded late submissions and membership of Neighbours for Public Green Space, Oakleigh South Inc**

Appendix C **Document list**

Appendix D **Background environmental reports**

Appendix E List of Panel Directions

Appendix F Proponent and Council revised version of proposed CDZ (Schedule 2)

List of Tables

	Page
Table 1: Peak gas bores methane measurements	42
Table 2: Peak gas bores carbon dioxide measurements.....	42
Table 3: Geotechnical description of each zone	56

List of Figures

	Page
Figure 1: Exhibited Comprehensive Development Plan.....	1
Figure 2: Existing zoning.....	4
Figure 3: Exhibited Comprehensive Development Zone	5
Figure 4: Site remediation zones.....	12
Figure 5: Outline of normal audit process.	82

List of Abbreviations

Advisory Committee	Ministerial Advisory Committee on Potentially Contaminated Land 2012
Amendment	Proposed Amendment C129 to the Monash Planning Scheme
CDZ	Comprehensive Development Zone
Council	Monash City Council
DCPO	Development Contributions Plan Overlay
DELWP	Department of Environment, Land, Water and Planning
EAO	Environmental Audit Overlay
EPA	Environment Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
ERR	Earth Resources Regulation Branch, Department of Economic Development, Jobs, Transport and Resources
ESA	Environmental Site Assessment

GRZ	General Residential Zone
ha	Hectares
Landfill BPEM	<i>Best Practice Environmental Management: Siting, design, operation and rehabilitation of landfills</i> , EPA Publication 788.3, August, 2015
LFG	landfill gas
L/hr	litres per hour (flow rate of gas)
LS	late submission
mbgs	metres below ground surface
Ministerial Direction No. 1	Ministerial Direction No. 1: Potentially Contaminated Land made under section 12(2)(a) of the <i>Planning and Environment Act 1987</i>
MRSD Act	<i>Mineral Resources (Sustainable Development) Act 1990</i>
Neighbours' Group	Neighbours for Public Green Space, South Oakleigh Inc
NEPM	<i>National Environment Protection Measure for the Assessment of Site Contamination</i> made under the <i>National Environment Protection Council Act 1994</i>
ODP	Overall Development Plan
P&E Act	<i>Planning and Environment Act 1987</i>
PC PAN	Post Closure Pollution Abatement Notice (issued by EPA for closed landfills)
Plan Melbourne	Metropolitan Strategy 2017, Department of Environment, Land, Water and Planning
Planning Scheme	Monash Planning Scheme
ppm	parts per million
PPN	Planning Practice Note
Remediation Options Report	Remediation Options Report, 121 to 1249 Centre Road, & 22 Talbot Avenue, Oakleigh South Vic, Coffey, 27 May 2014
SEPP	<i>State Environment Protection Policy (Prevention and Management of Contamination of Land) 2002</i>
SESP	Site Environmental Strategy Plan (also known as an SRSP – Site Remediation Strategy Plan)
SRSP	Site Remediation Strategy Plan (also known as an SESP – Site Environmental Strategy Plan)
SUZ	Special Use Zone
VPA	Victorian Planning Authority

VPP	Victoria Planning Provisions
v/v	volume/volume
Work Authority	Work Authority under section 77I of the <i>Mineral Resources (Sustainable Development) Act 1990</i>
Work Plan	Work Plan under section 77G (1) of the <i>Mineral Resources (Sustainable Development) Act 1990</i>

Overview

Amendment Summary

The Amendment	Monash Planning Scheme Amendment C129
Common name	Former Talbot Quarry and Landfill Redevelopment
Brief description	Rezoning from Special Use Zone Schedule 2 and General Residential Zone Schedule 2 to Comprehensive Development Zone Schedule 2, correction of boundary of Environmental Audit Overlay, and minor policy changes
Subject site	1221-1249 Centre Road, Oakleigh South
The Proponent	Sterling Global Pty Ltd
Planning Authority	Monash City Council
Authorisation	No A0347721 November 2016
Exhibition	2 February – 3 March 2017
Submissions	<p>Initially 8 submissions: 4 from local residents, 1 from Victorian Planning Authority, 1 from Environment Protection Authority and 1 from officers at City of Kingston. South East Water indicated that they had no comment and did not wish to be contacted further about the Amendment.</p> <p>Some five months later, 343 objecting submissions were received from local residents during the Panel process. Two objecting submissions were later withdrawn. One supporting submission was received even later from a local resident, but it also was withdrawn.¹</p>

Panel Process

The Panel	Jenny Moles (Chair) and Catherine Wilson
Panel Appointment	Under delegation from the Minister on 6 June 2017
Directions Hearings	6 July 2017 at Monash Council Offices and 30 January 2018 at Planning Panels Victoria
Panel Hearing	8, 10 and 11 August, 12 and 30 October 2017 and 4, 5, 6 and 14 June 2018 at Planning Panels Victoria and Monash Council Offices
Site Inspections	Unaccompanied on 6 July 2017 and accompanied on 9 August 2017

¹ A complete list of submitters is included in Appendix A to this Report

Appearances

Ms Louise Hicks, barrister appeared for Monash City Council on direct instruction, assisted by Ms Sherry Hopkins, Acting Manager, Strategic Planner, Monash City Council

Ms Heather Hutchinson and Mr Martin Vegt initially, then Mss Marlene Mathias, Farzana Siddique, Megan Vallis, Rund Gorgis, and Mr Andrew Scott, represented the Environment Protection Authority

Messrs Ian McLeod, Metropolitan Regional Manager, Tony Robinson, Director Regulatory Compliance, David Wilson, Senior Adviser, and Dr Sanjive Narendranathan, Geo-technical Engineer, represented the Earth Resources Regulation Branch, Department of Economic Development, Jobs, Transport and Resources

Ms Joanne Lardner, barrister, instructed by Mr Rory O'Connor, initially of Norton Rose Fulbright Australia, later of Hall and Wilcox, represented Sterling Global Property Group Pty Ltd, the Proponent. She called the following expert witnesses:

- Mr Glen Slimmon, Sinclair Brook Pty Ltd, the project manager, on project overview
- Mr Phil Sinclair, Coffey Environments Australia Pty Ltd (Coffey), on soil contamination and remediation
- Mr Ian Pedler, Coffey, on geotechnical issues
- Mr Stuart McGurn, Urbis, on planning
- Mr Ken Mival, URS Australia Pty Ltd and EPA auditor, on the EPA auditing process

Ms Maryann Gassert, barrister, instructed by Ms Gabrielle Guthrie of Guthrie Legal, appeared for the Neighbours for Public Green Space, South Oakleigh Inc² in 2018. She called the following expert witness:

- Dr Lyndon Bell, JBS&G Australia Pty Ltd, on environmental risks and the approach to environmental site assessment

Mr Angelo and Mrs Silvana Valente appeared in person

Mr Silvio Mazzacca, who late in the Hearing, sought to make a submission to the Panel in favour of the Amendment, also appeared in person but later withdrew from the proceeding.

Date of this Report

11 September 2018

² Appendix B contains a list of members of the Neighbours' Group.

Executive Summary

(i) Summary

This report concerns the proposed rezoning of an 18.79 ha site at the north-eastern corner of the intersection of Huntingdale and Centre Roads, South Oakleigh, to enable its use for residential or other urban development. Relevantly, the site was formerly used for sand extraction and later as an unregulated putrescible landfill. The site has acknowledged contamination issues which potentially affect its future use. It also has geotechnical problems which have been created by the depositing of residual sand processing slimes in the quarry pits. The slimes have potential structural impacts for future development. Further, around a fifth of the site is occupied by an unfilled quarry hole of approximately 15 metres deep which is partly filled with water and slimes. This void, which is close to the southern site boundary and a new multi-level dwelling development on adjoining land, has near vertical walls.

Until the commencement of this rezoning process, the site lay disused and vacant for many years. It was described to the Panel in the Council submissions at the Hearing as being *'a blight on the landscape for a considerable time'*.

Despite the extractive industrial and landfilling uses on the land, approximately half of the site (the western half) has been zoned for residential use (currently General Residential Zone Schedule 2 (GRZ2)) for some decades. The remainder of the site, except for a very narrow strip of residentially zoned land adjoining the eastern boundary (also now GRZ2), is included in a Special Use Zone relating to past extraction activities (SUZ2).

Monash Planning Scheme Amendment C129 (the Amendment) seeks to rezone all of the land to Comprehensive Development Zone (CDZ) and apply a zone schedule (Schedule 2) broadly regulating subsequent development via a Comprehensive Development Plan. The Comprehensive Development Plan would become an Incorporated Document of the Planning Scheme. The purposes and controls of the CDZ schedule generally envisage residential development but some other uses can be accommodated. The schedule also requires preparation of an Overall Development Plan (ODP) to accompany planning permit applications. The permit applications are expected to comply with the Comprehensive Development Plan, though applications which vary from that plan may be lodged.

The exhibited Amendment also proposes minor local policy changes in relation to urban renewal which would give support to the residential use of the land.

An existing Environmental Audit Overlay (EAO) applying to all but the narrow strip of GRZ2 land along the eastern boundary is proposed to be extended to cover the entire site.

The Proponent's preference is to use and develop the land for a master planned residential community consisting primarily of medium density dwellings, with higher density apartments, retail and mixed use and open space components also forming part of the proposed plan. This 'master plan' is spatially depicted on the Comprehensive Development Plan.

Whether any or all of the proposed uses can occupy the land will ultimately depend on the outcome of the environmental audit process, required by the EAO and a clause of the new

CDZ schedule. The EAO provides that a certificate or statement of audit must be issued to confirm suitability of the land for a sensitive use or associated development before the use or development commences. The Proponent nevertheless wishes to proceed with the rezoning to the CDZ and incorporation of the Comprehensive Development Plan in advance of an environmental audit. It is proposed to instead rely on a Site Environmental Strategy Plan (SESP) and associated reports to provide a measure of assurance that the site can be developed generally as intended. The timing of the environmental audit and the use and timing of an SESP have been key components of the debate between the principal parties.

When the Amendment was publicly advertised it attracted eight submissions. Four were from local residents, with the remaining submissions from government agencies.

Three of the nearby residents were concerned about the amenity effects for their properties of high density or commercial development on the site. They were also concerned that Talbot Avenue, a disused road reserve through the site, might be re-opened to traffic.

The Valentines, also owners of a nearby property, addressed a range of issues: they supported the use of the land as public open space; raised geotechnical concerns; and submitted that the environmental assessment process preceding the rezoning was inadequate and inappropriate and does not provide assurance that the land could be used generally as intended.

Officers of the City of Kingston³ found the Amendment unclear and were not able to ascertain what was proposed for the land.

The Victorian Planning Authority (VPA) supported the Amendment, making some suggestions about improved statutory provisions including infrastructure contributions. The VPA initially supported the provision of an ODP in advance of planning permit applications but later changed this approach to supporting a requirement for the ODP to be submitted contemporaneously with applications.

The EPA supported the rezoning and the approach taken by the Proponent whereby the environmental audit would be deferred and a SESP would potentially suffice to support the rezoning and later be included in the new zone as a guide to rehabilitation. Later correspondence from EPA emphasised that authorisation of the SESP and the associated Environmental Site Assessment (ESA) should precede the adoption of the Amendment by the Council. The EPA also indicated concerns about immediate and longer-term risks to do with managing in-ground infrastructure and use of the land by residents.

The Council resolved on 30 May 2017 to adopt some changes to the CDZ schedule and refer the Amendment and submissions to a Panel.

The Valentines and the EPA were initially the principal parties to the Panel Hearing, together with the Council and the Proponent. The only evidence initially called was by the Proponent – relating to the overall proposal, site contamination, geotechnical issues, planning policy issues and environmental auditing.

³ The City of Kingston is located just south of Centre Road and received direct notice of the proposed Amendment

On Day 4 of the Panel Hearing, however, some 221 additional late submissions opposing the Amendment were referred to the Panel by the Council. Additional submissions were later supplied bringing the total to 343 (two submissions were later withdrawn). These submissions were almost exclusively from people living close to the site and all but one opposed the Amendment. Eighty-six of these submitters later forwarded expanded written submissions at the invitation of the Panel. Still later, in response to a request, the Panel determined to reconvene the Hearing to allow oral presentations by some of the late submitters. A number of the late submitters meanwhile formed an organisation (the Neighbours for Public Green Space, South Oakleigh Inc (the Neighbours' Group)). They were legally represented at the reconvened Panel Hearing and called expert environmental evidence. The Proponent called evidence in reply at the reconvened Hearing. The Council, Proponent, EPA and the Valentines also made submissions at that Hearing.

There were a variety of issues raised in submissions to the Council and at the Panel Hearing. The main concerns included:

- what, if any, environmental assessment(s) should be considered as adequate to:
 - satisfy the Council and Panel that the rezoning should proceed and/or
 - inform the development of the master plan
- the ongoing management of the land once developed
- off-site contaminated emissions
- the physical unsuitability of the land for residential purposes
- whether rezoning the land for urban purposes is contrary to statutory policy
- a deficiency of open space in the area, past indications the site would be used for open space and open space as a preferred use for the site.

The principal issue to be assessed by the Panel is whether it is appropriate to allow rezoning of the land for residential and/or other urban purposes in accordance with the Comprehensive Development Plan in advance of an environmental audit and relying upon a SESP and related material.

This consideration has involved:

- An assessment of whether the current information concerning site contamination, geotechnical issues and staged remediation (with an environmental audit only occurring at a later stage is sufficient to satisfy the Panel and the Council that the environmental condition of the site can be made suitable for the proposed use and development. Essentially the Proponent and the Council propose that the Amendment proceed on the basis of preliminary environmental assessments, followed by subsequent remediation, as was proposed by the Potentially Contaminated Land Advisory Committee Report of 2012⁴.
- An endeavour to identify workable and structured arrangements for the management of the remediated land and its remediation infrastructure, both during the remediation/development phase and subsequently, by the various persons and organisations with an interest in the land, and the suitability of the schedule to the CDZ as a mechanism to assist this management. The Panel considers that the Council needs to be satisfied that a workable and enforceable management

⁴ Potentially Contaminated Land Controls (AC) [2012] PPV 30 (9 March 2012).

framework can be developed which manages the operation, maintenance and monitoring of contamination control equipment and the use of the site in a risk averse manner.

The Panel has necessarily considered other matters as input to the above principal matters.

It has also considered:

- The planning policy context for this proposal
- Whether there are any obligations arising from past authorisations to use the land which might conflict with or be obviated by the proposed new controls
- Whether there is a sufficient need for open space in the immediate locality such that the land should not be set aside for another use.

The Panel has concluded:

- The evidence concerning site contamination and remediation was incomplete and inadequate to persuade the Panel that the master planned urban community which is intended to follow the rezoning and shown on the Comprehensive Development Plan is likely to be a feasible outcome.
- The Panel considers that the geotechnical or structural issues and their interaction with the management of the contamination remediation works have not been adequately addressed.
- No suitable ongoing strategic management arrangements have been identified to manage risks during the lengthy staged development phases and in the post development period. The Panel considers that the CDZ schedule, even after several redrafts by the Proponent and the Council, fails to adequately set the framework for the ongoing management of the remediation works and regulation of the use of land.
- The site's environmental characteristics are more uncertain and hazardous than those for which a SESP approach, as discussed in the Potentially Contaminated Land Controls Advisory Committee Report of 2012, was envisaged. Not all of the criteria that were recommended by the Advisory Committee as needing to be met before adopting a SESP approach to site assessment in advance of a rezoning are satisfied.
- The parties failed to persuade the Panel that there are any precedents for this proposal – no sites to which the Panel was referred were comparable in terms of scale together with the combination of geotechnical and contamination characteristics found at the subject site.
- The uncertainties which would remain, both at the time of rezoning and for some years to come, about the use able to be made of the subject land, makes the proposed statutory documentation confused and unworkable.
- While the strategic planning policies give some general support to residential development in this locality, this presupposes the site itself can be made suitable.
- There is no identified urgent demand for public open space in this locality.
- The information to hand recommends against the rezoning of this site in advance of a statutory environmental audit due to the size of this site; the extent and the even now not fully understood characteristics of the unregulated landfill(s); the absence of any buffer to existing and new residential development; and the site's structural problems. These factors mean that only an environmental audit of the entire site

and a final structural assessment will properly identify the purposes for which the land can be used and developed. The Panel considers that it would be premature to rezone the land before those investigations are complete.

- No issues were raised concerning the correction of the boundary to the Environmental Audit Overlay and it is not a matter considered by the Panel.

(ii) Recommendations

Based on the reasons set out in this Report, principally the extent of contamination, incomplete and ongoing environmental information, inadequate planning for ongoing management, geotechnical uncertainties, and statutory drafting difficulties, **the Panel recommends that, except for the proposed extension to the Environmental Audit Overlay which should proceed, the Monash Planning Scheme Amendment C129 be abandoned.**

1 Introduction

1.1 The Amendment

(i) Amendment description

Monash Planning Scheme (Planning Scheme) Amendment C129 (the Amendment) applies to land at 1221-1249 Centre Road, Oakleigh South.

The Amendment proposes to rezone the land, formerly used for sand extraction and for landfill purposes, from part Special Use Zone Schedule 2, Earth and Energy Resources Industry (SUZ2) and part General Residential Zone Schedule 2 (GRZ2) to the Comprehensive Development Zone Schedule 2 (CDZ2).

The *Former Talbot Quarry and Landfill Comprehensive Development Plan 2016* (Comprehensive Development Plan) would be included as an Incorporated Document in the schedule to Clause 81.01 of the Planning Scheme (now Clause 72.04 following Amendment VC148 to all Victorian planning schemes).

Figure 1 shows the Comprehensive Development Plan proposed to be incorporated in the Planning Scheme. Figures 2 and 3 show the existing and proposed zoning of the land respectively.

The Comprehensive Development Plan contemplates:

- conventional residential development across the site
- recognition of sensitive interfaces with adjoining residential areas
- a number of areas across the site of higher density development
- a 0.37ha area of mixed use development on Huntingdale Road in the north-west of the site
- areas for site drainage/open space
- allowing applications to be made for some other non-residential urban uses.



Figure 1: Exhibited Comprehensive Development Plan

The exhibited CDZ2 sets out nine purposes. The purposes refer to development which recognises the residual environmental conditions of the land, support a residential and mixed use development that incorporates a range of housing densities and respects the adjoining lower density housing areas. The schedule has a limited number of as of right uses, with housing and most commercial uses included as discretionary. Industrial and warehousing uses are prohibited.

Clause 2 of the schedule also requires that planning applications for use, development and subdivision must include:

- **An Overall Development Plan (ODP)**

The ODP is required to address the management of the site and context issues, provide for open space and community facilities, include information on access and infrastructure, development staging and management of any common property, include land use, built form and design principles, and *'provide for environmentally sustainable outcomes'*.

- **A Site Environmental Strategy Plan (SESP) and an Environmental Site Assessment (ESA)**

The SESP, which must apply to the whole site, is to be provided to the Responsible Authority for assessment.

The ESA may be for part(s) of the site if development is to be staged and must be prepared by an environmental consultant and endorsed by an environmental auditor as consistent with the SESP. The ESA must adequately address the residual site contamination.

The decision guidelines at Clauses 3.3, 4.2 and 5.3 of the CDZ schedule require consideration amongst other things of:

- environmental, geotechnical and contamination issues
- any SESP and ESA
- consistency with the Comprehensive Development Plan or justification for any departure from it due to the findings of the SESP and ESA
- the approved ODP for the site.

Clauses 3.4 and 5.4 include requirements relating to sensitive uses (residential use, child care or pre-school centre or primary school) and developments which facilitate them. They require a statement or certificate of environmental audit to be issued before the use or development begins and an agreement under section 173 of the *Planning and Environment Act 1987* (P&E Act) to give effect to ongoing management requirements.

The Amendment would also make a minor correction to the eastern boundary of the existing Environmental Audit Overlay (EAO) which applies to the land to incorporate the whole of the site within the overlay.

The Amendment would make small associated changes to the local planning policy framework at Clauses 21.04 and 22.04 to refer to urban renewal sites as preferred areas for medium to high rise residential development, with the subject site identified as a site for medium density development.

The Amendment was prepared by Monash City Council (the Council) as Planning Authority. It was prepared at the request of Sterling Global Property Group Pty Ltd (Sterling Global)

(the Proponent). That company is the development manager for the remediation and development project.

(ii) Purpose of the Amendment

The purpose of the Amendment was set out in the Explanatory Report as follows:

The Amendment is required because the use of the land for extractive industry and landfill purposes ceased over 20 years ago. The site has remained dormant since that time and is in need of rehabilitation to improve the environmental condition of the site and enable a new urban use to be established. The current Special Use Zone – Earth and Energy Resources Industry - is no longer an appropriate zone for the site. Similarly, the existing current residential zoning of the western part of the site should be changed to allow the environmental issues and constraints to be planned and managed in an appropriate way across the whole of the site.

However, until a full environmental assessment is undertaken, it cannot be confirmed whether the preferred use of the site – as a residential precinct with some mixed uses, and open space areas – is appropriate.

The rezoning to a Comprehensive Development Zone (CDZ) will allow the site to be considered for residential or other suitable urban uses. The CDZ will provide sufficient confidence to the land owner that the land can be used for some form of urban use. This will enable the completion of the environmental assessments and the undertaking of required levels of environmental works appropriate to the potential future uses. The Proponent has prepared a Comprehensive Development Plan that identifies opportunities for an integrated residential development on the site.

The site is within an Environmental Audit Overlay and the requirements of the Overlay will need to be satisfied before any residential use or development on the site can commence. The Comprehensive Development Zone contains provisions to address the work required by the EAO in a staged manner. It is considered that the Amendment can proceed with a Comprehensive Development Plan based on preliminary assessments undertaken by the Proponent. The proposal also provides for alternative uses should it not be possible to develop the land for residential purposes or other sensitive uses. The planning application process would require further details to be submitted to Council for consideration and this process would involve public consultation. The Schedule to the CDZ sets out issues that are to be addressed as part of the permit stage.

1.2 The subject site

The subject site has been in the ownership of Huntingdale Estates Nominees Pty Ltd since 2012⁵.

The site is 18.79ha in area and is bisected by a closed road reserve running north-south (Talbot Avenue). The site generally slopes towards the south-west.

The land is irregular in shape and has a frontage to the eastern side of Huntingdale Road of 409.5 metres. There is an existing crossover towards the northern end of the site's Huntingdale Road frontage, providing access for vehicles. Huntingdale Road is included in a Road Zone 1 under the Monash Planning Scheme. The land has a small frontage of approximately 30 metres to Centre Road to the south where it intersects with the former Talbot Avenue road reserve. Centre Road is included in a Road Zone 2.

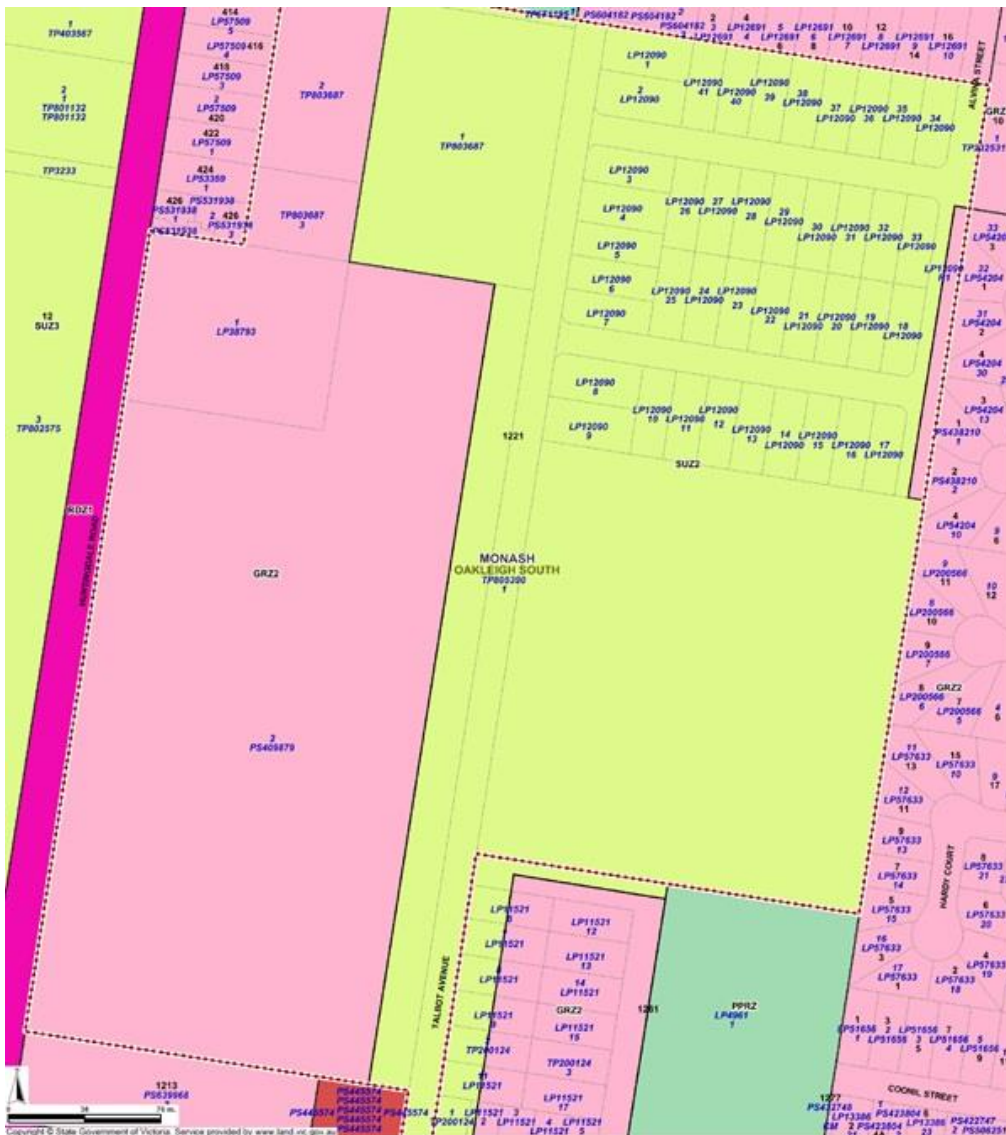


Figure 2: Existing zoning

⁵ This information appears in Ms Lardner's written submissions and on title. She said in her submissions on Day 2, however, that the site owner was Cousins Estates Nominees Pty Ltd.

The subject site is formally known as:

CT Vol 3645, Folio 846 (Lots 1-41 LP 12090)

CT Vol 9402, Folio 344 (Lot 1 TP805390J)

CT Vol 8186, Folio 871 (Lot 1, LP 38793)

CT Vol 6313, Folio 437 (CA 6A Sec 2)

CT Vol 10378, Folio 210 (Lot 2, PS 409879V)

CT Vol 8343, Folio 532 (Lot 1-3 TP 803687).

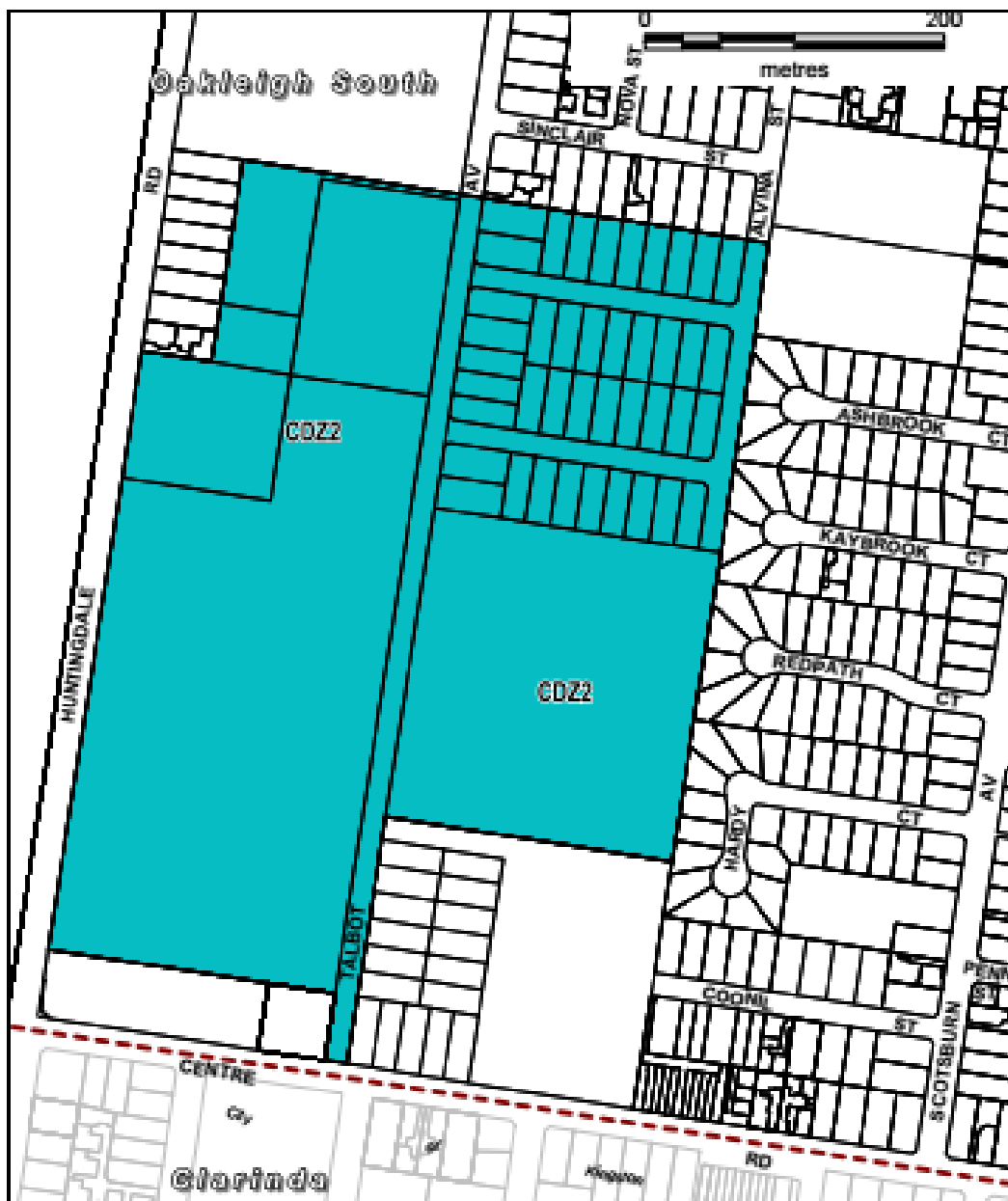


Figure 3: Exhibited Comprehensive Development Zone

The titles to the land are subject to an agreement made under section 173 of the P&E Act made on 15 March 1993 and registered on 26 May 1993⁶. The agreement was made while

⁶ Document 2, Tab 3

the land was used for sand extraction and processing and was the outcome of a settlement in an enforcement proceeding before the then Administrative Appeals Tribunal.⁷ The owner's covenants include the expeditious completion of sand extraction at the southern end of the site⁸, stockpiling of extracted sand to the west of Talbot Avenue, road sealing and construction of additional hoppers. Limited hours of operation are imposed. Part of the land was to be made available for clean filling by the Council and others, with the Council responsible for managing that aspect of the use. The owner is also required upon reclamation to consolidate, re-soil and level the land⁹ and ensure no clay slimes are deposited in the western sandpit¹⁰. Also relevant to the issues at the Panel Hearing, the owner's covenants further provide:

If required by Council, transfer filled or unfilled land progressively to the Council at a negotiated fair market price.¹¹

1.3 The surrounds of the site

Mr McGurn's planning evidence¹² for the Proponent provided the following details about the surrounds of the site:

The surrounding area can be described as follows:

- *To the north of the western portion of the site is Davies Reserve which contains an athletics track and associated recreational facilities. A Scout hut is located in the southern portion of the reserve¹³.*
- *The north-west boundary of the site abuts the rear of a row of single and double storey houses located at 412-426 Huntingdale Road.*
- *To the north-east and east of the site are areas of housing with the rear of residential properties abutting the site. The character of this area comprises single and double storey buildings, predominantly brick dwellings from the 1970s.¹⁴*
- *The former Clayton West Primary School site is located to the north-east which was rezoned to the General Residential Zone 1 in 2014.*
- *Talbot Park¹⁵ is located to the south of the eastern portion of the site and provides informal open space, playground and BBQ facilities.*
- *To the south of the western portion of the site is a two storey apartment building fronting Centre Road. To the west of this, on the corner of Centre and Huntingdale Roads is a site that has a permit for a five-storey apartment complex¹⁶.*

⁷ Now the Victorian Civil and Administrative Tribunal

⁸ Clause 4.2.15 requires sand extraction and processing to cease by 31 December 2014

⁹ Clause 4.2.11 (vi)

¹⁰ Clause 4.2.12

¹¹ Clause 4.2.13. Clause 4.2.14 also refers to making a strip of land at the south-western end of the site (adjacent to what was then an aged care facility) available for transfer to the Council as soon as possible after October 1993

¹² Document 13 paragraph 10 onwards

¹³ Included in a Public Park and Recreation Zone (PPRZ)

¹⁴ At least some of the housing along Huntingdale Road to the north-west appears to date from an earlier period than the 1950s

¹⁵ Talbot Park was also a former sand quarry apparently linked to the quarry hole in Zone 2 of the subject site

¹⁶ With semi-basement carparking

- *To the south of Centre Road is Clarinda Primary School and traditional residential areas. A service station is located at the south-east corner of the Huntingdale Road and Centre Road intersection. Bunnings is located to the south west of the site with commercial and industrial premises forming a large employment precinct extending south from Centre Road.*
- *To the west, on the opposite side of Huntingdale Road is the Huntingdale Golf Club.*

In the wider area, the Clayton Activity Centre is located approximately 1.3km to the east. The area is well served by education facilities with Oakleigh South Secondary College, Clarinda Primary School and Huntingdale Primary School within easy walking distance. Monash University and Monash Medical Centre are located to the north-east. Employment areas are located to the south-west, north (in Huntingdale and Oakleigh) and to the south-east (in Clayton South). A variety of public open spaces are also present in the area, including Davies Reserve to the north, Talbot Reserve the south and Bald Hill Park further to the south.

The site is located 1.1km south of Huntingdale Railway Station and 1.8km west of Clayton Railway Station. Bus routes operate along Centre Road, providing access to Clayton Railway Station and Activity Centre, Monash University, Monash Medical Centre, and Oakleigh Activity Centre.

The Panel notes that Talbot Park is in two zones at present: part Public Park and Recreation Zone and part GR22. As is true of the subject site, the park already has been partly subdivided into small lots. In the case of the subject site at least, these small lots may be a remnant of when the land was used for poultry farming or market gardening before it was mined.¹⁷

1.4 Historical land uses on the site

Sand extraction took place on the land from the early 1950s to the 1990s. The landfill operated from the 1970s through to the 1990s.

(i) Extractive industry

The sand mining which took place on the site from the 1950s involved the extraction and processing of sand. The sand was washed on site with the residual clayey washing water, 'slimes', deposited back into the extraction voids.

It appears from documents provided to the Panel by the Earth Resources Regulation Branch of the Department of Economic Development, Jobs, Transport and Resources (ERR) that the sand mining was established in about 1950 by Fergan Sand Pty Ltd. Sometime later a planning permit for sand extraction and processing was issued under the Melbourne and Metropolitan Planning Scheme Interim Development Order of 1961 (date unreadable)¹⁸.

A question arose during the Panel process as to whether there were any on-going obligations arising from previous approvals in relation to the land that might conflict with the new zoning. The relevant approvals related to the sand mining operations.

¹⁷ See Doc 21 – air photos from 1951 to 2016 provided by the Valentines.

¹⁸ Docs 36-42

In this respect, the Panel was referred to Planning Permit 4731 issued on 1 May 1989 under the Oakleigh Planning Scheme. It allowed the use of the land¹⁹ for the purpose of extraction and treatment of sand. Conditions included:

- a requirement for a site layout plan showing landscaping, details of the access way and provision of a buffer zone
- the terms of Extractive Industry Licences 44-2 and 1322 were to be complied with as if the permitted use were an extension of such licences
- permitted hours of operation of 6am to 7pm on Mondays to Friday, and 6am to 6pm on Saturdays
- commencement within two years and completion within two years of commencement unless extended.

So far as any obligations or entitlements arising from the sand mining permit are concerned, it was the Proponent's and the Council's submission, and the Panel agrees, that this permit has expired as the use of the land for sand extraction and treatment has now been discontinued for more than two years.²⁰

The Panel was also referred to Work Authority 389 issued under Section 19 of the *Extractive Industries Development Act 1995* to Pioneer Construction Materials Pty Ltd on 19 October 2000. It applied to the land subject to Planning Permit 4371. The approved Work Plan for the site was required to be lodged with the application for the Work Authority and was shown on an attached plan²¹. The attached plan indicated that the Work Authority applied to all of the subject land. The Work Authority allowed work to be undertaken only in accordance with the approved Work Plan.

Section 77L of the current *Mineral Resources (Sustainable Development) Act 1990* (MRSD Act) provides that a Work Authority remains in force 'for the period for which carrying out of an extractive industry is permitted on the land under the planning scheme or a planning permit', or until the owner's consent is revoked, or the Work Authority is cancelled.

The Work Authority was later amended on 20 December 2001, with all land, save for the area around the large remaining quarry void in the south-western corner of the site, being removed from the Work Authority. At best the Work Authority would now remain extant for this south-western quadrant only - if the planning permission had not lapsed.²²

There is nevertheless an ongoing requirement to rehabilitate the land under section 81 of the MRSD Act. This provision applies even if a Work Authority ceases to apply. It provides:

- (1) *The authority holder must rehabilitate land in the course of doing work under the authority and must, as far as practicable, complete the*

¹⁹ 'Land in Certificate of Title Volume 9402 Folio 344, formerly known as Talbot Avenue and portions of the land abutting such land'

²⁰ Doc 29 tab 6. See also section 68(2)(b) of the P&E Act and the existing use expiry provisions at Clause 63 of the Planning Scheme (as the site may have operated after the New Format Planning Scheme was introduced on 16 November 2000 under existing use rights)

²¹ ...and described as follows: Lot 1 of PS38793, Lot 6 of PS 4961, Part of Lot 2 of PS 46617, Lot 3 of PS 53359, carriageway of PS 4961, CA6 and 6a, Section 2, Parish of Mordialloc, Lot 1 of PS 4961, Lots 3 and 4 and part of Lot 5 of PS 4961, Lots 1,2,3,4,5,8,10,11,16, and 17 of PS 11521

²² While the continuation of the Work Authority was a matter in contention, it appears to the Panel that it would only be extant if the site enjoyed existing use rights for sand extraction. The Proponent did not seek to claim any rights

rehabilitation of the land before the authority or any renewed authority ceases to apply to that land.

(2) *If the rehabilitation has not been completed before the authority or renewed authority ceases to apply to the land the former authority holder must complete it as expeditiously as possible.*

(3) *While the rehabilitation is being completed, a former authority holder must continue the appointment of—*

...

(b) *in the case of a former extractive industry work authority holder, a quarry manager or person to manage the site where the extractive industry operation was carried out.*

Current provisions relating to Work Plans in section 77G of the MRSD Act indicate that a Work Plan is required to include a Rehabilitation Plan for the land. Sections 80 to 82 relate to satisfactory completion of rehabilitation and provide for repayment of Rehabilitation Bonds which are required to be lodged.

The ERR representatives at the Hearing advised that the amendment of the Work Authority in December 2001 was in response to the Department being satisfied that the area removed from the Authority's operation had been rehabilitated to its satisfaction. The Panel was told that the rehabilitation bond is still held²³, as part of the site is not yet fully rehabilitated.

It was submitted for the Council that Hanson²⁴, as the former extractive industry Work Authority holder, therefore has ongoing obligations under the MRSD Act in relation to rehabilitation of the site. This would apply to the south-western quadrant.

Reference was made to the potential problem of Hanson being unable to meet its obligations in relation to rehabilitation due to the works not being permitted in the relevant zone (GRZ2). The Council submissions noted, however, that where another planning permit is granted allowing remediation then this might supplant the requirement under the MRSD Act. In this the Council relied upon *Iluka Resources Limited v Horsham Rural CC (amended)* [2017] VCAT 107. In that case, the Tribunal accepted that the filling of extractive industry voids with waste under alternative legislation, meant that the objective for site rehabilitation under section 81 of the MRSD Act would be met.²⁵

The Council submission noted that permits had already been issued for the subject land allowing backfilling and stockpiling. It is an implied extension of the Council's argument, that the obligations under section 81 of the MRSD Act are being met.

Without determining the correctness of these submissions, the Panel records that it does not consider that any obligations which might still apply under the MRSD Act are such that they would preclude the proposed use and development of the land following its remediation.

²³ Panel Hearing, October 2017

²⁴ Pioneer was rebranded as Hanson around 2000

²⁵ *Iluka* at paras 45-51

(ii) Landfill operations

The landfill operations which occurred contemporaneously with sand extraction from the 1970s and which made use of some of the quarry voids were unlicensed and otherwise unregulated. The voids were not lined, and it appears that the fill and capping were not engineered. Capping appears to be minimal in some places. It seems that most of the waste deposited was putrescible in nature as the site operated at least in part as a landfill for municipal waste. It seems that there were few if any limits to what was deposited at the site. It was suggested in one submission that a 'slab of beer to the gate operator' would allow 'pretty much anything' to be deposited there. There was evidence provided to the Panel that train carriages and other heavy equipment were dumped in at least one of the voids which at the time was partially filled with water or slimes²⁶. While the site was used in part as a municipal landfill, the Council could not provide the Panel with any relevant documents concerning its operations.

(iii) Resultant condition of the land

The physical condition of the subject land has been seriously disturbed by the past sand extraction and landfilling operations. The site has an uneven surface with noticeable mounding and depressions. There is a large 15 metre-deep quarry hole in the south-western corner of the site. The site appears generally unkempt with weed growth and extensive areas of exposed soil. Some of the former quarry holes remain filled with unstable slimes produced during processing of the sand, others have been filled with waste brought onto the land. The site displays 'danger' signs warning of the presence of 'quicksands'.

A series of 2-3-metre high soil embankments are located along several site boundaries. They serve as amenity buffers to adjacent residential properties.

Mature trees and other vegetation were present on the site at the time of the Panel site inspection, generally along the site boundaries²⁷.

The Proponent's witnesses all described the land as comprising five 'zones' – that is, parts or segments – at least for site environmental assessment and remediation purposes.

The evidence by Mr Sinclair and Mr Slimmon²⁸ for the Proponent provided information about the five segments, which are shown in Figure 4. In summary:

- Zone 1 occupies the north-western quadrant – it was a former municipal landfill for the then City of Oakleigh. It apparently has been capped with un-engineered fill of 1-5 metres in depth. Filling occurred between 1970 and 1975. EPA records indicate that approximately 535,000m³ of waste was accepted while this part of the site was used as a municipal landfill. The landfill continues to produce landfill gas. It also has potential leachate issues as well as potential differential settlement and foundation construction issues.

²⁶ Document 127. It was suggested that the carriages were Harris Train Carriages containing asbestos lining. The Proponent disputed the particular type of carriages dumped suggesting that the reported event was too early in terms of discontinuance of Harris Trains.

²⁷ We understand that the trees along the western boundary of the site were removed during the Panel process

²⁸ Documents 9 and 1 respectively. Maps at pages 11 and 12 of Mr Slimmon's evidence show the five segments

- Zone 2 is the south-eastern quadrant – it is described as containing uncontrolled fill over slimes. The slimes have variable thicknesses and differential settlement and foundation construction issues arise. The evidence suggests that slimes are the predominant fill but solid inert (building) waste and some foundry waste is present. Filling with slimes occurred predominantly in the 1990s.
- Zone 3 is a smaller segment in the north-eastern corner – it is described as containing fill material at various depths including former sand wash slimes. The slimes have variable thicknesses and differential settlement and foundation construction issues arise. The evidence suggests that slimes are the predominant fill but solid inert (building) waste and some foundry waste is present. Filling with slimes occurred predominantly in the 1990s.
- Zone 4 comprises the south-western segment – it is occupied by a large quarry void to a depth of 15 metres with slimes disposal. It will require dewatering and backfilling. The geotechnical issues for this segment are described as a requirement for a batter stability management plan, management of uncontrolled fill including slimes, and settlement of uncompacted fill to Australian Standard (AS3798).
- Zone 5 is the mid-eastern segment between Zones 2 and 3 – it is described as the former site of a concrete batching plant and the processing plant for the sand production. The western portion of this segment supports uncontrolled fill of up to 9 metres in depth.

The site has been the subject of a considerable number of environmental investigations and reports since 2004. Some of those reports are referred in this Report and are listed in Appendix D to this Panel Report.



Figure 4: Site remediation zones

1.5 Recent proposals and current use of the site

(i) Previous combined permit/amendment proposal

The Panel was advised that a combined permit application and Planning Scheme amendment process was proposed under section 96A of the P&E Act in 2013/4.

The amendment component proposed to rezone the eastern portion (10.9ha) of the site from SUZ2 to GRZ, and rezone 0.37ha of the western part of the land at the accessway to Huntingdale Road to Mixed Use Zone. It was indicated that this was intended to be used as a convenience store.

The permit application for the eastern part of the land was for a subdivision to create 216 lots and their development for multi-dwellings, creation of five super lots, and removal of 0.355 ha of vegetation.

A second permit application sought permission for subdivision, building and works and removal of vegetation for the western portion of the site. The subdivision proposal was for creation of 186 lots for multi-dwellings and two super lots. Permission for building and works – for infrastructure – was also sought.

The application process in 2013/4 involved the preparation of a SESP for the site²⁹ which received ‘authorisation’ from an EPA auditor. The lodgement of an authorised SESP was consistent with the approach to rezoning of contaminated sites recommended by the State Government-commissioned Potentially Contaminated Land Advisory Committee in 2012.

Mr McGurn’s evidence for the Proponent records in relation to the 2014 process and the SESP:

Whilst these recommendations [of the Advisory Committee concerning SESP] have not yet been implemented, the Site Environmental Strategy Plan approach has already been commenced and completed (in 2014) and has been endorsed by an appointed EPA accredited Auditor in a letter dated 28 November 2014 ... The letter concludes that:

- *Having considered the information available for the site up to November 2014, in our experience the remediation options being proposed by Coffey for this site in the Strategy Plan and the supporting documents listed in this letter, are consistent with similar approaches to remediation of these types of sites and are considered to be feasible if implemented diligently and with due regard to the physical site properties and the materials used.*
- *Provided that they are suitably implemented in accordance with the Plan, good practice, and any conditions required by a Statement of Environmental Audit when issued, we consider that there is no overriding issue that would prevent redevelopment of the site, or portions of the site, subject to the suitable completion of the remedial process outlined in Coffey’s Strategy Plan, and completion of the audit process with acceptance by EPA.³⁰*

The letter referred to, which is from the site’s auditor Mr Mival, went on to say:

It must also be noted that, whilst this letter considers the suitability of the Site Environmental Strategy to provide an acceptable development of the site, it does not represent an Environmental Audit Report and does not provide any Statement of Environmental Audit for any portion of the site at 1221-1249 Centre Road & 22 Talbot Road South Oakleigh. A Statement of Environmental Audit may only be issued for a site once an Environmental Audit Report is completed and provided to the Environment Protection Authority.³¹

This combined amendment/application process was withdrawn in October 2016.³²

²⁹ Huntingdale Estate: Site Environmental Strategy Plan – 1221-1249 Centre Road & 22 Talbot Avenue, 28 November 2014, referenced ENAUABTF00751AA_R09 Rev04 (2) prepared by Coffey

³⁰ McGurn evidence para 75 and Appendix C

³¹ Page 3 of letter from Ken Mival to Glen Slimmon dated 28 November 2014, McGurn evidence, Appendix C

³² Source: Council website - planning applications

The proposal at that time was to use the land for a master planned residential community, essentially as is now proposed. More detailed plans for development than the current Comprehensive Development Plan were part of that process. The current plan, although more schematic, has the same general layout.

(ii) Recent planning permits

Currently, some remediation works are being undertaken on the land which are the subject of two planning permits issued by the Council in June 2015. These were described in the officer report to the Council meeting of 27 September 2016 as the drying of slimes being *'a precursor to the site's remediation'*.

Permit TPA/43336

This permit of 1 June 2015 allows 'backfilling and site rehabilitation of the former quarry'. It is subject to conditions which include:

- retention of mounded areas within 40 metres of the boundary
- a 30 metre boundary setback of all works unless otherwise agreed by the Council
- retention of grassed areas and vegetation within the 30 metre boundary setback unless otherwise agreed by the Council
- a setback for the concrete crusher within the existing quarry pit of 150 metres from the site boundary unless otherwise agreed by the Council
- the height of stockpiles near site boundaries limited to 3 metres above natural ground level
- standard amenity protection measures such as dust, storm water and litter management, screening, fencing, parking and access arrangements, limited hours of operation and noise emissions
- a requirement for a construction management plan to be prepared and approved before the development begins. It is to address measures to control dust, noise, and water runoff; control sediment laden or polluted runoff; manage parking and access; ensure cleaning of adjacent roads; limit hours of operation.

The permit also 'incorporates' six engineering design reports from 2014.³³ The six reports are two ESAs, a backfilling design report, the backfilling protocol, the backfilling construction environmental management plan and a traffic management plan. The reports are generally directed to backfilling in Zone 4 but also relate to stockpiling and the drying of slimes.

The endorsed plans of the permit are extracted from the construction environmental management plan. Plan 4 shows the extent of the area allowed to be backfilled (Zone 4) and the areas for stockpiling and drying of slimes across the site.

The permit also requires the establishment of a community consultative committee.

The permit includes a 2 year commencement date and a 4 year completion date. This permit has been extended.³⁴

³³ All provided to the Panel. See Appendix D

³⁴ Council website

Permit TPA/43337

This permit of 1 June 2015 allows ‘use and development of the land for stockpiling of earth, treatment of existing on-site slimes, sediments and uncontrolled fill material and associated earthworks to facilitate the backfilling of the former quarry’. It is subject to the same conditions as TPA/43336.

1.6 Council processing and referral to Panel

(i) Adequacy of notice

At the Panel Hearing, Mr Angelo and Mrs Silvana Valente, who were initially the principal non-government objecting submitters to the Amendment, asserted that the notice of the Amendment had been inadequate to alert the community to the contaminated state of the land, its geotechnical issues and the scale and nature of remediation works required. It was suggested that the small number of submissions from local residents within the exhibition period was reflective of this.

The Panel indicated during Hearing that it agreed that the Explanatory Report was less than informative about the extent of remediation required for this contaminated land to be used for urban purposes.

The Panel considers that the purpose of the Amendment as described in the Explanatory Report largely employs somewhat euphemistic terms – it refers to the land as ‘*lying dormant*’ and refers to the ‘*environmental condition of the land*’. It makes no reference to site contamination until page 3 of 5 when the Ministerial Direction on Potentially Contaminated Land is discussed. The Explanatory Report also makes no reference at all to the site’s geotechnical problems.

The indirect language in the Explanatory Report and the consequential inadequate notice to would-be submitters about the true nature of the site’s environmental problems and the proposal, was influential in the Panel’s decision to accommodate the 341 late submissions received only late in the Hearing process (as discussed in Chapter 1.8).

(ii) Initial submissions

In response to public notice of the Amendment, eight submissions were received by the Council, including four from local residents or land owners. The submissions received were as follows.

South East Water

This indicated no objection to the Amendment and requested that the Authority not be contacted further in relation to the Amendment.

Officers of the City of Kingston

The City of Kingston is situated immediately south of Centre Road. The submission said that the end use of the land was unclear, and it was not possible to provide useful comment.

Local residents

Two local residents indicated opposition to any high-rise developments and wished to ensure that Talbot Avenue was not re-opened through the site.

Another local resident was concerned that the amenity of his land would be affected by the abutting proposed Mixed Use Area of the Comprehensive Development Plan and submitted that no retail development was required. He was also concerned about the amenity consequences of the proposal to include student accommodation and six storey developments.

The submission for Mr Angelo Valente, an owner of a nearby property, by A and S Valente Pty Ltd, was that the land should be rezoned as public open space. The submission pointed to the paucity of open space in this part of the municipality when compared to other areas. It was also noted that Oakleigh South is an investigation area of the Monash Employment Cluster which would create additional demands for open space. It was argued that the Council should exercise the power conferred by the existing section 173 agreement applying to the land and acquire the site or at least that part currently zoned SUZ3. The submission expressed concern that the Council officer report on the Amendment had not noted the existence of the section 173 agreement applying to the land. It was also said that there is no need to rezone the GRZ2 part of the land.

The submission expressed concern that the officer report appeared to support the Proponent's claim that an audit in advance of rezoning would not provide the requisite certainty to warrant the expense and effort of remediating the site. It was submitted that the converse was true, that without an environmental audit, the Proponent might waste Council and the community's time dealing with permits for uses and developments which ultimately could not be approved under the EAO.

The submission also raised concerns that high density development was being proposed on extensive areas of un-engineered fill and that the filling of the remaining quarry hole, given there is a multi-level apartment development very close to the south boundary, posed a risk of embankment failure or exposure to contaminated materials.

Environment Protection Authority

The EPA's submission of 10 March 2017 noted that the Council had previously engaged a consultant, Senversa, to prepare a Review of Environmental Matters³⁵ for the site and that that report had highlighted several environmental risks and longer term logistical risks associated with its development. The report referred to the following risks:

- *In-ground infrastructure to manage landfill gas and leachate and the responsibility and payment for the ongoing management of these.*
- *Restrictions suggested managing risks to residents V housing density plans (i.e. limiting digging past a defined depth).*

The EPA emphasised to the Council that the land rezoning presents these risks. The submission included:

It is imperative that these risks associated with the development of landfill sites are appropriately managed through the rezoning and development approvals to protect future land uses, human health and safety.

³⁵ Senversa: Review of Environmental Matters – Site Environmental Strategy Plan, letter to King and Wood Mallesons, 27 August 2015, Background document provided by Council

The submission nevertheless noted the application of the EAO and the Comprehensive Development Plan to the whole site and indicated general support for the Amendment. It also supported the staged development of the site reflected in the exhibited Amendment:

... allowing the site to be rezoned with the support of an Environmental Site Assessment (ESA) and Site Environmental Strategy Plan (SESP) and requiring a section 53X Audit³⁶ as a condition of any future planning permit for a sensitive use.

It went on to say, however, that as this approach was not strictly in accordance with the approach set out in Ministerial Direction No. 1: Potentially Contaminated Land³⁷, the Council, if it decided to defer the environmental audit, was required to satisfy itself that the level of contamination would not prevent the use of the site. The EPA offered to assist the Council in making this assessment.

The EPA submission also included:

EPA wishes to advise ... that this approach may send a false message to Developers/Land Owners that contaminated land sites can eventually be developed for a sensitive use, which may not be the case depending on the findings of the section 53X audit.

The EPA then reinforced its submission on 18 May 2017 via an email to the Council, noting that the environmental requirements of the site must be addressed via the SESP and ESA before rezoning.³⁸ It was said that the Council must have reasonable certainty that the site can be developed as proposed and that it was not in anyone's interest to discover at the permit stage, at the end of a long assessment, remediation and audit process, that the site could not be used for any of the uses allowed by the zone. It submitted that as there are currently doubts about whether the land might be used as proposed, the best option was that the SESP and ESA should precede any approval of the rezoning.³⁹

The Panel was also referred to earlier correspondence between the EPA and the Council in June and August 2014 in relation to the combined Planning Scheme amendment and permit for the land which had initially indicated agreement that an environmental audit should precede any rezoning, however EPA subsequently supported a SESP as providing a level of surety that an acceptable audit would be produced following site remediation.⁴⁰

Victorian Planning Authority

The VPA made a submission on 3 March 2017. It supported the Amendment in principle. It noted that the site was included in the Monash National Employment and Innovation Cluster and provided an excellent opportunity to redevelop an underutilised parcel of land to provide a diversity of housing close to employment. The submission noted the nearby presence of open space, schools, shops and public transport.

³⁶ Section 53X of the *Environment Protection Act 1970*

³⁷ Ministerial Direction No. 1: Potentially Contaminated Land made under section 12(2)(a) of the *Planning and Environment Act 1987*

³⁸ The EPA subsequently submitted at the Panel Hearing that it only became aware in May 2017 that an SESP had not been prepared before the Amendment was exhibited

³⁹ The EPA later told the Panel that its position was that it will not be known whether the land can be used for housing until the environmental audit is completed

⁴⁰ Document 2, Tab 6

The VPA made a number of suggestions for improved process:

- the ODP information requirements should be more fully described and mandated
- the ODP must be approved before any planning application could be lodged
- the SESP and ESA phase should be completed prior to any planning application
- obligations for development contributions for open space, transport and community infrastructure should be imposed via a section 173 agreement.

On 21 April 2017, VPA modified its submission to the Council following a meeting with the Proponent's consultants. The VPA changed position was:

- The ODP and first planning permit application could be lodged and advertised to the community concurrently
- The infrastructure contributions for open space, community infrastructure and transport might be imposed via the ODP or permit conditions.

(iii) Council consideration of submissions

The Council considered the submissions to the exhibited Amendment at its meeting of 30 May 2017 and determined that it supported a number of changes to the exhibited Amendment. The changes were largely prompted by the VPA and EPA submissions and later correspondence.

The changes which were supported, require the submission and approval of an ODP for the site; and an endorsed SESP and ESA that are linked to the land uses proposed by the ODP prior to lodgement of any planning application.

The revised Schedule 2 to the CDZ, supported by the Council, provides that the SESP and ESA must be submitted for approval before lodgement of any planning permit application for use, development or subdivision of the land. These in turn must be coincident with or preceded by approval of the ODP. The ODP would be subject to notification and third party input.

The Council also supported a change to the Amendment to introduce a Development Contributions Plan Overlay (DCPO).

The Council resolved to refer the submissions and Amendment to a Panel and to support the changes to the Amendment at the Panel Hearing.

1.7 Panel process and late submissions

The Panel was appointed by the Minister's delegate on 6 June 2017.

A Directions Hearing was held by the Panel on 6 July 2017. At the Directions Hearing, the Panel requested the supply of certain information to assist its understanding of the submissions and the Amendment. The information requested included Council records concerning the operation of the municipal landfill in the north of the subject site; the Council experience with the remediation of the land in Talbot Park adjoining the south-eastern part of the subject site which had also been used for sand extraction and landfilling from 1971-1979; other site investigation reports prepared for the land owner; the relationship of the proposed planning approvals process to Ministerial Direction No. 1 concerning Potentially Contaminated Land and other statutory requirements.

At the Directions Hearing, the Panel also requested the supply of certain background documents to the Amendment. A complete list of background technical documents referred

to by the Council and Proponent is included in Appendix D to this Report. Appendix C contains the complete list of documents received by the Panel.

The Panel Hearing commenced on 8 August 2017.

The Valentines and the EPA were initially the principal parties to the Hearing together with the Council and Proponent. The only evidence initially called was by the Proponent – relating to the overall proposal, site contamination, geotechnical issues, planning policy issues and environmental auditing.

In response to issues related to the status of the Work Authority and ongoing obligations, the Panel requested that ERR attend the Hearing in October 2017 to assist the Panel. ERR made a presentation concerning approvals under the MRSD Act at the October 2017 hearing.

On Day 4 of the Hearing in October, however, the Council tabled 221 letters referring to the Amendment which had been received by the Council only in recent days. The letters were largely from local residents. A large proportion were proforma letters. They opposed the Amendment, some on explicit grounds, and all supported the use of the land as public open space. Later the Council provided further similar letters – giving a total of 343 (including approximately 14 duplicates).⁴¹

On Day 5 of the Hearing, the issue of how to treat the letters and how this might affect the further conduct of the Panel Hearing was discussed. All parties agreed that the letters should be treated as submissions to the Amendment and should be considered by the Panel in some way, at least to the extent issues raised in them were relevant. The Proponent maintained that the issues were largely irrelevant. The Council's position was that it was for the Panel to determine how to further proceed with the matter. Mrs Valente suggested that in order to allow the late submitters to fairly participate in the Panel process, the current Hearing should be abandoned, and a new Hearing commenced. She submitted that in any case the late supply of so many submissions confirmed her earlier submissions that the public notice of the Amendment had been inadequate.

The Panel considered the matter and determined that it would offer the opportunity to the late submitters to make expanded written submissions to the Panel. It was acknowledged, however, that on one view the proper course which would allow maximum participation by the late submitters may have been to abandon the Hearing and commence a new Hearing. The Panel indicated that, in as much as considerable time and cost had already been spent by the Council, EPA, the Valentines and Proponent on the proceeding, a balancing of the interests of existing and future parties would be served by enabling the late submitters to participate in the Hearing. The Panel directed that arrangements be made by the Council to give submitters access to all documents previously supplied to the Panel.

Correspondence was sent to the 341 submitters on 13 November 2017 advising that they might make expanded written submissions. Some 86 submitters responded with expanded grounds.⁴² One of these late submitters, as well as providing expanded submissions, asked to be heard. The submitter was a Dr Curt Thompson who had moved into the area only

⁴¹ A list of all late submissions (except a few which were withdrawn) are included in Appendix A

⁴² A list of the persons supplying additional submissions in response to the Panel Directions of 13 November 2017 is included at Appendix B

sometime after the first notice of the Amendment had been given. Another 12 submitters said that if the Hearing was reconvened they would like the opportunity to present to the Panel.

The Panel then gave the existing parties an opportunity to respond to the request to be heard by 18 December 2017. Mrs Valente was the only person responding. It was again her submission that the Hearing should be abandoned.

The Panel having considered fairness to the existing and potential new parties, determined to reconvene the Hearing, on the basis that this afforded the late submitters '*a reasonable opportunity to be heard*' as required under section 24 of the P&E Act. Efforts were made to make all earlier tabled material available to the new parties.

A Directions Hearing concerning arrangements for the further Hearing was held in January 2018. A successful request by Dr Thompson for an adjournment of the proposed further Hearing dates in the week of 19 February 2018, together with the unavailability of the lawyers representing the Council and Proponent for later parts of the first quarter of the year and the Panel's own unavailability in April-May, saw the Hearing rescheduled for 5-7 June. It was later continued on 14 June at the request of Proponent.

Before the reconvened Hearing, some of the late submitters formed a local residents' organisation (the Neighbours for Public Green Space, South Oakleigh Inc (the Neighbours' Group)). They were legally represented at the Panel Hearing and called expert engineering evidence. A list of those whom their barrister represented is included in Appendix B. The Proponent also called evidence in reply at the reconvened Hearing. The Council, Proponent, EPA and the Valentés also made submissions at that Hearing.

1.8 Comments on the process

This has been a protracted and difficult process.

(i) The issuing of permits for on-site works

The issuing of permits for site remediation by the Council in mid-2015, when this Amendment was already under preliminary consideration (at least via the section 96A proceeding), has undermined the effectiveness of requirements which might be introduced by the Amendment, especially in relation to what matters might be required to precede remediation works, such as a construction management plan as was discussed at the Hearing. It also undermines the assessment of the adequacy of proposed remediation measures. So long as the permit holder continues to use and develop the land in accordance with the permission already granted, any requirements which might be introduced by the Amendment in relation to these works would have no effect.

The Panel notes that a construction management plan is a requirement of the 2015 permissions granted, but its content does not accord with the contents envisaged for the construction management plan as set out in the re-drafted CDZ2 and discussed at the Hearing (see Appendix F).

The issuing of the permits has also confused the assessment process for the proposed development of the site as envisaged by the Amendment, in so far as the purpose of the permitted remediation works is not stipulated (though one assumes the purpose to be

residential use). It would seem that the works being undertaken are subject to the 2014 ESAs and various other reports relating to works management⁴³. There is, however, no reference in the permits to, nor a requirement for, a SESP. The issues of the need for a refreshed SESP to guide site remediation, and whether an environmental audit should precede development, were the subject of extensive submissions and evidence at the Hearing.

(ii) Dealing with late submissions

Perhaps the greatest difficulty faced by the Panel has been the effort to afford a fair Hearing to those submitters who only joined the Hearing process after Day 5 of 9.

In an endeavour to facilitate their effective participation, the Panel directed the Council to load all previous Hearing exhibits and relevant material onto its website and to make hard copies available as required.

The Council response to the Direction was slow and incomplete and necessitated follow-up Directions (see Appendix E).

(iii) Obtaining required information

Throughout the Hearing process, the Panel gave numerous directions concerning the supply of further information. The list of written Directions in Appendix E gives some indication of this. The Panel found the responses to information requests slow, reluctant, incomplete and/or contradictory in many instances:

- Information was sought on several occasions about the Council's experience with gas emissions and subsidence at adjoining Talbot Park as might better inform what might occur on the subject site. No useful response was received as discussed in Chapter 4.2.
- The Panel also requested suggestions from the parties, in particular from the Council and Proponent, concerning matters to be listed as components of an ongoing management plan for the site once it was developed, with a view to including these matters within the CDZ schedule. The Panel was concerned to ascertain the practicality of such measures, and how the responsibility for these audit requirements and other obligations would be allocated as between the developer, the current landowner, contractors, individual lot owners after subdivision, owners' corporations, the Council, other government bodies and the like, both during the staged development and subsequently. No considered submissions relevant to the circumstances of this site were received either from the Council or Proponent. This matter is discussed in Chapter 9.
- The Panel endeavoured to understand other statutory obligations already applying to the land under the MRSD Act, EPA legislation and earlier planning permits. This was with a view to establishing whether any requirements of the amended Planning Scheme would be supplemented by any other statutory obligations or might conflict with or obviate them. Obtaining this information proved difficult.

⁴³ Condition 2 refers to six background reports from 2014. The precise content of these reports being referenced is not clear. Further, the Condition 2 requirement is for compliance with endorsed plans not reports.

- In response to the generally difficult geotechnical issues associated with the site, and because the geotechnical issues would fall outside the responsibilities of the EPA auditor, the Panel made the suggestion on several occasions from as early as November 2017 (as did the Valentines) that the CDZ schedule might include a requirement that the geotechnical reports and the structural design should be peer reviewed by an independent suitably-qualified geotechnical/structural engineer. This was only responded to in a cursory manner towards the end of the Hearing. It is concerning that the seriousness of the geotechnical aspects of site development and appropriate processes for peer review of proposed structural designs were not responded to more decidedly or comprehensively by the Proponent.
- Despite the Panel's best endeavours, a clear answer was not forthcoming about how a permit was granted for quarrying and a landfill in a residential zone. The endorsed plans for Planning Permit No. 4731 issued by the City of Oakleigh, and dated 1 May 1989, refer to a 'Site Layout Plan'. The copy of the endorsed Site Layout Plan (which appears to be also the Work Plan for the site)⁴⁴ indicates that the eastern part of the land was at that time included in the Industrial 10 Zone, and the western part (between the Huntingdale Road frontage and just to the west of Talbot Avenue) zoned Residential 1. It may be that the mining activities enjoyed existing use rights in relation to the western part of the land in so far as sand extraction dates from the 1950s.⁴⁵ It may also have been that landfill, if subject to a permit, was treated as an alternative non-conforming use. None of this was suggested to the Panel, however.
- The Panel found it concerning that, despite many years of engineering investigations in relation to this site, many detailed environmental characteristics of the site including the extent of the landfill in Zone 2 and elsewhere, remain uncertain.
- Some information about the site remains contradictory: the evidence that train carriages were dumped on the site versus none were encountered in any site investigations⁴⁶; and the contradictory aerial photographic evidence about whether the Talbot Park quarry was an extension of quarry holes on the subject site or was separated by an un-excavated strip of land, are but two examples.
- The information provided concerning comparable sites in terms of building residences on both slimes and a putrescible landfill proved incorrect. This is discussed in Chapter 7.2.
- When the Panel sought to enquire whether there had been follow up surveys as recommended in an initial environmental report concerning the Growling Grass Frog⁴⁷, the Proponent initially responded that the presence or otherwise of the frog was not before the Panel but had been considered as part of the section 96A process. The Panel was advised much later in the Hearing, however, that there had indeed been a second frog survey and the results were negative and the relevant report was provided. This is discussed in Chapter 13.

⁴⁴ Provided by the Proponent

⁴⁵ See also Doc 21 - aerial photographs from 1951. The 1951 photo shows no extraction but by 1963 (the next photograph provided) sand mining was well underway in the north-western part of the land

⁴⁶ Neither were any large pieces of equipment found which were said to have fallen into slime pits and could not be retrieved

⁴⁷ Provided as background material

(iv) Contradictory positions

The Panel found the Proponent's case somewhat contradictory on the question of the timing of an environmental audit. On the one hand it was argued that it is likely that the land can be used as intended; on the other, the Proponent acknowledged that the final certainty of use will only be provided by the audit. The level of certainty expressed by the Proponent's witness, Mr Sinclair, about the likelihood of the planned development outcome being realised, also does not sit comfortably with the assertions for the Proponent that greater certainty of outcome would be afforded by the Amendment being approved. This is especially strange in that approximately half of the land is already zoned for residential use.

The Council considered the submissions made in response to public exhibition at its 30 May 2017 meeting and resolved that it would support certain changes to the Amendment before the Panel. The presentation for the Council at the Hearing, however, supported the Amendment as a whole (in modified form).

This approach at the Hearing was not consistent with the advice on Council's position in relation to the Amendment in the letter from Mr Sean McNamee of Monash Council to Dr Thompson on 26 October 2017, later tendered to the Panel⁴⁸, in which it was said:

As you know this Amendment is currently subject to the Panel Hearing where a range of issues are being examined.

In exhibiting the Amendment, Council has made it clear that this process is different from the conventional processes under the Minister's Direction for Contaminated Land and that we are going through the process to determine whether the proposed approach is appropriate under the circumstances. The Panel Hearing and subsequent report will provide guidance on this issue ...

As I have stressed in all of our discussions, Council is considering the Amendment and has not committed to any particular outcome ...

It is important to restate that the Amendment is at public exhibition stage and the fact that Council has agreed to exhibit the Amendment does not mean that Council has determined to proceed with the rezoning.

1.9 Summary of issues raised in submissions

The key dispute between the Proponent, the Council and EPA concerned the timing of the future site contamination assessments in relation to planning approvals, including the Amendment itself. Other fundamental matters were raised by submitters who own property or live in the local area.

The additional issues as raised in submissions to the Council and at the Hearing included:

- certainty around the future use of the land and its relationship to the timing of contamination assessments
- concerns about off-site contaminated emissions
- the physical unsuitability of the land for residential purposes
- the proposal for rezoning of the land for urban purposes being contrary to planning policy
- concerns about the ongoing management of the land once developed

⁴⁸ Doc 127

- a deficiency of open space in the area, past indications the site would be used for open space and open space as a preferred use for the site.

1.10 The Panel's approach

At the Panel Hearing, there was general support by the Council, the EPA, ERR and the Proponent for the Amendment proceeding. The principal debate between those bodies was about the adequacy of post-Amendment processes, including the timing of the provision of an up to date SESP and ESA(s). Other submitters, however, fundamentally challenged the evidence and submissions favouring the Amendment and questioned whether the Amendment should proceed at all.

The Panel has identified the key matter to be addressed as whether, with the information to hand concerning contamination and remediation prospects, and geotechnical issues, it is appropriate to allow rezoning of the land for residential and/or other unknown urban purposes. This assessment has involved:

- An assessment of whether the current information concerning site contamination (without an environmental audit at this stage) and geotechnical problems provide the required satisfaction that clean up and development of the site in the staged manner proposed is practicable.
- Efforts to identify practical and structured arrangements for the ongoing management of the land and its remediation infrastructure both during the proposed staged development and post-construction, by various persons and organisations, and the suitability of the schedule to the CDZ as a mechanism to assist this management.

1.11 Issues dealt with in this Report

The Panel has considered all written submissions made in response to the exhibition of the Amendment; as well as the further submissions, evidence and other material presented to it during the Hearing, as informed by its site visits.

The Report considers the issues under the following chapter headings:

- Strategic policy context
- Soil contamination
- Landfill gas
- Groundwater
- Leachate, sediment and surface water
- Geotechnical issues
- The site assessment and audit process
- Ongoing management of the site
- Zoning and drafting difficulties
- The need for open space
- Other issues
- Overall assessment.

2 Strategic policy context

2.1 Policy framework

(i) State Planning Policy Framework

The Explanatory Report for the Amendment addresses the Strategic Assessment Guidelines⁴⁹. It states that the Amendment supports or seeks to implement the State Planning Policy Framework of the Planning Scheme and the following components in particular:

- Clause 11.02-1 (Supply of Urban Land) by facilitating the clean-up of a contaminated site which, subject to environmental quality, may provide the opportunity for the redevelopment and intensification of existing urban land.
- Clause 13.03-1 Use of Contaminated and Potentially Contaminated Land by introducing measures to ensure potentially contaminated land is suitable for its intended use and development and is safely used.
- Clause 16.01-3 (Strategic redevelopment sites) through the identification, in the relevant local policy, of a site which (subject to site remediation), could be appropriate for large residential development in Metropolitan Melbourne.

The planning policy context for the Amendment was also addressed at the Panel Hearing principally in the submissions for the Council and Mr McGurn's planning evidence for the Proponent.

The Council and Mr McGurn expressed the view that the Amendment supported the following clauses in the State Planning Policy Framework:

- *Clause 9 'Plan Melbourne'*
- *Clause 10.04 'Integrated Decision Making'*
- *Clause 11 'Settlement'*
 - Clause 11.01-1 Settlement Networks
 - Clause 11.02 'Urban Growth'
 - Clause 11.04 'Open Space'
 - Clause 11.06 'Metropolitan Melbourne'
- *Clause 13.03-1 'Use of contaminated and potentially contaminated land'*
- *Clause 15 'Built Environment and Heritage'*
- *Clause 16 'Housing'*
- *Clause 17 'Economic Development'*
- *Clause 18 'Transport'*.

On 31 July 2018, Amendment VC148 to all planning schemes, which included several reforms to the Victoria Planning Provisions, was gazetted. Notably it made changes to the State level planning policy framework, including renumbering of clauses and a limited number of substantive changes. VC148 was accompanied by:

- Advisory Note 71 – A New Planning Policy Framework
- Advisory Note 72 – Reforms to the Victoria Planning Provisions

⁴⁹ See Minister's Direction No. 11 Strategic Assessment of Amendments made under section and Planning Practice Note 46: Strategic Assessment Guidelines

- A clause finder (to help navigate the changes to the schemes on a clause by clause basis).

The following post-VC148 clauses in the Planning Policy Framework are particularly relevant to the current Amendment:

- **Clause 11.02-1S (Supply of urban land)** has the following objective:

To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses

Strategies in Clause 11.02-1S include:

Planning for urban growth should consider:

- *Opportunities for the consolidation, redevelopment and intensification of existing urban areas.*
- *Neighbourhood character and landscape considerations.*
- *The limits of land capability and natural hazards and environmental quality.*
- *Service limitations and the costs of providing infrastructure.*

- **Clause 13 (Environmental risk and amenity)** has policies which include:

- *Planning should strengthen the resilience and safety of communities by adopting a best practice environmental management and risk management approach.*
- *Planning should aim to avoid or minimise natural and human-made environmental hazards, environmental degradation and amenity conflicts.*
- *Planning should identify and manage the potential for the environment and environmental changes to impact on the economic, environmental or social wellbeing of society.*
- *Planning should ensure development and risk mitigation does not detrimentally interfere with important natural processes.*

- **Clause 13.04-1S (Contaminated and potentially contaminated land)** has the following objective:

To ensure that potentially contaminated land is suitable for its intended future use and development, and that contaminated land is used safely.

The following strategies are listed:

Require applicants to provide adequate information on the potential for contamination to have adverse effects on future land use if the subject land is known to have been used for industry, mining or the storage of chemicals, gas, wastes or liquid fuel.

Facilitate the remediation of contaminated land, particularly on sites in developed areas with potential for residential development.

The following documents are required to be considered as appropriate:

- *State Environment Protection Policy (Prevention and Management of Contamination of Land)*

- *Ministerial Direction No. 1 - Potentially Contaminated Land*
 - *National Environment Protection (Assessment of Site Contamination) Measure (National Environment Protection Council, 1999).*
- **Clause 16.01-1S (Integrated housing)** includes the following strategy:
Increase the supply of housing in existing urban areas by facilitating increased housing yield in appropriate locations, including under-utilised urban land.
 - **Clause 16.01-2R (Housing opportunity areas in Metropolitan Melbourne)** identifies urban renewal areas and sites as providing opportunities to provide increased housing supply.

(ii) Local Planning Policy Framework

The Explanatory Report for the Amendment provided that the Amendment supports and seeks to implement the Local Planning Policy Framework, particularly having regard to:

- *Clause 21.02 – Providing a mechanism to consider the redevelopment of a disused industrial site for an alternative urban uses in a manner that seeks to protect, enhance and develop the physical, economic and social environments of Monash.*
- *Clause 21.04 – Facilitating the potential opportunity for new residential development, subject to site remediation, through the provision of an appropriate Zone which ensures an integrated approach can be considered.*

The Council submission and Mr McGurn’s evidence was that the Amendment supports the following local planning objectives:

- *Clause 21.02 ‘Key Influences’ identifies the key influences affecting planning and development in the municipality. These include the need to address changing demographics*
- *Clause 21.04 ‘Residential Development’ sets out objectives and strategies regarding residential development. A key objective is the encouragement of the provision of a diversity of housing styles and sizes that will accommodate future housing needs and preferences of the Monash community*
- *Clause 21.10 ‘Open Space’ encourages that open space should be located within easy walking distance of the majority of residents*
- *Clause 22.01 ‘Residential Development and Character Policy’ provides local policy requirements for new residential development. It identifies Character Type Areas. The site is adjacent to Character Type B.*

Following Amendment C125 to the Planning Scheme in April 2018, Clause 21.02 no longer has any content. Clauses 21.04, 21.10 and 22.01 remain.

(iii) Plan Melbourne 2017 (DEWLP⁵⁰)

The Council submitted that the site is in the Eastern Sub-region of Melbourne which is anticipated to accommodate approximately 175,000 new dwellings. A key objective of Plan

⁵⁰ State Department of Environment, Land, Water and Planning

Melbourne is to provide housing choice close to jobs and services and the creation of a '20-minute city'. New housing and mixed use developments are encouraged in urban renewal sites across Melbourne.

(iv) Monash Housing Strategy 2004 and 2014 (City of Monash)

The Council submitted that the 2004 Housing Strategy is a reference document in the Planning Scheme. It stresses the importance of providing for smaller households and greater housing choice.

The Council also advised that it had adopted a new Housing Strategy in 2014 and it is the subject of another Scheme amendment. The submission included that the 2014 Strategy aims to protect the 'garden city' character of Monash whilst also identifying preferred locations for increased housing density. The Council said that higher density residential development is intended to be directed to places in and around activity and neighbourhood centres and other strategic sites. It was further said:

The site is also located on the periphery, but within the investigation area of the Monash National Employment and Innovation Cluster (NEIC) which is an employment area of State Significance. However, the site is not specifically marked as an area for new housing opportunities for more medium and high density housing.⁵¹

(v) Commentary on planning policy

Mr McGurn's view was that there is a strong strategic basis for the Amendment. He said:

There is strong strategic support for the redevelopment of the site as an urban renewal site located close to jobs, services and transport.

The site is located within the Monash National Employment and Innovation Cluster identified in Plan Melbourne. These employment clusters are identified as places of focus for investment and growth and is an area of State Significance (Clause 11.01-1).

Additionally, Plan Melbourne elevates the role of large, well located urban renewal sites in meeting housing growth and reducing pressure for change in established neighbourhoods. In particular, the Amendment is supported by Clause 11.06-2 which seeks to identify housing opportunity areas to provide housing choice close to jobs and services. The Amendment will facilitate the provision of increased housing in an established area and assist in creating a city of '20 minute neighbourhoods'.

Notably, Clause 11.06-2 also seeks to 'Facilitate the remediation of contaminated land, particularly on sites in developed areas of Melbourne with potential for residential development.'...

The site is well located in terms of access to public transport, shops, services, educational facilities, health services, public open space, recreational facilities, and employment opportunities. Clayton activity centre is located 1.3km to the east, bus services operate along Centre Road, and Huntingdale and Clayton

⁵¹ Doc 3

Railway Stations are located in close proximity. The area is also well provided with educational facilities with two primary schools and a secondary school in close proximity and Monash University in the wider area. The employment areas to the south-west, north and south-east, as well as the University and Monash Medical Centre, provide easily accessible employment opportunities.

The Council submissions included:

The site is not in and around an activity or neighbourhood centre, nor is it identified in the cluster. However, no doubt it has a valuable role to play in potentially providing more and more diverse housing in the municipality. This, of course, will depend on the outcome of the ODP, SESP and ESA (and indeed, the audit).

It was also noted in the Council submissions that, contrary to Mr McGurn's evidence, the subject site is not identified in Plan Melbourne as a large strategic site.

The Council submission, however, concluded in terms similar to Mr McGurn on the issue of strategic support for the Amendment:

There is strategic support for remediation and development of the site. It has too long been a blight on the area. For many years, its use has not reflected the SUZ zoning. Clause 11.06-2 also seeks to 'Facilitate the remediation of contaminated land, particularly on sites in developed areas of Melbourne with potential for residential development.'

Whilst Council does not put its strategic role as high as the proponent, it does accept that it has a potential role to widen the housing choice available in the municipality.

The Panel has considered these key strategic planning policies as they relate to the Amendment and agrees that the site has the potential to contribute to housing objectives, but only subject to satisfactory clean up and ongoing management of the contamination and geotechnical issues.

Neither the Council submission nor Mr McGurn's evidence, referenced an important further component of the local planning policy framework. Clause 21.13-2 relates to Sustainability and Environment. One of the key issues of that clause is:

Previous work practices, particularly associated with industrial activities, may have resulted in soil or water contamination. Planning procedures should ensure that areas undergoing renewal and redevelopment are investigated for the presence and extent of contamination and appropriate actions taken to remediate the site.

Strategies to achieve this include:

Ensure that soils are not degraded or contaminated and that soil conditions are compatible with intended development and use of sites.

Assist in the protection of groundwater quality in the southern sand belt area of Monash.

The Panel considers that these policies around site contamination are an important part of the Amendment context.

Should the Amendment proceed against the Panel’s recommendations, the Council and/or DELWP should ensure the Amendment is consistent with the Planning Scheme as whole as modified by Amendment VC148.

2.2 Ministerial Directions and Planning Practice Notes

(i) Ministerial Directions

Generic Ministerial Directions relating to amendments are:

- Ministerial Direction No 11 - Strategic Assessment of Amendments and its associated Planning Practice Note 46 (Strategic Assessment Guidelines).
- The Form and Content of Planning Schemes (under s7(5) of the P&E Act).

There was little reference to these in the Panel process.

The following Ministerial Direction received greater attention:

Ministerial Direction No. 1 – Potentially Contaminated Land

This Direction, made under s12(2)(a) of the P&E Act, as amended in 2001, includes:

The purpose of this Direction is to ensure that potentially contaminated land is suitable for a use which is proposed to be allowed under an amendment to a planning scheme and which could be significantly adversely affected by any contamination.

All parties proceeded on the basis that this was a relevant Ministerial Direction to the Amendment and the EPA specifically accepted that the land was ‘potentially contaminated’ in terms of the Direction⁵², despite its being known to be actually contaminated.

Clause 4 of the Direction sets out the requirement to be met:

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. (Panel emphasis)

‘Sensitive use’ is defined in the Direction as ‘a residential use, a child care centre, a pre-school centre or a primary school.’

The Direction goes on in Clause 5 to advise how the planning authority must satisfy itself that the environmental conditions of the land are or will be suitable for the uses. Two options are offered:⁵³

In satisfying itself in relation to an amendment allowing a sensitive use, a planning authority must comply with either sub-clause (1) or (2):

(1) Before it gives a copy or notice of the amendment under Section 17, 18 or 19 of the Act, a planning authority must ensure that:

⁵² The definition of potentially contaminated land in the Direction includes land known to have been used for industry and waste storage

⁵³ The following clause of the Direction allows the Minister or Planning Departmental Executive to grant an exemption from these requirements after consultation with EPA. This exemption has not relied upon in relation to this Amendment

- a) *A certificate of environmental audit has been issued for the land in accordance with Part IXD of the Environment Protection Act 1970, or*
 - b) *If the amendment allows a sensitive use only in accordance with plans included or referred to in the amendment an environmental auditor appointed under the Environment Protection Act 1970 has made a statement in accordance with Part IXD of that Act that the environmental conditions are suitable for the sensitive use in accordance with those plans.*
- (2) *A planning authority must include in the amendment a requirement to the effect that before a sensitive use commences or before the construction or carrying out of buildings or works in association with a sensitive use commences:*
- a) *A certificate of environmental audit must be issued for the land in accordance with Part IXD of the Environment Protection Act 1970, or*
 - b) *An environmental auditor appointed under the Environment Protection Act 1970 must make a statement in accordance with Part IXD of that Act that the environmental conditions of that land are suitable for the sensitive use.*

The application of the Ministerial Direction with respect to the Amendment was the subject of much evidence and submission. It is discussed in some detail in Chapter 8 of this Report.

(ii) Planning Practice Notes

The key Practice Note - General Planning Practice Note 30 - Potentially Contaminated Land - has been in place since 2005 and was the subject of review by the Advisory Committee appointed by the Minister to consider the operation of contaminated land assessments and controls in 2012. No formal change was made to the Practice Note following the review.

General Planning Practice Note 30 - Potentially Contaminated Land (June 2005)

This Practice Note is designed, amongst other things, to assist planners and applicants to identify the appropriate level of assessment of site contamination which should be undertaken for a planning scheme amendment involving contaminated land. It envisages that land may require an environmental audit or may instead require a site assessment.

It sets out land uses which have varying degrees of potential for contamination and which type of environmental assessment should be conducted for various proposed land uses. Relevantly it identifies land used for extractive industry and landfilling as having high potential for contamination. Where the proposed use of that land is residential, the Practice Note recommends that an environmental audit (rather than a site assessment) should be undertaken.

The Practice Note goes on to say that although the Ministerial Direction refers to the environmental audit being undertaken before notice of the amendment is given:

... it may be appropriate to delay this requirement if testing of the land before a notice of the amendment is given is difficult or inappropriate. For instance, if the rezoning relates to a large strategic exercise or involves multiple sites in separate ownership. Direction No. 1 provides for the requirement for an

environmental audit to be included in the amendment. This can be done by applying the EAO.

It is essentially the second option for a deferred audit that is being pursued in the case of the present Amendment.

The Practice Note and its application to the Amendment is discussed in Chapter 8.

2.3 Other contextual reports and statutory policies

(i) Potentially Contaminated Land Advisory Committee Report 2012

The Explanatory Report to the Amendment, in discussing the approach to the Amendment and its relationship to the Ministerial Direction on Potentially Contaminated Land, refers to the recommendations made by the State Government-commissioned Potentially Contaminated Land Advisory Committee in its 2012 report. This matter is discussed further in Chapter 8.

This report is not referenced or incorporated in the Planning Scheme, nor have its recommendations been adopted by government. Nevertheless, several urban renewal projects across Melbourne have adopted its recommended approach to the processing of amendments concerning contaminated land.

The Explanatory Report for the Amendment refers to the approach recommended in Ministerial Direction No. 1 concerning audits and planning scheme amendments and says:

... the Victorian State Government commissioned a review of this approach in 2012, and the Potentially Contaminated Land Advisory Committee report 2012 proposes alternative measures to address the requirements of the Ministerial Direction No. 1. Applicable to this proposal, it identifies an approach which recognises the costs involved in site remediation. It recognises the confidence a land owner needs, all other things being equal, that the land is capable for residential or other sensitive uses before making this expenditure.

Following the approach in the Advisory Committee's report, the owners have requested that a staged approach to the remediation process be taken. This approach proposes to delay the completion of the environmental audit until prior to the commencement of redevelopment. This provides certainty about the rezoning to an urban zone, allowing planning permits to be issued for a range of urban uses and provides flexibility to progressively remediate the site to standard that suits the proposed uses.

The approach proposed involves the use of a Comprehensive Development Zone (CDZ). Schedule 2 to the Comprehensive Development Zone will require the submission of two documents endorsed by an EPA approved auditor to accompany any planning application:

- *A Site Environmental Strategy Plan (SESP); and*
- *An Environmental Site Assessment (ESP).*

Once a planning permit has issued, an audit will need to be undertaken and state that the land is fit for the purpose provided for by the planning permit. This audit will need to occur prior to any development commencing on the site. Should the audit find that residential development is not possible given the

contamination levels of the site, the proposed Comprehensive Development Zone will allow for consideration of a range of commercial and other non-sensitive uses.

The Explanatory Report also refers to the Advisory Committee's comments on the requirement for confidence by a landowner concerning future use before site remediation is undertaken:

... the Potentially Contaminated Land Advisory Committee report 2012 proposes alternative measures to address the requirements of the Ministerial Direction No. 1. Applicable to this proposal, it identifies an approach which recognises the costs involved in site remediation. It recognises the confidence a land owner needs, all other things being equal, that the land is capable for residential or other sensitive uses before making this expenditure ...

Following the approach in the Advisory Committee's report, the owners have requested that a staged approach to the remediation process be taken. This approach proposes to delay the completion of the environmental audit until prior to the commencement of redevelopment. This provides certainty about the rezoning to an urban zone, allowing planning permits to be issued for a range of urban uses and provides flexibility to progressively remediate the site to standard that suits the proposed uses.

(ii) The Landfill BPEM

EPA Publication 788.3, *Siting, design, operation and rehabilitation of landfills, Best Practice Environmental Management*, August 2015 (the Landfill BPEM) is the source document for best-practice environmental management measures for landfills and is an incorporated document under Clause 19.03-5 of the Planning Scheme. It gives direction on the best-practice siting, design, operation, performance and rehabilitation standards for landfills in Victoria, taking into account the risk they pose to the environment. It also provides a guide for the measures required to meet legislative objectives. It includes a chapter devoted to closed landfills and their management, including the need for post-closure landfill buffers for landfill gas (LFG) management.

The Council's submissions noted that the Landfill BPEM provides that planning authorities need to be provided with sufficient information by a proponent to satisfy them that a proposed new development will not be adversely impacted by its proximity to a previous landfill site. It also says that where the proposed development encroaches into the recommended landfill buffer area or increases the extent of development within the already encroached buffer area, EPA recommends that the council require an environmental audit to be conducted under section 53V of the *Environment Protection Act 1970*. The audit must assess the risk of harm to the proposed development posed by the potential offsite migration of landfill gas and amenity impacts resulting from the landfill.

(iii) EPA Auditor Guidelines

EPA publication 759.3, *Environmental auditor (contaminated land): Guidelines for issue of certificates and statements of environmental audit*, December 2015 provides guidance to auditors, appointed under Section 53S of the *Environment Protection Act 1970*,⁵⁴ to issue certificates and statements, on the conduct of environmental audits of contaminated land.

⁵⁴ Now Section 195 *Environment Protection Act 2017* (as amended 18 August 2018)

3 Soil contamination

3.1 The issues

In this chapter and the following five chapters, the evidence and submissions concerning the extent and nature of the site's contamination and geotechnical problems, together with their remediation prospects, are addressed.

The issues in this chapter are:

- whether the soil is contaminated and with what contaminants
- can the contaminated soil be remediated or what other measures could be used to make the site suitable for built urban uses?

3.2 Submissions and evidence

Mr Sinclair provided the only expert witness statement on soil contamination at the Amendment site.⁵⁵ His evidence summarises Coffey's soil sampling, chemical analysis and test results.

Soil samples were taken from 52 test pits in all zones across the site and from 29 previously stockpiled soil mounds in Zones 1, 2, 3 and 5. The samples were analysed and, as required by the *State Environment Protection Policy (Prevention and Management of Contamination of Land) 2002* (SEPP), assessed against the *National Environment Protection Measure for the Assessment of Site Contamination 2013* (NEPM) criteria for human health and ecological guidelines.⁵⁶

Soil contaminants, identified through Coffey's investigations, which were above acceptable levels for each zone are as follows:

Zone 1:

- Above Human Health Guidelines – Arsenic and Total Reactive Hydrocarbons (TRH)
- Above Building and Structure Guidelines - pH at one location
- Above Ecological Guidelines - metals widespread in zone
- Aesthetically unacceptable materials - building and putrescible waste.

Zone 2:

- Above Human Health Guidelines - Asbestos
- Above Ecological Guidelines - metals
- Aesthetically unacceptable materials - building and putrescible waste.

Zone 3:

- Above Human Health Guidelines - Arsenic and benzene
- Above Building and Structure Guidelines - pH at two locations
- Above Ecological Guidelines – metals.

⁵⁵ Doc 9 Expert Witness Report of Phil Sinclair 28 July 2017

⁵⁶ NEPM (2013) Ecological Screening Levels - Urban Residential and Public Open Space, Coarse Soil
 NEPM (2013) Ecological Investigation Levels - Urban Residential and Public Open Space
 NEPM (2013) Health Investigation Levels - Residential Setting A
 NEPM (2013) Health Screening Levels - Low-high density residential, sand, 0m to <1m / 1m to <2m / 2m to <4m / 4m+.

Zone 4:

- None detected but limited sampling.

Zone 5:

- Above Human Health Guidelines – TRHs including naphthalene at two locations, Poly Aromatic Hydrocarbons including Benzo(a)pyrene at one location, Asbestos in fill and surface soils
- Above ecological guidelines - metals
- Aesthetically unacceptable materials - building and putrescible waste.

Mr Sinclair also provided a summary of previous investigations⁵⁷ which indicated elevated levels of the following additional contaminants:

- Toluene, ethylbenzene, xylenes, total petroleum products, pesticides, phenolics and cyanide (above EPA investigation levels) (AMAL Black, 10 May 2002)
- Ammonia, volatile fatty acids, cadmium, vanadium, mercury, lead (HLA April 2004).

Mr Sinclair considered that:

*The main soil contaminants of concern with respect to the proposed uses of the site are arsenic, petroleum hydrocarbons and asbestos containing materials. While copper, nickel and zinc were reported to be widespread, they are not assessed to be contaminants likely to prevent proposed uses of the site.*⁵⁸

The Remediation Options Report,⁵⁹ that predates more recent soils analyses, considers options for treating the site's contaminated soil. The options for Zones 1, 2, 3, and 5 include undertaking a risk assessment to determine if the soil can remain on site or needs to be disposed of off-site; using some of the soil in Zone 1 as back fill in Zone 4; remediating the soil in situ; and, disposing of the soil off site and importing clean soil. The preferred option is to use the soil, if considered suitable, to fill the quarry void.

For the site in general, Mr Sinclair proposed the following remedial measures:

- *Covering of the site with hardstand, paths, paving, roads and buildings, which will prevent access to soils;*
- *Ensure soil of suitable environmental quality is present in unpaved areas of the site, such as gardens, retention basin areas and open space. Minimum soil cover of 0.5 m of suitable quality fill;*
- *Ensure soil conditions will not impact on the beneficial uses of buildings and structures by use of resistant building elements that penetrate soil;*
- *Where soil is not suitable for reuse on-site, conduct remediation works or dispose soil offsite;*
- *Implement the environmental management plan to ensure workers are protected during the site works;*

⁵⁷ See Appendix D for previous investigations also cited in Expert Witness Report of Phil Sinclair 28 July 2017, pages 13-18

⁵⁸ Doc 9 Expert Witness Report of Phil Sinclair, 28 July 2017, p21

⁵⁹ Doc 23 Coffey Environments, Remediation Options Report, 121 to 1249 Centre Road, & 22 Talbot Avenue, Oakleigh South, Vic, 27 May 2014

- *Implement Audit conditions and Owners' Corporation Rules prohibiting digging or excavation past a defined depth, depending upon residual contamination present.*⁶⁰

A number of submissions indicated concern about asbestos⁶¹ while others referred to ammonia⁶² and pH levels⁶³ as well as contaminated soils in general.⁶⁴ Mr Menegatti expressed concern that the building piles would corrode because of the acidic nature of the soils which he suggested may have been caused by the washing of sands during car parts casting processes.⁶⁵

3.3 Discussion

As might be expected given the historical uses of the site, soil contamination is widespread across the site (except perhaps for Zone 4, about which little is known).

Soil sampling of test pits, soil mounds, gas and bore holes by Coffey was limited to depths of 4 metres or less⁶⁶ except in one location where sampling was up to 7 metres depth. The summary of studies by other consulting firms indicates that previously soils from greater depths had been sampled and analysed. For example, an AMAL Black 2002 report⁶⁷, cited by Mr Sinclair, had boreholes to depths of 21.5 metres and test pits to 8 metres and found contamination levels above EPA Investigation Levels.⁶⁸

It is unfortunate that further details about the results from these studies were not provided (although the Panel was advised that some of the reports are now missing). The results of those studies, particularly from the deeper boreholes and test pits, would have been helpful as the development of the site will entail considerable earth disturbance at depths greater than those for which more recent sampling results were provided. For example, in Zone 1 it is proposed to drive piles to depths of about 18 metres, through uncontrolled fill. Little is known about soil conditions at these depths, and this will require further investigation.

The multi-pronged measures proposed by Mr Sinclair to ensure that the soil conditions are suitable for the intended use, appear appropriate to protect human health including that of workers, and to support some vegetation in the unpaved areas. However further investigations are required to ensure soils at the depth of potential footings and other infrastructure are not corrosive to buildings and other structures, particularly in Zones 1 and 3.

⁶⁰ Doc 9, Expert Witness Report of Phil Sinclair, 28 July 2017, Table 4.1, p27

⁶¹ S Hodgson (LS1), L Stolarski (LS16), P Chua (LS21), O Murashova & C Thompson (LS57), R Menegatti (LS6), H Raditis (LS305)

⁶² S Hodgson (LS1), R Menegatti (LS6)

⁶³ L Stolarski (LS16), O Murashova & C Thompson (LS57), R Menegatti (LS6)

⁶⁴ K Kenny (LS10), J Spina (LS76), D Giannakis (LS81)

⁶⁵ LS6

⁶⁶ Doc 9, Expert Witness Report of Phil Sinclair, 28 July 2017, Appendix B

⁶⁷ AMAL Black Pty Ltd (September 2002c), Hydrogeological Assessment, Ex Pioneer Quarry Property, Talbot Avenue, Oakleigh cited in Doc 9 Expert Witness Report of Phil Sinclair, 28 July 2017, p13

⁶⁸ EPA Investigation Levels predate the State Environment Protection Policy (Prevention and Management of Contamination of Land) 2002

If the soils to the depths of the footings are found through further testing to be corrosive to buildings and structures, then the use of materials that are non-corrosive will be required or the soil acidity remediated.

The Panel considers that if these and other proposed measures can be satisfactorily implemented, soil contamination is unlikely to preclude residential development. The related issue of the acidity of the groundwater is discussed in Chapter 5.

3.4 Conclusions

The Panel concludes:

- Further investigations and possible remediation and building measures are required to ensure soils are not corrosive to buildings and other structures particularly in Zones 1 and 3.
- The measures proposed to protect beneficial uses and meet the objectives of the State Environment Protection Policy (Prevention and Management of Contamination of Land) 2002 are otherwise appropriate.
- Subject to the results of the further investigations, soil contamination is not likely to preclude residential redevelopment.

4 Landfill gas

Gas emissions from landfills are caused by the degradation of the disposed waste. It is a complex mixture of a range of gases. In uncapped and unlined landfills, these gases opportunistically rise through cracks and crevices below the surface. While the gas may not pose a threat to human health at present as it dilutes as it disperses, it tends to concentrate in poorly ventilated areas in buildings and structures.

LFG at certain concentrations can, under the right conditions, such as in places with poor ventilation, be flammable and explosive, odorous, corrosive, toxic to humans and flora and fauna, and cause asphyxiation.⁶⁹

4.1 The issues

The issues are:

- What is the current LFG situation across the site?
- Is it likely that the land can be developed for residential development despite the emissions of LFG?
- Is there a need for landfill buffers?

4.2 The current landfill gas situation across the site

(i) Evidence and submissions

Measurements of methane and carbon dioxide, as indicators of LFG, have been made periodically at the site since at least 2004. Mr Sinclair provided brief summaries of past monitoring results and a more detailed summary of the 2016 and 2017 methane and carbon dioxide concentrations from bores, utility pits, and at the surface across the site, and at two off site locations near the border with Talbot Park.⁷⁰ He also indicated that further monitoring of LFG had been undertaken since preparation of his expert report and more is scheduled. This is discussed further in Chapter 9.

In addition to gas concentrations, he provided the flow rates for 2016 and 2017 and a Hazard Potential Rating for each set of results.⁷¹

Past monitoring in 2004 reported that there were elevated methane concentrations predominantly around Zone 1 and Talbot Park, with some occurrence in the slimes in Zones 2 and 3.⁷² Similar results were reported in 2005. In 2010, methane was found to be above the trigger level of 1 per cent in nine perimeter bores and seven centrally located bores, and carbon dioxide was above the trigger level in all bores except five. At one bore there was found to be a concentration of methane of 95 per cent.

In 2014, Coffey reported elevated methane concentrations in several bores in Zones 1 and 2 and Talbot Park, with elevated carbon dioxide concentrations in a majority of bores across

⁶⁹ Included in Doc 130, *Best Practice Environmental Management: Siting, design, operation and rehabilitation of landfills*, EPA Publication 788.3, August 2015, p32 (BPEM)

⁷⁰ Sinclair expert witness report, Doc 9

⁷¹ Doc 32, The Hazard Potential Rating is based on the *Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings*, British Standard 8485:2015, Table 2. The Table is reproduced in Mr Sinclair's Expert Witness Report, Doc 9, p30.

⁷² Sinclair p15

the site. Gas Screening Value calculations were conducted, which resulted in a low risk classification for the site.⁷³

In his expert witness statement, Mr Sinclair summarised the 2016 and 2017 monitoring results as follows:

- *Elevated 'flows' of landfill gas were recorded in several bores across the site, including in Zone 1, both centrally located and close to the northern boundary and for the first time in the north western portion of Zone 2.*
- *The maximum recorded flow rate of gas was 11.1 L/hr.⁷⁴ Prior to the August 2016 monitoring event, flow rates had not been recorded greater than 1 L/hr. The maximum flow was recorded in Zone 2.*
- *Elevated concentrations of methane were recorded across Zone 1, parts of Zone 2 and on the boundary of the site with Talbot Park.*
- *Notably methane concentrations were reported along the north western boundary at GB46A (maximum of 95% methane in August 2016 and reducing to 1.2% in March 2017) and at GB18A (maximum of 26.7% methane reducing to 0.0%). It is noted that Lane Piper (November 2010) reported what were considered unusually high methane levels at GB46 (also 95%), recommending further investigation and noting that the concentration was above that expected for a landfill. Coffey has completed additional LFG assessment around well GB46A which replaced well GB46 (refer Figure 4A).*
- *Newly installed bores in Zone 2, GB71 and GB73, reported concentrations of up to 46.1% and 41.8% respectively.*

The elevated flow rates in Zone 2 may also be an effect that is limited to the borehole volume rather than the soil formation around the bores. We would expect the soil in this area has limited permeability.⁷⁵

In 2016, emissions from five gas bores were assessed as having a hazard potential rating of moderate to high, with the majority recorded having a low rating. The 2017 emissions from four bore holes were assessed as having a hazard potential rating of moderate – high. In neither year, were there bore hole emissions with hazard potential ratings of high or very high.⁷⁶

The two surface methane monitoring events in 2016 and 2017 found that:

- surface methane was confined to Zone 1 - the maximum methane concentration recorded being 1500 – 19400 ppm⁷⁷ and the second highest being 450 - 583 ppm, both recorded in 2016
- no surface methane was found in utility pits
- off-site methane and carbon dioxide emissions were recorded at one utility pit to the east of the site and methane in a stormwater drain at the corner of Clarinda and Centre Roads (60 ppm)

⁷³ Ibid p18

⁷⁴ Litres per hour

⁷⁵ Sinclair p 23

⁷⁶ Sinclair evidence, Figures 6A and 6B

⁷⁷ ppm = parts per million

- off-site surface methane was detected in 2017 at sites to the east: in Kaybrook Court (11.7 ppm and 2.4 ppm), Redpath Court (1.6 ppm), Ashbrook Court (21.6 ppm); and to the south at Centre Road (2 ppm and 1.4 ppm)⁷⁸
- off-site monitoring was not conducted in 2016.

The Panel sought further information from the Proponent and the Council, to better understand the LFG emissions scenario.

Despite a request by the Panel to Mr Sinclair, no graph showing LFG emissions over time based on monitoring data was provided.

Also, Mr Sinclair's expert witness statement had referred to Talbot Park immediately to the south-east of the site being a source of LFG, based on monitoring results from 2009 and 2010.⁷⁹ The Panel requested further information from the Council on several occasions about its experience with managing Talbot Park so as to be able to assess the impact on the site of LFG emissions from the Talbot Park landfill. After some months, the Council responded that *'any issues that might emerge [about Talbot Park] would be addressed by any environmental audit conducted in relation to any development under the terms of the proposed rezoning.'*⁸⁰

Dr Bell, Mr Sinclair and Mr Mival all agreed that the landfill on the subject site is in the later stages of gas generation, with Mr Mival explaining that for the first 4 to 5 years a landfill is anaerobic, and so not much methane is generated. He said that methane generation generally peaks at about 10 to 12 years after closure and then drops, but the landfill may continue emitting for 30 to 40 years. His advice was that carbon dioxide emissions fluctuate over time.⁸¹ He also said that from the audit perspective it is not just the concentrations of methane or carbon dioxide that are important, the flux rate is also important as it drives the migration of gases. At this site the flux rate is low.⁸²

Several submitters indicated that they can smell the landfill gases from time to time⁸³, while others expressed concern about the health impacts of methane and the off-site migration of the gases.⁸⁴ Mr Menegatti called for continuous monitoring of LFG.

The Panel was advised by Mr Sinclair that further LFG monitoring is scheduled for the next two years, including some continuous LFG monitoring at three boreholes. An additional run of bore hole monitoring occurred just prior to the completion of the Hearing, however the results were not provided.

The EPA indicated that it is considering issuing a Post Closure Pollution Abatement Notice (PC PAN) for the site's closed landfills. The PC PAN would require the ongoing management of the landfills during rehabilitation, and in the aftercare phase until the EPA determine the landfills no longer present a hazard and there are no further LFG emissions.⁸⁵

⁷⁸ Sinclair evidence, Figures 7A & 7B

⁷⁹ Sinclair p 11

⁸⁰ Monash City Council – Response to Direction 4, 16/3/2018

⁸¹ Mival, oral evidence at Hearing, June 2018

⁸² Doc 147 Supplementary expert statement from Mr Mival, 22 June 2018

⁸³ LS69 R Sharp, LS74 B Flanders

⁸⁴ LS6 R Menegatti, S162 P Chua, S309 N Yogev

⁸⁵ Doc 133, EPA submission, 5/6/2018, p3-4

(ii) Discussion

Table 6.4 in the Landfill BPEM provides ‘gas action’ levels for methane and carbon dioxide at various landfill locations. These are 1 per cent v/v for methane and 1.5 per cent v/v for carbon dioxide at the landfill boundary, 100 ppm methane for the landfill surface final cap and 10,000 ppm methane for subsurface surfaces on and adjacent to the landfill site.⁸⁶ While the EPA gas action levels are predominantly aimed at ensuring that those living close to a landfill are not at risk, they provide some guidance as to the levels at which some form of action is required before allowing a landfill site to be converted to a more sensitive use.

The Panel has undertaken some analysis of the 2016 and 2017 results which is presented in the following tables.

Table 1: Peak gas bores methane measurements⁸⁷

Zone	2016 % v/v ⁸⁸	2017 %v/v	Comment
1	95.9	75.9	Many bores measured methane. Highest reading in 2016 was close to Huntingdale Road.
2	78.0	46.1	Highest on border with Talbot Park
3	All low		Most bores in this zone on edges of zone
5	57.8	53.5	

Note: There was no methane (an indicator for LFG) measured in the limited number of Zone 4 gas bores (all located on the edges of the zone).

Table 2: Peak gas bores carbon dioxide measurements⁸⁹

Zone	2016 % v/v	2017 %v/v
1	23.5	21.9
2	23.3	26.4
3	-	-
5	18.2	20.9

Note: There was no carbon dioxide (an indicator for LFG) measured in the limited number of Zone 4 gas bores (all located on the edges of the zone).

The monitoring results show elevated concentrations of methane and carbon dioxide on the subject site, especially in, but not limited to Zone 1.

The absence of requested information and data about LFG emissions from landfill at Talbot Park has precluded a more comprehensive understanding of the subject site’s LFG sources.

⁸⁶ BPEM

⁸⁷ Based on Sinclair evidence, Figures 6A & 6B

⁸⁸ Volume/Volume

⁸⁹ Sinclair based on Figures 6A & 6B

(iii) Conclusion

The Panel concludes that:

- LFG is a serious concern that needs to be controlled in order that the site can safely be developed for residential and other urban purposes.
- There is an ongoing need for LFG to be monitored until the emissions cease.

4.3 Is the site suitable for residential development in light of the LFG results?

(i) Evidence and submissions

In 2014, the Remediation Options Report, a report that was reviewed and approved by Mr Sinclair, examined various options for site clean-up. It identified that the key objective for remediation is that it should be cost effective while at the same time ensuring that:

... landfill gas remedial measures are protective of future occupiers of the site, such as residents, and future users of the site, such as subsurface maintenance workers, whilst also being protective of off-site receptors.

The options considered for LFG were:

Zone 1

Option 1: Source removal of landfill waste with off-site disposal.

Option 2: Installation of a clay cap and HDPE⁹⁰ liner above the waste

Installation of a gas venting system below the liner with a water collection sump to ensure the venting layer does not become saturated

Installation of a boundary venting system to prevent off-site migration.

Option 3: Installation of a clay cap above the waste

Installation of a taped and sealed membrane and venting system consisting of a clear void with air brick vents beneath each building

Installation of a boundary venting system to prevent off-site migration.

Option 4: Installation of a clay cap above the waste

Installation of a proprietary gas resistant membrane and venting system consisting of a gravel layer with inlet and outlet risers beneath each building

Installation of a boundary venting system to prevent off-site migration.

Zone 2:

As for Zone 1.

Boundary gas protection measures will also prevent the migration of landfill gas from Talbot Park into Zone 2.

⁹⁰ High Density Polyethylene

Zone 3, 4 and 5:

Gas protection measures for Zones 1 and 4 would reduce the need for gas protection in these Zones.

Each option for the control and management of LFG in Zones 1 and 2 was assessed using a weighted matrix approach against a number of criteria and the advantages and disadvantages of each option specified.

The evaluation criteria used were:

- probability of achieving the remediation goals
- likelihood of achieving operational and logistical goals
- regulatory compliance
- timing / duration of works
- ongoing management requirements
- community and environmental health and safety impacts.

Some more details were provided in the report about what each option entailed and about the matrix weightings. The Panel asked some exploratory questions about the basis for the matrix weightings, but Mr Sinclair declined to provide further information on the basis that the methodology was Coffey intellectual property.

The preferred option for LFG remediation, as determined through the matrix, was:

1. *Capping areas of gas producing waste with a 1m low permeability clay cap; and*
2. *Installation of a boundary venting system consisting of either gravel filled vertical shafts and/or lineal gravel filled trenches around the perimeter of the areas of gas producing waste; and*
3. *Installation of gas protection membranes or venting voids beneath buildings constructed over gas producing waste; and*
4. *Construction of underground utility trenches (for example stormwater, sewers, communications, electrical, gas) within high permeability backfill material.*

The report outlined the benefits of this combination of gas mitigation measures:

- *The measures are technically proven and feasible for this site, particularly when considering the likely low gas generation potential of the waste.*
- *The cost of implementation is reasonable when compared with excavation and off-site disposal of landfilled waste areas.*
- *There is a level of redundancy in the combined technology approach, with the clay cap acting as a primary barrier, directing landfill gas to a boundary venting system. The secondary layer of protection is gas protection measures (membranes and venting) for individual buildings.*
- *The measures are compatible with the geotechnical concept solutions proposed for the site, such as:*
 - *The clay capped areas could be subsequently penetrated with foundation piles (as opposed to a HDPE or LDPE membrane).*
 - *The measures would not be significantly affected by differential settlement.*

The Remediation Options Report has some qualifications concerning the management of LFG: for Zone 1, further characterisation of gas generation rates is required to determine the appropriate type of boundary venting; and, for Zone 2, the landfill area is not well defined, so the options recommended for this zone could vary.

Landfill gas emissions were considered by Dr Bell and Mr Mival as the key issue of concern with respect to required remediation and management of the land.

Dr Bell gave evidence that the types of engineering controls proposed in the preferred option in the Remediation Options Report were consistent with his own technical experience for managing LFG and would ensure that the risk of potential exposure to LFG both on and off the site would be low.⁹¹ He commented, however, that the lateral movement of LFG needs to be managed and it is important that LFG is monitored throughout the development stages of the site, particularly when actions that reduce venting are implemented.⁹² Mr Mival agreed that for this site *'capping and vapour barriers internally, is considered acceptable to protect future occupants on- and off-site'*.⁹³

Various submitters⁹⁴ expressed concern about off-site gas migration and inter-zone gas migration. Mr Sinclair indicated that the vertical gas venting system (shown by the red line in Figure 10A of his expert witness report) prevents gas migrating to other zones.⁹⁵ Mr Menegatti's submission noted that all mechanical systems have downtimes⁹⁶. Mr Sinclair nevertheless indicated that the gas management system had built-in redundancy, so if one part of the LFG protection system required repair, protection would still be provided.

Mr Sinclair referred to a former sand mine and landfill site at Cavanagh St, Cheltenham where he was the auditor. He said that the Cheltenham site had some similarities to the Amendment site. The Cheltenham site has recently been developed to accommodate approximately 200 townhouses. The townhouses are built on slabs placed on piles with an inbuilt passive ventilation system for the LFG which is a similar system proposed for use at the Amendment site.

Like this site, the Cheltenham site's past uses had been market gardening, sand quarrying (average depth of 20m) and until 1989 it was an uncapped, unlined landfill filled with soil, demolition waste and a limited amount of putrescible waste. Timber waste and possible green waste were said to be the likely source of the LFG at the site, but it was assessed as having a low gas risk. The approximately 4.6 hectare site was zoned Residential 3 and had no overlays.

A Statement of Environment Audit had been issued for the Cheltenham site which imposes ongoing requirements in relation to the LFG emissions. Passive gas protection measures have been installed, and a section 173 agreement⁹⁷ gives the Owners' Corporation the responsibility for the maintenance and monitoring of the LFG venting system.

⁹¹ Bell expert witness statement p 7

⁹² Ibid p10

⁹³ Doc 147 Supplementary Expert Witness Report by Mr Mival, 22/6/2018, p5

⁹⁴ LS57, LS12, LS56

⁹⁵ Hearing 10/8/2018

⁹⁶ LS6

⁹⁷ Made under the *Planning and Environment Act 1987*

The Panel made an accompanied inspection of the Cheltenham site and were shown the visible parts of the passive LFG venting system, which is comprised of small ducts near the townhouse entrances and some vertical conduits. The Panel was also told that LFG emissions have almost abated. The soil placed on top of the landfill cap was able to support shallow rooted plants allowing a small garden area for the townhouses as well as pleasant common garden areas.

A case study PowerPoint presentation on the Cheltenham site, to which the Valentés drew the Panel's attention, showed the similarity of the slab and pile approach to the proposed construction design for the Amendment site. This slide show gave an insight into the very careful attention to detail, quality control and specialist expertise required to ensure the venting system is constructed properly and is leakproof.⁹⁸ Following installation of the LFG control measures, a further audit was undertaken to ensure the integrity of the LFG controls.

(ii) Discussion

The housing on the Cheltenham site is built on a largely non-putrescible landfill with low LFG emissions. The Cheltenham site demonstrates that with detailed design of gas protection measures and high levels of construction oversight and quality control of the LFG infrastructure, residential development can be built on old non-putrescible landfills.

However, the Amendment site is a putrescible landfill. The site circumstances and development risks are therefore not directly comparable. At the Amendment site, there are still significant LFG emissions, which present a higher risk for any development when compared to the Cheltenham site. Dr Bell and Mr Mival acknowledged this challenge. Also, further monitoring and assessment work of related site contaminants, as indicated by Mr Sinclair (see for example Chapter 5.2), is proposed. This is necessary to better define the control and management systems for LFG emissions and gas mitigation measures; and thus, assist in determining whether all of the site can be successfully developed for sensitive uses.

The established EPA audit system, which is discussed further in Chapter 8, is directed to the exploration and management of environmental impacts, including by LFG. Development of a suitable geotechnical design, which is not a component of the audit system, will be equally important in enabling the development of the site. The geotechnical challenges are discussed in Chapter 7. Communication between the designers of the environmental and geotechnical management systems is required to ensure that there is a seamless integration of all aspects of site design. This is essential if the site's development is to be to the standard required for sensitive uses.

(iii) Conclusions

The Panel concludes that:

- The site can, with great care in the construction of the extensive LFG infrastructure required, potentially be developed.
- Further work is required to better identify the extent and nature of filled areas in Zone 2 and its remediation requirements. This information, together with better characterisation of gas generation rates in Zone 1, is a necessary input into the design of the gas monitoring and management measures.

⁹⁸ Doc 22 presented by A and S Valente: P Hitchcock, Landfill Case Study, Australian Environmental Auditors

- The gas mitigation measures need to be integrated seamlessly with the geotechnical design.

4.4 Is there a need for landfill buffers?

(i) Evidence and submissions

The Neighbours' Group noted that there are three areas affected by putrescible landfill – Zone 1, Zone 2 and Talbot Park.⁹⁹ Its submission referred to the Landfill BPEM's default 500 metre buffer distance from buildings and structures that is required for closed putrescible landfills which have stabilised, and which are required until LFG emissions have largely ceased. According to the Landfill BPEM, buildings and structures include subsurface structures such as stormwater drains. If the default buffer distance is to be varied, the variation needs to be based on a risk assessment.

Neither Mr Mival nor Mr Sinclair could indicate whether any buffers would be required.

Dr Bell raised the issue of other buffers or easements in his evidence. He said there would be a requirement for suitable buffer zones/easements around the site to accommodate the LFG engineering controls.¹⁰⁰ In his opinion, if buffers/easements were not provided, it might not be possible to access the critical LFG engineering equipment and controls. When asked, Dr Bell could not nominate a required buffer distance for this site.¹⁰¹

Mr Mival agreed with Dr Bell that there is merit in implementing temporary buffers along the outer boundary of the site, to install any required LFG and groundwater/leachate intercept infrastructure. Mr Mival also said that access could be provided through easements to vapour and intercept boreholes along the outer boundary and some internal boundaries. This is an approach contemplated in the 2014 SESP.¹⁰²

(ii) Discussion

A buffer is a means to manage LFG impacts including the potential risks of explosion and asphyxiation.

The Landfill BPEM provides that a default 500 metre buffer applies to closed landfills until either the LFG emissions have largely ceased, or a risk based assessment demonstrates that a lesser buffer is justified on the basis that the off-site migration of landfill gas will not cause a danger to human health.

It is incontrovertible that LFG is still being emitted across the site as a result of the Zone 1 and Talbot Park closed putrescible landfills and possibly some similar landfilling in Zone 2. No risk assessment has been undertaken to justify reducing the default 500m buffer recommended in the Landfill BPEM.

The default buffer from Zone 1 extends across the whole of the site to the houses to the east, west, north and south including the new apartments at 1223- 1271 Centre Road. If a buffer is required for Zone 2 and Talbot Park, then that would extend the buffer further to the east and to the south.

⁹⁹ Doc 107, p5

¹⁰⁰ Bell expert statement, page 11

¹⁰¹ Ms Gassert, Hearing, June 2018

¹⁰² Docs 123 &124 Evidence replying to Dr Bell from Mr Sinclair, 30/5/2018 and Mr Mival, 29/5/2018

A risk assessment of the LFG for the whole site that assesses the risk from all sources of LFG is needed. It will ultimately have to be demonstrated to the auditor's satisfaction that the buffer can be reduced through proposed management controls and monitoring before any building and structures may be built on any zone of the site.

(iii) Conclusions

The Panel concludes:

- A risk based assessment of the LFG for the whole site including the LFG contributed by the old Talbot Park landfill is required. Until that occurs, the default 500 metre buffer recommended by the Landfill BPEM should be applied. This would render large parts of the site undevelopable for sensitive uses.
- It will need to be demonstrated to the auditor's satisfaction that the default 500 m buffer can be reduced through proposed management controls and monitoring before any building and structures may be built on the site.
- Until this is done, the suitability of the site or parts of it for housing or other urban purposes cannot be assured.
- At a minimum, boundary buffers are likely to be required during development. Buffers, or at a minimum easements, will need to be maintained post development to allow access to LFG vents and boreholes.

5 Groundwater

5.1 The issues

The issues are:

- Have past site uses contaminated the groundwater?
- How will the proposed site development impact on groundwater?

5.2 Evidence and submissions

Mr Sinclair provided the only expert witness statement on conditions of groundwater at the Amendment site.¹⁰³

Groundwater is estimated to be at between 0.46m and 13.8m below ground surface (or at between approximately 45 and 61 AHD). The groundwater moves in a number of circular patterns with the inferred flow moving off-site from Zones 2 and 3 towards the east and south-east, from Zone 2 to the Zone 4 quarry lake, north from Centre Road to Zone 4 and south-westerly from Zone 4 towards the golf course.

The State Environment Protection Policy (Groundwaters of Victoria) (SEPP) states:

The goal of this policy is to maintain and where necessary improve groundwater quality sufficient to protect existing and potential beneficial uses of groundwaters throughout Victoria.

It identifies the groundwater beneficial uses that are to be protected as:

- maintenance of ecosystems
- potable water supply
- potable mineral water supply
- agriculture, parks and gardens
- stock watering
- industrial water use
- primary contact and recreation (for example bathing and swimming)
- building and structures.

Guidelines for these apply.

Groundwater samples taken in 2016 and 2017 were analysed for a comprehensive range of contaminants. The assessment of whether each beneficial use is protected is determined by reference to the NEPM and other standards and guidelines as set out in Mr Sinclair's report.

The Panel's abridged version of groundwater test results in Mr Sinclair's expert witness report is:

- Hydrocarbons
 - Benzene concentrations were above the Potable Water Supply Guidelines in four of the 29 groundwater bores analysed for hydrocarbons. Benzene in one groundwater bore was above the Primary Contact and Recreation Guidelines.

¹⁰³ Doc 9 Expert Witness Report of Phil Sinclair, 28 July 2017

- Toluene concentration was above the Potable Water Supply and Primary Contact and Recreation Guidelines (based on aesthetics) in one groundwater bore.
- Hydrocarbons in the F2 fraction (carbon chain length fraction C10-C16 less naphthalene) were above the Human Health (Vapour Intrusion) Guideline in one groundwater bore.
- Ammonia:
 - Ammonia concentrations were above the Maintenance of Ecosystems Guidelines in 16 of the 29 groundwater bores.
 - Ammonia concentrations were above the Potable Water Supply and Primary Contact and Recreation Guidelines (based on aesthetics) in 16 of the 29 groundwater bores.
- Metals:
 - Metals concentrations exceeded the Maintenance of Ecosystems Guidelines in 26 of the 29 groundwater bores sampled. Exceedances were reported for:
 - Boron, in two bores
 - Cadmium, in two bores
 - Copper, in 10 bores
 - Lead, in three bores
 - Nickel, in 17 bores
 - Zinc, in all but three bores.
 - Metals concentrations exceeded the Potable Water Supply Guidelines in 20 of the 29 groundwater bores sampled. Exceedances were reported for:
 - Arsenic, in 12 bores
 - Lead, in four bores
 - Manganese, in three bores
 - Nickel, in 18 bores.
 - Metals concentrations exceeded the Agriculture Parks and Gardens Guidelines in seven of the 29 groundwater bores sampled. Exceedances were reported for:
 - Arsenic, in three bores
 - Boron, in two bores
 - Manganese, in three bores
 - Nickel, in one bore.
 - Metals concentrations exceeded the Primary Contact and Recreation Guidelines in three of the 29 groundwater bores sampled. All three exceedances were for Nickel.
 - Metals concentrations exceeded the Stock Watering Guidelines in two of the 29 groundwater bores sampled. One exceedance was for Arsenic and the other for Lead.
- pH:
 - pH was reported to be non-compliant with the Buildings and Structures Criteria in nine of the 29 groundwater bores sampled. The lowest pH was

3.87 which is regarded *as being very severely aggressive with regards to concrete piles and moderately aggressive with regard to steel piles.*¹⁰⁴

In summary, Mr Sinclair stated:

*Based on the observed exceedances of the adopted groundwater assessment criteria, groundwater use is considered to be precluded for one or more beneficial uses at each individual well. When groundwater at the site is taken as a whole, all identified beneficial uses are precluded somewhere on the site.*¹⁰⁵

Other groundwater issues noted by Mr Sinclair were:

- Zones 3 and 5 are the least contaminated
- Zone 2 groundwater contamination may be due to uncontrolled fill
- When the Zone 4 quarry void is backfilled, groundwater from Zones 1 and 2 may shift to flow off-site to the south-west. Zone 1 groundwater may then also flow to Zone 4. Backfilling Zone 4 may also cause groundwater to flow from Zone 2 and Talbot Park to Zone 4
- Leachate from Zone 1 will need to be managed.

A number of measures were proposed by Mr Sinclair which may go some way to reducing the effects of development of the site on groundwater and improving groundwater quality, including:

- Capping Zone 1 to reduce amount of surface water leachate generated
- Installing a permeable drainage layer in Zone 4
- Implementing a Groundwater Management Plan which includes ongoing groundwater monitoring
- Possible leachate treatment or extraction wells to manage contaminated groundwater migration from Zone 4
- Clean Up to Extent Practicable (CUTEP), which will probably be required for Zones 1 and 2.¹⁰⁶

The 2014 SESP states that, as the removal of the source of contamination is not possible, a Groundwater Restricted Use Zone will be necessary for the site as well as surrounding areas which, as the name implies, will restrict or preclude groundwater use.¹⁰⁷ Where a Groundwater Restricted Use Zone is declared by EPA, EPA provides information about the contamination to resource managers and may also inform affected property owners (on and off the site), catchment management authorities and local government.¹⁰⁸

Mr Mival¹⁰⁹ indicated that, under a Groundwater Management Plan for the site, ongoing monitoring will be required, and EPA may issue a PC PAN that will require regular reporting of monitoring results. His evidence was that an Owners' Corporation will need to take responsibility for meeting the reporting obligations once the developer had finalised sales and met building permit obligations.

¹⁰⁴ Doc 9 Expert Witness Report of Phil Sinclair 28 July 2017, p22

¹⁰⁵ Ibid, p29

¹⁰⁶ Note: EPA determines whether CUTEP has been achieved.

¹⁰⁷ p35

¹⁰⁸ *The Clean-up and Management of Polluted Groundwater*, EPA publication 840.2, April 2016, p8

¹⁰⁹ Doc 126, Supplementary Witness Statement by Ken Mival, 29 May 2018, p2

Dr Bell said he was not especially concerned about groundwater effects for residents and other potential users of the site as there will be no direct access to it and there will be restrictions on its use. However, he was concerned about the acidic nature of the groundwater and its potential to corrode concrete and steel piles. Ms Murashova and Dr Thompson expressed similar concerns.¹¹⁰

The Valentis expressed concern that the backfilling of the Zone 4 void would alter the groundwater direction beyond the site boundaries whereas not filling the quarry void would limit the off-site movement of the contaminated groundwater.¹¹¹

5.3 Discussion

It is evident from the 2016 and 2017 results of groundwater testing provided by Mr Sinclair that past activities on the Amendment site have contaminated the groundwater.

Interrogation of the tables of the groundwater test results in Mr Sinclair's report indicates that the groundwater contamination is concentrated in Zones 1 and 4, though there was limited sampling in Zone 5 (from only one borehole) and in Zone 3 (from three boreholes).¹¹² In addition samples were taken from three off-site bores to the south of the Amendment site (one on the Talbot Park/site boundary, one to the north and one the west of Zone 4). It is noted that the inferred groundwater flow for at least one of the off-site bores indicates that the contamination may not be originating from the Amendment site.

In addition to the exceedances that Mr Sinclair highlighted in the body of his report, his appended Tables 6A and 7A show that total dissolved solids exceeded the aesthetic-based NEPM Water Quality Guidelines for Potable Water Supply and Primary Contact and Recreation in all zones. However, the 2016 and 2017 broad screen results shown in Tables 6B and 7B indicate that organochlorine pesticides, phenols, the more toxic poly aromatic hydrocarbons have not contaminated the groundwater.

Unfortunately, there was no groundwater testing as part of the audit of the five storey apartment building at 1213-1217 Centre Road¹¹³ which might have better informed this issue.

Mr Sinclair acknowledged that further off-site groundwater testing is required. Once backfilling of Zone 4 had been completed, and the area stabilised, its impact on groundwater would require further testing. He said that additional remedial measures may be required. The particular concern noted was the acidity of the groundwater in Zone 4 which would prohibit the use of concrete piles and possibly steel piles. Mr Sinclair suggested, however, that this acidity may normalise after backfilling.

Mr Sinclair's evidence identifies measures to clean up the groundwater and to restore beneficial uses. He said total clean-up is unlikely to be practicable or feasible, therefore the groundwater will be cleaned up to the extent practicable (CUTEP), resulting in the residents of Amendment site being precluded from using groundwater. As indicated by both Mr Sinclair and Mr Mival, a Groundwater Management Plan will be required as part of the audit

¹¹⁰ LS57

¹¹¹ Doc 16, p22

¹¹² Note: Some boreholes are close the zone boundaries

¹¹³ Report No. 210052, Environmental Audit of the Northern Portion of Lot 1 on PS419739 at 1213-1217 Centre Road Oakleigh South, Victoria, Environmental Earth Sciences Vic, April 2011

and EPA is likely to issue a PC PAN which will include a requirement to report ongoing monitoring results to EPA. EPA is also likely to declare a Groundwater Restricted Use Zone and relevant authorities, and landholders on and off the site, will be required to be notified that the groundwater is polluted and informed regarding the precluded beneficial uses.

As groundwater would not be used on site, groundwater contamination would not preclude residential development unless the problem of its potentially corrosive effects on piles proves insurmountable.

5.4 Conclusions

The Panel concludes:

- Groundwater on the site is contaminated.
- It is likely that all beneficial uses of groundwater within the Amendment site and some beneficial uses in neighbouring areas will be precluded for the foreseeable future.
- It cannot be determined at this stage if proposed remedial measures will restore any of the beneficial uses for groundwater. This can only be determined through future monitoring.
- Future monitoring will be required as part of a Groundwater Management Plan.
- EPA is likely to issue a Pollution Abatement Notice and declare a Groundwater Restricted Use Zone.
- As groundwater will not be used on site, groundwater contamination would not preclude residential development unless the problem of its potentially corrosive effects on piles proves insurmountable.

6 Leachate, sediment and surface water

6.1 The issue

The issue is:

- Do any of these sources of contaminants preclude the proposed remediation and development of the site?

6.2 Evidence and submissions

Mr Sinclair provided the only expert evidence concerning conditions of sediment and surface water in Zone 4 of the Amendment site.¹¹⁴ His witness statement summarises Coffey's 2014 assessment of sediment and surface water.¹¹⁵

(i) Leachate

There was little discussion about leachate at the Hearing and it was given little prominence in the written materials provided to the Panel. The 2014 SESP¹¹⁶ acknowledges that leachate is moving from Zone 1 into Zone 4 and is likely to require remediation and/or management to control it. The measures proposed are to cap Zone 1, which will reduce leachate generation, and to attenuate Zone 4 to allow dispersion, dilution and denitrification to occur. However, treatment of leachate may be required which will entail a series of groundwater intercept bores where the leachate may be extracted and treated.

(ii) Sediment

Sediment in and around the quarry hole in Zone 4 is proposed to be reused on site.

Sediment was sampled at ten locations in Zone 4 to depths of up to 0.7 m. The test results were assessed against the NEPM Residential Soil and Ecological Criteria. One sediment sample was found to be above the criteria for arsenic, however it was considered likely to be naturally occurring.

Previous work undertaken by another consulting firm in 2002, found elevated mercury, arsenic and organo-chlorine pesticides in the sediments from the bottom of the quarry lake, however no further details about these results were provided in Mr Sinclair's summary of past investigations.¹¹⁷

The sediment in Zone 4 was assessed by Coffey as being suitable for on-site reuse for backfilling, providing the sediment meets the geotechnical requirements stipulated in the *Site Backfill Protocol* (Coffey, September 2015), and the *Zone 4 Backfill Design Report* (Coffey, June 2015). Other options for the sediment if found unsuitable for immediate reuse as backfill include its remediation and then using it for back fill, or off-site disposal.

¹¹⁴ Doc 9 Expert Witness Report of Phil Sinclair 28 July 2017

¹¹⁵ Coffey, *Huntingdale Estate Zone 4 Environmental Site Assessment – Soil, Sediment & Surface Water, Zone 4 of 1221 to 1249 Centre Road and 22 Talbot Avenue, Oakleigh South, Vic, June 2014*

¹¹⁶ *Site Environmental Strategy Plan 1221 to 1249 Centre Road, & 22 Talbot Avenue, Oakleigh South, Vic, Oct 2014*

¹¹⁷ Doc 9 Expert Witness Report of Phil Sinclair p14, 28 July 2017, summary of *AMAL Black Pty Ltd (September 2002c), Hydrogeological Assessment, Ex Pioneer Quarry Property, Talbot Avenue, Oakleigh, Vic*

(iii) Surface water

Zone 4 is the only zone to which consideration of surface water applies.

Four surface water samples from the upper column of the quarry were analysed by Coffey in 2014.¹¹⁸ It was found that arsenic in all four samples exceeded the criteria for maintenance of ecosystem and sodium levels exceeded the adopted level for irrigation. Chloride was found to be above the criteria for stormwater discharge in one sample as was manganese.¹¹⁹ The arsenic exceedances were considered marginal.

Coffey concluded that the quarry water is likely to be suitable for use as an onsite dust suppressant, or used off-site (possibly seasonally), discharged to stormwater or to sewer. Further consultation with authorities and land owners that might be interested in using the water, such as the Huntingdale Golf Club, is, however, required. Coffey's preferred approach is to discharge the water to sewer under a trade waste agreement as it has the lowest risk. It is considered that at lower water depth may be highly turbid and may need to have sediment removed.

6.3 Discussion and conclusions

The Panel accepts the evidence as presented. Further work is required to determine the control or remediation measures to be used, however the options proposed are sound and when implemented do not preclude residential development on the Amendment site.

The Panel concludes:

- Further work is required to determine the movement of leachate and possibly leachate extraction and treatment.
- Further work is required to ensure that sediment meets contamination requirements.
- There are options available to dewater the quarry and the quarry sediment, but further investigations are required as to the ultimate use or disposal routes.

¹¹⁸ Coffey, *Huntingdale Estate Zone 4 Environmental Site Assessment – Soil, Sediment & Surface Water, Zone 4 of 1221 to 1249 Centre Road and 22 Talbot Avenue, Oakleigh South, Vic, June 2014, p12*

¹¹⁹ *ibid*, Table 3

7 Geotechnical issues

It is proposed to construct dwellings and mixed uses on a site that has been quarried and landfilled with uncontrolled waste and slimes from processing of the mined sand. This will require detailed design of constructed foundations.

Originally Mr Ian Pedler, a Senior Principal Geotechnical Engineer with Coffey Services Australia Pty Ltd, was the only expert witness who addressed the site’s geotechnical issues. During the initial four days of Hearing, however, a number of issues arose about the Amendment site that initiated an invitation from the Panel to the Earth Resources Regulation Branch of the Department of Economic Development, Jobs, Transport and Resources (ERR) to address the Panel at the October 2017 Hearing.

7.1 The issues

There are a number of interrelated issues. They are:

- the feasibility of building on the Amendment site
- Zone 4 interface issues
- Harris (Blue) train carriages that may have been landfilled at the site
- the risk of impacts on structures on the Amendment site by seismic activity.

7.2 Feasibility of building on the site

(i) Evidence and submissions

Site geotechnical issues

Mr Pedler provided his assessment of each of the zones across the site. His evidence can be summarised as in the following table.

Table 3: Geotechnical description of each zone

Zone	Currently	Proposed engineering solution
1	Formerly an uncontrolled unlined putrescible landfill. Landfill material extends to depths of 18 metres.	Will involve a combination of preloading of the waste material and piles with rigid raft footing systems to permit the construction of the proposed mixed and sensitive uses including residential and retail or commercial buildings. Will require a gas collection system.
2, 3 and 5	These zones are comprised of sand, overlaid with clay soil. Uncontrolled fill and slimes extend to depths of 1.5 to 19.6 metres. Methane gas emissions are	Slimes will be preloaded in situ and piled footing systems used. If 1-2 storey development is proposed, a slab may be required.

Zone	Currently	Proposed engineering solution
	<p>present in Zone 2.</p> <p>Slimes¹²⁰ are less apparent in Zone 5.</p> <p>In some areas, only the fill is suitable to support large construction equipment.</p> <p>In other areas, fill is thin and further filling is required to provide a suitable capping layer.</p>	
4	<p>A large water filled void dominates this zone.</p> <p>The dam has been filled to about 5 metres with slimes and unknown volumes and depths of concrete and uncontrolled waste.</p>	<p>Slimes to be removed and dried, then placed back into the pit, with sand, and then covered with engineered fill.</p> <p>Settlement will need to be monitored until the design criteria are reached.</p>

Mr Pedler gave oral evidence that slimes are the site’s main geotechnical challenge.¹²¹

Mr Pedler described slimes as having a high moisture content, being highly compressible but can only be dewatered under load.¹²² He gave evidence that to expel the moisture the slimes must be preloaded to 20 kPa for up to 12 months, after which settlement will require checking. It is expected that after primary consolidation through preloading, the slimes will typically undergo 10-20 mm of further settlement, possibly over many years. This will be within the required tolerance for buildings, and services (which will run on a slab), and the predicted settlement will be taken into account during the design phase.

A system of piled footings extending through the weaker slime material and into the stronger soils beneath is proposed. Mr Pedler said he does not have a problem with piles going into the sands and silt of the Brighton Group, however he also said he was not aware of other sites where preloaded slimes had been built on.¹²³

Appended to Mr Pedler’s statement are several figures showing, amongst other things, piles extending to a depth of more than 20 metres into the underlying sands and silt of the Brighton Group, as well as a gas mitigation design which incorporates vertical vents, horizontal venting layers, gas membranes, clay caps and, where required, a horizontal gravel and geofabric gas collection layer. The proposed structural design is similar to the system used at Cavanagh Street, Cheltenham, where the rows of townhouses have been built on vertical piles with slabs bridging the piles, that is the buildings basically float above the ground.¹²⁴

Mr McLeod from ERR said the sands and silt of the Brighton Group can be found in any sand quarry between Port Phillip Bay and Frankston. He claimed that there are methods and

¹²⁰ Slimes are a waste product generated when the fine sand, clay and silt fractions are washed from natural sands during sand mining operations.

¹²¹ Hearing, 11/8/2017

¹²² Mr Pedler expert statement, page11 of 22

¹²³ Hearing

¹²⁴ Hearing

processes that can be employed to remediate slimes generated by extracting sands that overlie the Brighton Group.¹²⁵

Mr Pedler gave evidence that he considers all zones can be developed as proposed in the Amendment, subject to further site investigations, detailed design and close monitoring of the settlement. A staged development approach is proposed commencing with Zone 4. Remediation of Zone 4, which is likely to take a couple of years, has been assessed as being the most economical zone remediation.¹²⁶

The Panel was informed that Coffey proposes to undertake further investigations, including a four-phase geotechnical investigation, of which only the first phase, 'Investigation and Assessment', has been already been completed. The other proposed phases include 'Conceptual Design Options and Feasibility', 'Detailed Designed Implementation' and 'Compliance and Validation'.¹²⁷

Mr Pedler also responded to the concerns expressed about the possibility of pile corrosion by groundwater (reported in Chapters 3 and 5) by indicating that it might be dealt with by using thicker concrete in the piles.

Several submitters raised concerns about geotechnical aspects of the proposed development including B Spina and A and M di Gregorio, with Mr Menegatti saying that further geotechnical investigations are required.¹²⁸ The Valentis also made submissions on this issue as discussed below. There were also concerns about potential contaminated dust being generated if dynamic compaction of slimes was used.

Mr Mival as part of his evidence indicated that he had had a cursory look at the other evidence to be given for the Proponent in this respect. He said that he had some concern about the differential settlement of the slimes and other site elements. He noted also that dynamic compaction, as was proposed earlier to dewater the slimes (as an alternative or in addition to pre-loading), may cause vibration (an issue lying outside of the auditor's responsibility). He expressed concern that, whatever settlement measures would be adopted, care should be taken that they did not interfere with the security of the gas pipelines.

Mr Pedler corrected some concerns by saying dynamic compaction was not proposed to treat the slimes.

Other developments involving geotechnology

Mr Pedler as part of his evidence gave some examples of where geotechnology had been used in the construction of other developments.¹²⁹

A summary of these examples is as follows:

- the former Footscray Institute of Technology (now called Footscray Secondary College) where piles were sunk through landfill into basalt and a gas mitigation system installed

¹²⁵ Doc 36, Response to Planning Panel Questions, Mr Ian McLeod, ERR

¹²⁶ Hearing

¹²⁷ Doc 15, Mr Pedler Expert Witness Statement, page 10 of 22

¹²⁸ Late submissions LS80, LS77, LS78 and LS6 respectively

¹²⁹ Doc 15, Mr Pedler Expert Witness Statement, pp 13-14 of 22

- a 12 storey tower complex on the site of the former Kensington stockyards where uncontrolled fill to 30 metres was removed and replaced with engineered fill and piles were used
- several developments built on Coode Island silt that required preloading and settlement monitoring, including the residential Edgewater Development
- Valley Lake residential development, Niddrie, on a former quarry site which involved engineered fill up to 30 metres thick, comprising boulders and overburden clay soils
- residential development in Cavanagh Street, Cheltenham, where, on the site of a former landfill, a piled footing system and gas control layers have been used
- Ascot Chase development, at the former Orica site in Ascot Vale, where preloading was used to consolidate Coode Island silt.

Mr Pedler, in response to questioning, advised that based on his involvement in constructing buildings on preloaded Coode Island silt, slimes are softer than Coode Island silt.¹³⁰

Dr Narendranathan, a geotechnical engineer from ERR, gave examples where he claimed housing had been built on similar remediated sites.¹³¹ The examples were:

- Thomas Mews, Feldspar Parade, Gwelup, Western Australia where one- and two-storey residential developments have been built on the site of a former landfill
- Lefroy Road, Beaconsfield, Western Australia, the site of a former limestone quarry (Lefroy Road Structure Plan).

Dr Narendranathan also claimed that slimes had been successfully remediated for parkland and Mr McLeod also from ERR mentioned a commercial property that has been built on reclaimed slimes at 346-348 Warrigal Road, Oakleigh South.¹³² A misunderstanding was later clarified, in a letter from Mr Tony Robinson of ERR, that none of the above examples were developments on slimes.¹³³ When the Panel¹³⁴ sought more details about the Western Australian example, a website link for the Lefroy Road development was provided.¹³⁵

Again, there was some reliance placed on remediation and development of the Cavanagh St, Cheltenham site. There, the rows of townhouses (which are built on an old uncontrolled landfill site that received inert waste) sit on slabs on piles of up to 15 metres set into sandy soil and with groundwater at about 15 metres. The Valentès provided information from a power point presentation by a Mr Phillip Hitchcock, an EPA appointed auditor, who audited part of the Cheltenham site¹³⁶. The presentation gives a summary of the history of the site and its environmental condition. Photos in the presentation demonstrate the geotechnical complexity of building on a landfill as well as some of the problems encountered.

The Valentès claimed that slimes exhibit different properties to Coode Island silt (which was acknowledged by Mr Pedler), and said that none of the examples given by Mr Pedler and Dr Narendranathan were developments built on putrescible waste and compressed slimes with pile footings. They also expressed concern that preloading the slimes would cause landfill

¹³⁰ Hearing, 11/8/2017

¹³¹ Hearing, 30/10/2017 and Doc 70

¹³² Hearing, 30/10/2017 and Doc 70

¹³³ Doc 70, Letter to Panel, 8/12/2017

¹³⁴ Doc 68, 4/12/2017

¹³⁵ Doc 70, 8/12/2017

¹³⁶ Doc 22, 31/8/2017

gas to migrate to the adjoining residential properties, and that differential settlement could damage roads and footpaths, the repair of which would in the future become the responsibility of the Owners' Corporation.¹³⁷

Geotechnology quality assurance

Throughout the Hearing, there were various revisions to the CDZ schedule, especially by the Proponent and Council, which sought to respond to concerns raised about its adequacy. The final draft of the decision guidelines in the schedule produced by the Proponent in consultation with the Council included:

*If required by the responsible authority, an independent peer review of any geotechnical report relating to the structural design submitted by the permit applicant, with the costs of such review to be met by the permit applicant.*¹³⁸

The Valentès¹³⁹ indicated that they consider that, given the geotechnical complexity involved in developing the Amendment site, a geotechnical peer review should be a mandatory requirement rather than at the discretion of the responsible authority. The Council indicated tentative support for a peer review by a suitably qualified geotechnical expert.

The Valentès referred to section 54A of the MRSD Act which gives the responsible Minister (which is the Minister for Resources) the authority to appoint advisory panels. The Minister, for example, has established a three member Technical Review Board to provide independent advice to the Minister 'on managing risks associated with mine instability and rehabilitation in the Victorian mining and quarrying sector'.¹⁴⁰ The Valentès propose that the Minister appoint the Technical Review Board to undertake the peer review and to certify all the engineering designs and documentation for this site's development. The Valentès submitted that only through the appointment of three truly independent experts would the future residents, the neighbours and the public have confidence that the geotechnical issues and risks associated with the whole of the development would be appropriately managed and addressed. Moreover, it was said that, as the land was a former sand mine, the appointment of a Technical Review Board would meet one of the MRSD Act's principal objectives which is:

... to establish a legal framework aimed at ensuring that —

(i) *risks posed to the environment, to members of the public, or to land, property or infrastructure by work being done under a licence or extractive industry work authority are identified and are eliminated or minimised as far as reasonably practicable.*¹⁴¹

The submissions for the Proponent included that the Valentès did not raise concerns about geotechnical issues in their initial objection, did not call an expert and do not have geotechnical expertise. Furthermore, it was said that it is standard procedure for the responsible authority to call for independent advice, and reviewing this site is not a matter the Minister for Resources would be interested in referring to the Technical Review Board.

¹³⁷ *ibid*

¹³⁸ For example, Doc 138, Hall & Wilcox, 6/7/2018

¹³⁹ Doc 140

¹⁴⁰ Earth Resources Regulation Branch, Department of Economic Development Jobs Transport and Resources, Technical Review Board, Annual Report 2015-2016

¹⁴¹ *Mineral Resources (Sustainable Development) Act 1990*, s.2 (1) (b)

In response, Mr Valente informed us that the Technical Review Board's Annual Reports outline its recent projects which include reviews of mine and quarry closures and their rehabilitation.

(ii) Discussion

Approximately 2,000 dwellings and some mixed uses are proposed to be built on the Amendment site. It goes without saying that it is imperative that these buildings and associated infrastructure are built on solid durable foundations.

In his expert witness statement,¹⁴² Mr Pedler listed the nearly two decades worth of geotechnical investigations that have been undertaken by various consulting firms at the Amendment site for successive site owners and operators. Some of the geotechnical investigations are for the whole site, others are for particular zones or a specific aspect of site remediation. The most recent studies relate to the backfilling of Zone 4. Only some of the Zone 4 backfilling reports were provided.

The Panel has appended a list of the studies cited by all three of the Proponent's expert witnesses to indicate the depth and breadth of these investigations. It is not known if there are have been additional studies. What the list at Appendix D demonstrates is the many challenges and complexities involved in developing the Amendment site.

Generally, the Panel does not consider that the qualified support given to the development by Mr Pedler as quoted above should be regarded as sufficient to provide reasonable certainty about the overcoming of geotechnical difficulties, including dewatering and stabilisation of slimes, differential settlement on the base foundation, corrosive soil and ground water affecting piles, and impacts of required construction activities on LFG monitoring and capture equipment, such that the site can be expected to be developed as proposed with an acceptable level of risk.

Further, the Panel notes that only the first phase of the four stage geotechnical investigation of the site proposed by Coffey has been concluded.

The Panel attempted to determine if there was any precedent for development on a site with similar characteristics to the subject land. The Panel reviewed the information about the sites mentioned by Dr Narendranathan. While the web link for the Lefroy quarry development, provided by ERR, did not work, the Panel came upon the background material in the applicable Fremantle Council meeting agenda.¹⁴³ There are some important distinctions between the Lefroy quarry development and the development proposed by the Amendment. The groundwater at the Lefroy quarry site appears not to have been impacted, no landfill gas was detected, the deposited waste was inert with only some small fragments of asbestos found, much of the deposited landfilled waste was proposed to be removed, the remaining waste was to be compacted and the fill area capped. Crucially, the landfill areas were not proposed for buildings but were to be remediated for open space. From limited information that could be found about the Gwelup site, the landfill area of the site was not built on.

¹⁴² Document 15 Expert Witness Report of Ian Pedler, 1 August 2017

¹⁴³ Council Agenda, Ordinary Meeting of Council, 26 October 2011, City of Fremantle

Similarly, the examples provided by Mr Pedler were not examples of sites that experienced conditions like those of the Amendment site. Several of the examples were built on preloaded Coode Island silt, not preloaded slimes, which Mr Pedler conceded are softer than the silts. He also gave examples of developments which had piled footings into basalt but not into the sandy Brighton Group, with the possible exception of Cavanagh Street, Cheltenham.¹⁴⁴ Dr Narendranathan did, however, indicate that piles could be driven into the Brighton Sands formation, although he said that this formation is associated with differential settlement which increases its complexity. Differential settlement was also a concern of Mr Mival who was concerned about the security of the LFG system as noted in Chapter 4 of this Report.

The site with the most similarity to the Amendment site is the Cavanagh Street, Cheltenham site. The Cheltenham site is likely to be underlain with the Brighton Sands group, and is a former landfill, although filled with basically inert waste (and therefore less likely to generate LFG).

The Panel considers that there is no clear development precedent that demonstrates that geotechnical engineering solutions are feasible for the development proposed on the Amendment site. The Amendment site is a complex site with a combination of geotechnical and environmental problems which are in part a legacy of unregulated past use.

The Panel only received evidence from one geotechnical expert, Mr Pedler.

While Mr Pedler expressed his view that the site can be developed for residential and mixed use, he proposed further studies and his expert statement contained many qualifications related to the foundation system for the buildings and structures. For example, he said:

*In my opinion the various zones across the development can be developed for the proposed mixed and sensitive uses subject to the undertaking and results of further site investigations, detailed design of appropriate foundation systems and service connections and close monitoring of the performance of the fill and building structures.*¹⁴⁵ (Panel's emphasis)

One of the objectives of the MRSD Act is for old mines and quarry sites to be rehabilitated. It appears that some early rehabilitation works were undertaken at this site, as envisaged by that Act (as referred to in Chapter 1.6). However, when these works were done, it was envisaged that the eventual use would be as open space. This is clear from the Reclamation Management Plan for the site prepared by Pioneer Concrete (Vic) Pty Ltd in 1994 and endorsed as part of the Work Plan. Rehabilitation of the site under that plan was expected to be completed by 2014. At Clause 5.9, the Plan indicates that the long term plan for use of the site is as 'a Reserve which will include recreation facilities'. Clause 7.1 refers to an outcome of 'a slightly undulating parkland'.¹⁴⁶ Any earlier remediation of this kind should, therefore, not be relied upon to support the geotechnical (or indeed other) suitability of the site for relatively intensive redevelopment for residential and mixed purposes.

Further, as described in Chapter 1.6, two planning permits were granted by the Council in 2015 allowing on-site works. One permit allows '*backfilling and remediation of the former*

¹⁴⁴ Expert statement, Doc 15, section 2.1

¹⁴⁵ Ibid, p 7 of 22

¹⁴⁶ Doc 68 from ERR

quarry’; the other allows ‘use and development of the land for stockpiling of earth, treatment of existing on-site slimes, sediments and uncontrolled fill material and associated earthworks to facilitate the backfilling of the former quarry’.

The Panel considers it concerning that earth moving and stockpiling, extraction and drying of slimes, and backfilling of Zone 4 are being undertaken on the site only under the guidance of the conditions of these permits.

The Panel notes that Condition 2 of the permits each ‘incorporate’ six background reports relating to the site from 2014. One relates to traffic, four directly relate to the backfilling of Zone 4 alone, including the backfilling design and protocol reports, and one is an ESA relating to ‘*site, groundwater and landfill gas assessment*’. Except for the recommendations of the report containing the Construction Environmental Management Plan for backfilling, to which Condition 16 particularly refers and from which some plans have been extracted for direct endorsement, it is unclear what aspects of the other reports are required to be complied with.

The Panel is concerned that the works permitted under these two permits are intended to facilitate development of the site for built urban uses, without the benefit of the further investigations and implementation of risk management measures that have been described in evidence as being required before the land is redeveloped for urban (as opposed to open space) purposes. In particular, to date only the first phase of the four-phase geotechnical investigation of the site proposed to be undertaken by Coffey has been completed. In light of the incomplete nature of the geotechnical investigations and that land filling and earthworks have been and are being undertaken in advance of required geotechnical investigations, the Panel regards it as premature to allow any redevelopment of the site at this stage, except perhaps for open space purposes.

The Environment Protection Act establishes a clear mechanism to assess contaminated land, including the appointment of an independent auditor, to ensure that contamination has been remediated to the required standard before land is redeveloped for a sensitive use. Similar review mechanisms are not provided in the MRSD Act in relation to potential geotechnical issues.

The Panel agrees with the Valentés’ submission that given the large number of residences proposed for this site, and its sand extraction and landfill history, it should be a mandatory requirement that a full assessment of the site geology and a structural design review be undertaken by suitably qualified professionals – whether this be through the Technical Review Board or by others – before the land is rezoned to allow residential and mixed use development. While structures must be built to Australian Standards, this is not sufficient to overcome the Panel’s concern that the evidence does not establish, to the Panel’s satisfaction, that it is appropriate to rezone the land for urban development at this stage.

The Panel would observe here that the Valentés provided considerable input on all aspects of this Amendment including in relation to the geotechnical issues. While the submissions for the Proponent challenged their expertise on geotechnical matters, the Panel considers that even though Mr Valente may not be an expert in geotechnical issues, as a qualified civil engineer and a registered builder, his submissions should be given greater weight than might be ordinarily be afforded to submissions by a lay submitter on these issues.

(iii) Conclusion

The Panel is not satisfied that the evidence demonstrates that development of the site as proposed by the Amendment would involve an acceptable level of risk to future owners and occupiers of the site, neighbouring properties, and the public more generally. Further investigation is required to demonstrate that feasible solutions are available to address the many, complex and interrelated geotechnical and environmental issues associated with the site.

The Panel considers that it is essential that before any development on the site commences, geotechnical reports be prepared by a suitably qualified independent expert, to the satisfaction of the Responsible Authority, addressing:

- appropriate methods of compacting and stabilising the site to make it suitable for the proposed development
- appropriate structural design and construction methods for any buildings and structures, including services, to be built on the land to ensure that they respond appropriately to the geotechnical characteristics and conditions of the site
- the effects that the compaction and stabilisation activities may have on any landfill gas monitoring and collection systems required to address the landfill gas issues on the site
- the effects that the compaction and stabilisation activities may have on any other systems required to monitor and/or remediate soil or groundwater contamination, or contamination of leachates and sediments on the site.

The geotechnical reports must be independently peer reviewed by a suitably qualified expert, to the satisfaction of the Responsible Authority.

The recommendations of the geotechnical reports and peer review must be implemented to the satisfaction of the Responsible Authority.

7.3 Zone 4 batters and interface with Centre Road apartments

(i) Evidence and submissions

A new five storey building with semi basement parking containing 137 apartments¹⁴⁷ is being built at 1213-1217 Centre Road, on the corner of Huntingdale Road and Centre Road, Oakleigh South. This small site shares a border with Zone 4.

An environmental audit of a 15 metre wide, 0.223 ha strip of land abutting the southern border of Zone 4, was undertaken in 2010 to 2011. A Certificate of Environment Audit was issued on 21 April 2011.^{148,149} The audit notes that the land at 1213-1217 Centre Road was formerly quarried, and that by 1988 the quarry hole had filled with water. The most recent use of the land was as a single storey nursing home which closed in 2010. In 1998, the City of Monash had purchased the northern portion of 1213-1217 Centre Road (the audit strip of land) so it could be used as recreational space for the nursing home. The audit also mentions that nearby Talbot Park had been quarried, rehabilitated and grassed. While not

¹⁴⁷ Doc 11: 1213-1217 Centre Road, Oakleigh South – Planning permit TPA/40514/A, issued 23 February 2013, extension of time 9 October 2014

¹⁴⁸ Doc 12 Environmental Audit of the Northern Portion of Lot 1 on PS419739 at 1213 -1217 Centre Road, Oakleigh South, Victoria, Environmental Earth Sciences Vic, April 2011

¹⁴⁹ Amendment C106 removed the EAO, Doc 11, Ms Hicks

strictly a matter for consideration for this Amendment, the Panel notes that the audit report for 1213-1217 Centre Road does not mention that the nearby Talbot Park had been landfilled with putrescible waste and it was not tested for evidence of landfill gas.

Batters have previously been constructed within Zone 4 (the former quarry) on the Amendment site. In their original objection to the Amendment, the Valentés raised concerns about the batters presenting a potential stability problem.¹⁵⁰ The Valentés later expanded on this concern, arguing that the 20 year old batters exceed the ERR 1:1.5 recommended slopes for a small sand quarry of less than 5ha and less than 5m deep. The existing slope of the batter in Zone 4 is reportedly 2:1. The Valentés were also concerned that planning permit TPA3336 specifies that material is to be taken from the toe of the batter. This will, according to the Valentés, increase the load at the head of the batter and could cause the batter to fail.¹⁵¹ Failure of that batter could present an *unacceptable risk to the stability of the adjoining 5 storey apartment building*.¹⁵²

Mr McLeod said ERR has a responsibility for public safety and he was also concerned about the five storey building to the south. He suggested that the southern end of the quarry hole in Zone 4 should be filled to reduce risk.¹⁵³

There was also some concern that Talbot Road, which is adjacent to another batter constructed within Zone 4, will be used a haul road during remediation and construction activities on the Amendment site. The increased pressure of the haul trucks could cause the batter to fail and may pose a safety risk to workers on the site.¹⁵⁴

In his expert statement, Mr Pedler said:

*Coffey has analysed the stability of the existing batters which have stood for many years with only minor fretting ...*¹⁵⁵

He went on to say, however, that:

Mr Valente's concerns regarding slope stability are one of the major geotechnical issues to be addressed. I consider the stability of the side walls has been suitably addressed by the proposed remedial works to fill Zone 4 with engineered fill.

The Valentés referred to the ERR publication *Guidance Material for the Assessment of Geotechnical Risks in Open Pit Mines*¹⁵⁶ which outlines risk assessment methodology and the information to be supplied to ERR to ensure that the risks are controlled or mitigated.

ERR's publication states:

The assessment of geotechnical risks to public safety, public infrastructure and the environment is required by the department's Earth Resources Regulation Branch, as part of the submission of a work plan for a new open pit mine/quarry or for a variation to a work plan for an existing mine or quarry.

¹⁵⁰ Letter dated 3 March 2017

¹⁵¹ Submission 30 October 2017, Doc 49

¹⁵² Doc 135 A & S Valente and Associates Pty Ltd, submission 11 August 2017

¹⁵³ Hearing, 30/10/2017

¹⁵⁴ Ibid

¹⁵⁵ Document 15 Expert Witness Report by Ian Pedler, 1 August 2017

¹⁵⁶ Valente submission Attachment B

Work plans are required for all open pit mines and quarries where the areal extent of the excavation exceeds five hectares or five metres depth or where working practices including ground controls or wet working are necessary or where environmental assets are affected. The requirements for submission of a work plan or work plan variation are detailed in the Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013 and the Mineral Resources (Sustainable Development) (Extractive Industries) Regulations 2010.

The Valentès submitted that ERR has an ongoing responsibility to make sure that Zone 4 is safely rehabilitated, and by its supporting the Amendment, it is seeking to shift responsibility to a third party.

As far as the Panel is aware the risk assessment required under the ERR publication has yet to be done.

(ii) Discussion and conclusion

The stability of the new apartments at 1213-1217 Centre Road abutting the southern batter to the Zone 4 void and of the areas abutting the other batters during the works in that zone is of concern. This is a view shared by the Valentès and Mr McLeod and considered by Mr Pedler as a major issue. A detailed risk assessment is required. The Panel considers that this risk assessment, like the other geotechnical investigations referred to in Chapter 7.2, should be undertaken before the land is rezoned for urban development. If and when the land is rezoned and developed, extreme care will need to be taken in the execution of interface works in Zone 4.

7.4 Potential seismic events and liquefaction

(i) Evidence and submissions

The Valentès¹⁵⁷, Mr Chua and Mr Menegatti expressed concern about the ability of the dwellings constructed on the site to withstand seismic activity.

The Valentès submitted that according to the *2012 Australian Earthquake Hazard Map*¹⁵⁸ the site is within an area that could experience vibrations from earthquakes, and, although according to the *State Emergency Response Plan Earthquake Sub-Plan Edition 1 (the Response Plan)*¹⁵⁹ there is a low risk of Melbourne and surrounds experiencing a major earthquake, the consequences for buildings on the site could be catastrophic. The Response Plan¹⁶⁰ states that there have been 57 recorded earthquakes of magnitude in Victoria over a 10 year period. Mr Chua submitted that he had felt eight tremors over a thirty year period.

Building on slimes, according to the Valentès,¹⁶¹ would increase the risk of damage or collapse for the proposed buildings and associated services. The building supports are to be piled through the preloaded slimes. The Valentès said that as the slimes have a small

¹⁵⁷ Doc 16, 11 August 2017

¹⁵⁸ *2012 Australian Earthquake Hazard Map, Geoscience Australia, Australian Government*

¹⁵⁹ Appended to Doc 49

¹⁶⁰ *Emergency Response Plan Earthquake Sub-Plan Edition 1, Emergency Management Victoria, Victorian Government, 2016*

¹⁶¹ Hearing 14/6/2018 and Doc 16, 11/8/2017

uniform particle size, they are not resistant to vibration and the soil could lose its ability to support the structures. They submitted that this problem would be compounded by the possibility of soft or poorly compacted soils being present. It was said that an earthquake could increase the potential for liquefaction to occur, that is for the soil to transform into a liquid.

The ERR was asked by the Panel¹⁶² to comment on the potential for a seismic event to cause structural damage and liquefaction. Mr McLeod¹⁶³ acknowledged that seismic events could cause building collapse, embankment collapse, flooding/liquefaction, and mud slides. He added that the assessment of these risks and the potential for such adverse effects are site specific. Dr Narendranathan¹⁶⁴ said that buildings built on slimes have no greater risk than other structures, as the buildings will be required to meet Australian Standard AS 2870 *Residential slabs and footings— Construction*.

The Panel was nevertheless referred to the ERR guidelines document: *Management of Tailings Storage Facilities*¹⁶⁵. Slimes are a sub-category of tailings. Section 7 of the guidelines discusses risk management for tailings dams. It refers to the potential hazards to the operation of tailings dams and the deficiencies in design which can reduce safety margins. It lists four main threats to the stability of artificial embankments: one is '*liquefaction of saturated fines during seismic activity or other vibration*'.

(ii) Discussion

The Valentines raised the issue of the potential for the slimes to liquefy in August 2017 and again at the Hearing in 14 June 2018. Other submitters also raised this issue.

The Proponent did not provide any expert opinion on the potential for damage to building and services from seismic activity and liquefaction.

Without an assessment by an expert in the field of the potential seismic activity at the site and its likely impact, the Panel has not been able to form a conclusion as to whether this is an issue of serious concern. It is nevertheless acknowledged that if seismic activity is a genuine risk, the consequences of any such seismic activity could potentially be significant.

In light of the Panel's recommendation to abandon the Amendment, it was not necessary for the Panel to seek to pursue this matter further.

(iii) Conclusion

If this site is to be redeveloped for urban purposes, the advice of an expert in seismology should be sought to assess the potential for seismic activity at the Amendment site.

¹⁶² Letter to David Wilson, Department of Economic Development, Jobs, Transport and Resources, Earth Resources Information Centre, 16 October 2017

¹⁶³ Doc 36 and at Hearing

¹⁶⁴ Hearing 30/10/2017

¹⁶⁵ Doc 42

7.5 Harris (Blue) train carriages and other landfill materials

(i) The issue

The issue is whether Harris Train or other types of train carriages and large items of machinery were dumped on the site which might further affect site stability. There is also concern that Harris or Blue Train carriages were lined with asbestos adding to contamination hazard.

(ii) Evidence and submissions

A witness statement was provided by the Neighbours' Group from a Mr Peter Flavelle¹⁶⁶ who, between 1969 and 1972, was a cadet civil engineer with the then City of Oakleigh. On several occasions he worked at Davies Reserve which abuts the Amendment site. He stated that during his work he observed 'Blue Train' carriages being tipped into a quarry hole on the site, which he said was located approximately in the northern section of Zone 3. He estimates that he saw between five and 10 carriages being tipped.

Some of the comments added to the proforma submissions and later expanded in written submissions also mention Harris Trains being dumped at the site and other construction vehicles being lost in one of the pits. Mr Raditis¹⁶⁷ submitted that 'his mate, Bill', a truck driver, said he dumped Harris Trains at night in 1992/3.

The Valentis¹⁶⁸ submitted that if the train carriages were buried as a complete undisturbed unit, cavities in the trains could exist which, over time, would fill with slimes. These slimes would not, however, be preloaded so that the ensuing settlement could damage dwellings, footpaths and roads.

The Council, however, later disputed the claim that Harris Trains were dumped at the site in late 1960s - early 1970s as they '*were manufactured until 1971, making it extremely unlikely they were dumped in 1972. Our research indicates that they were withdrawn from the mid 1980's.*'

The Council provided a link to an article from a 1985 newsletter from the Public Transport Users Association which says that some of the Harris Train carriages had been buried at Clayton 'a few months ago'¹⁶⁹, which the Council said accorded with the memory of one of their building surveyors who saw the trains being dumped at one of the City of Kingston's landfills in the 1980s.

The Council went on to say that:

In any event, it is not necessary or advisable for the Panel to make findings or recommendations based on duelling eye witness accounts. Further, the proposed control makes appropriate provision for multiple layers of geotechnical analysis and confirmation of same.

¹⁶⁶ Doc 127 Witness Statement, Peter Flavelle, 25 May 2018

¹⁶⁷ LS35

¹⁶⁸ Document 144, letter 20/6/2018

¹⁶⁹ Doc 146, Email and web link to the Public Transport Users Association Newsletter Volume 9 Number 2, April 1985, page 7, from Ms S Hopkins Monash CC

The Proponent submitted that it has not been established that train carriages had been deposited at the site¹⁷⁰ and it is not for a Panel considering a planning scheme amendment to make findings about the types of waste disposed of on the site.

Mr Pedler¹⁷¹ said that the boreholes across the site, which were 20-40 metres apart, had not detected the carriages. He agreed that, if the carriages were there, they would be filled with slimes, but considered that they would have little impact on the ground stability. He went on to say that, if, during construction, a pile struck a carriage, the pile might not be able to achieve the required depth. Typically, if a pile did not reach depth due to an obstruction, he said, a replacement pile is installed. This would require a design check of the entire foundation system potentially with modifications made. These could result in a structural trade-off, such as increasing the slab strength and reducing the number of piles. The design of the foundation system would nevertheless be to Australian building standards and codes.

The Valentès considered that having replacement piles would be problematic. The number of trains tipped is unknown, they said, and if a large cross-sectional area was obstructed by the 20 metre long carriages, replacement piles may not be feasible. Furthermore, if any piles became damaged through contact with a carriage, the damage may not be detected but may cause future problems with the foundations. In a further response, Mr Pedler¹⁷² said that techniques such as magnetic surveys could be used to detect the presence of the train carriages, a point also made Mr Menegatti.

The Valentès also contended that the tipping of the (Blue) Harris Train carriages highlights the lack of regulation on waste disposal in the 1970s. They submitted that this presents the real possibility that undetected, whole, or rusted containers of hazardous material could be buried at the site. Like the train carriages, other large waste containers have not been encountered during investigations according to Mr Pedler¹⁷³.

One of the main reasons Harris Trains were decommissioned was due to their asbestos lining. A number of other submissions mentioned the disposal of asbestos containing products,¹⁷⁴ trains and other items. Mr Raditis, a long-time nearby resident and truck driver, said he disposed of materials such as asbestos roofing and wall sheeting into the landfill.

(iii) Discussion

It was not disputed that waste deposition at this site was uncontrolled and as such a large variety of wastes went into the landfill.

The Panel considers that it is possible that stories about what waste was deposited may have become somewhat exaggerated over time. Nevertheless, the Panel notes Mr Flavelle's statement regarding the dumping of train carriages, which was only contradicted by hearsay passed on by Ms Hopkins.

The Panel disagrees with the Proponent's submissions that it should not concern itself with the types of wastes buried at the site. Indeed, much of the material presented by the

¹⁷⁰ Letter 22 June 2018, Doc 147

¹⁷¹ Doc 141, Letter to Hall and Wilcox dated 6 June 2018, received 14 June 2018

¹⁷² Doc 147, Email from Hall & Wilcox, attached Supplementary Expert Witness Statement by Ian Pedler, 21 June 2018

¹⁷³ Doc 147

¹⁷⁴ Submission 61 and LSs 1, 16, 21,35, 57 and 74

Proponent related to the composition and environmental consequences of the buried waste. Waste components may have implications not only contamination but also structural outcomes, and this is relevant to the suitability of the future use of the site as proposed.

Mr Pedler initially advised that, if a pile encountered a large object such as a train, the pile could be relocated, and modification and design checks could be made to the entire foundation system, to ensure that the foundations would still be to Australian Standards. This appears to be a rather haphazard approach which could prove very costly in terms of required redesign and modifications. Mr Pedler later suggested that surveys could be done to detect large objects, a suggestion made by the Valentines earlier.

(iv) Conclusion

Based on possible large strong objects having been buried on the site, the Panel considers that a precautionary approach is appropriate, and the site should be surveyed using a suitable technique as an early component of site remediation if the site is to be redeveloped for urban purposes in future.

8 The site assessment and audit process

8.1 Introduction

As described in Chapter 1.8, the Proponent, the Council, EPA and, when questioned at the Hearing, ERR, all supported this Amendment proceeding on the basis that there is reasonable satisfaction that the site can be made suitable for the proposed residential uses as set out in the Comprehensive Development Plan. These organisations, in supporting the rezoning of the land, basically took the view that the currently available environmental site assessment information supported this conclusion. It was nevertheless understood and accepted by them that an environmental audit would eventually be required (both by the EAO already applying to the land and the provisions of the proposed CDZ schedule) before permits might be granted for sensitive uses, including dwellings.

This staged approach to environmental site assessment, with an SESP and associated information being relied upon in advance of the rezoning of contaminated land and an audit deferred to close to the final development stages, was seen to be consistent with the approach to the rezoning of contaminated land for sensitive uses recommended in the Potentially Contaminated Land Advisory Committee Report of 2102. It was also seen as not inconsistent with the Ministerial Direction No. 1 – Potentially Contaminated Land as interpreted by its Explanatory Report and in Planning Practice Note 30 - Potentially Contaminated Land.

Indeed, the dispute between these organisations was primarily about when a SESP and ESA(s) should be required to be provided after the rezoning and during the remediation and development stages. The disagreement was about whether it was appropriate to leave lodgement of an updated SESP for the site to the much later permit application stage or whether its earlier provision was required as input to the ODP required by the CDZ.

Other submitters took a different view. It was argued that the Amendment should not proceed and that the environmental information to hand was such that there was not a satisfactory level of certainty that the proposed uses for the land were feasible. It was submitted that in the circumstances of this site, an audit was required to precede any rezoning and that the process proposed did not properly comply with the intent of the Ministerial Direction and the Planning Practice Note.

There was also a lack of agreement about the suitability of the staged assessments by zones for the site as proposed by the Proponent and staged zone audits together with staged development.

Further, in considering whether a SESP and ESA might suffice to provide satisfaction that the site could be used as intended, and whether they should be included as a requirement of the CDZ schedule, the Panel became concerned that neither of the terms SESP and ESA were defined. This led to some discussion at cross purposes at the Hearing and the absence of definitions was seen as potentially causing uncertainty around the requirements for their preparation and lodgement

The issues are:

- What is the appropriate site assessment and audit process for the Amendment site?
- Should any future planning controls allowing the redevelopment of the site include definitions of the required site assessments and plans?

8.2 Definitions of assessment processes

(i) Evidence and submissions

During the August 2017 Hearing days, various terms were used in relation to site assessment and audit processes without agreed definitions. The Panel was particularly concerned that no definitions of SESP and ESA were included in the CDZ schedule and thus it was unclear what would be required. This was also later noted in the Neighbours' Group submissions in 2018.¹⁷⁵

The Panel directed that the Proponent provide a clear set of definitions for Environmental Site Assessment, Site Environmental Strategy Plan and/or Site Remediation Strategy Plan to ensure there was clarity on the processes proposed.¹⁷⁶

The Proponent responded¹⁷⁷ that a Site Remediation Strategy Plan (SRSP) and a Site Environmental Strategy Plan (SESP)¹⁷⁸ are very similar remediation tools and are often used interchangeably. The Proponent's definitions for Environmental Site Assessment (ESA) and SRSP/SESP were:

The purpose of an Environmental Site Assessment (ESA) is to provide:

- (1) the Responsible Authority with a completed assessment regarding the suitability of the site, or a part of the site, for a sensitive use, having regard to all investigation data required to satisfy the requirements of an audit; and*
- (2) the Environmental Auditor with information on the contamination status of the site, or a part of the site, and the consequent implications for the suitability of the site for its intended use.*

This will ultimately allow the Auditor to complete an Environmental Audit and issue a Statement or Certificate of Environmental Audit.

An ESA may apply to the entirety of a site, or to a portion of a site. There may be multiple ESAs performed, as each ESA may concentrate on a different aspect of contamination, for example groundwater, landfill gas etc.

In an ESA, assessment is made of the levels of contamination present, compared to criteria that are linked to possible site uses. ESAs are required to be undertaken in accordance with the 'National Environmental Protection Assessment of Site Contamination Measure' (NEPM). The ESA may include advice on clean up or management requirements that could be implemented to make the site suitable for a range of uses.

¹⁷⁵ Doc 129

¹⁷⁶ Panel direction, 27/8/2017. This direction requested definitions for Site Environmental Strategy Plan, Site Environmental Assessment and Site Remediation Plan. It was intended to ask for definitions of Site Remediation Strategy Plan, not Site Remediation Plan, as noted by the Proponent

¹⁷⁷ Doc 23, letter to Panel from Norton Rose Fulbright, 4/9/2017

¹⁷⁸ It is noted from Coffey's 28 November 2014 *Site Environmental Strategy Plan*, 1221-1249 Centre Road & 22 Talbot Avenue, Oakleigh South, Victoria, page 1, that a SESP incorporates remediation strategies plus broader environmental management strategies

The function of a SESP/SRSP is to demonstrate that, based on known issues and investigation techniques, a site is highly likely to be capable of being remediated so that it is suitable for the proposed use and/or development.

The AC Report [Advisory Committee] provides a description of a SRSP as follows (at p 46):

- *Site Remediation Strategy Plan is a broad overview of the realistic options available and the preferred remedial approach to carry out clean up of the site to ensure suitability of use. It is usually based on site history and some preliminary site assessment.*
- *The primary role of the Site Remediation Strategy Plan would be for a landowner to convince a council that a clean-up of the site is feasible.*
- *A Site Remediation Strategy Plan should not be confused with a Clean Up Plan (otherwise known as a Remediation Action Plan), or an engineering design of remediation work. Such documents are much more detailed and provided specific contaminant treatment procedures, quantities of work, action schedules, clean up criteria and validation procedures. Such documents would usually be prepared at a later stage, closer to the time of site remediation work taking place.*
- *The Site Remediation Strategy Plan should attempt to demonstrate with a reasonable degree of confidence that the site is capable of being remediated. Such a conclusion would typically be based on the assumption that further site sampling, or health risk assessments, or feasibility studies of remediation processes need to be conducted at a later stage.*
- *An auditor would not be able to confirm prior to the remediation process that a statement or certificate will be issued following future remediation, only that is likely.*

The letter from the Proponent goes on to say:

A SESP/SRSP is a strategy plan which is completed before an ESA is undertaken. The conclusions drawn in a SESP/SRSP are based on site history, preliminary site assessments and known remediation techniques and options, having regard to the proposed use.

(ii) Discussion

Simply put, an Environmental Site Assessment (ESA) is a process involving the sampling and analysis of the water, air and soil across the site with the results assessed against established criteria to determine if a site is contaminated. ESAs may be undertaken for the total site, part of it, for a segment of the environment or a mix of the two. If undertaken in parts, then the sum of all the parts needs to provide a complete picture of the environmental condition of the entire site. The auditor reviews the ESAs and may lead to requirements for further environmental assessment to be undertaken.

Based on the findings of the ESAs, a Site Remediation (or Environmental) Strategy Plan (SRSP or SESP) is prepared which gives an overview of the realistic options available to remediate

the site to ensure suitability of use.¹⁷⁹ This is the design phase shown in Figure 5. The auditor will also review and comment on the SRSP/SESP before it is finalised and endorsed it prior to clean-up commencing. In undertaking the assessment, the auditor is also required to consider off-site impacts as well as health of the workers involved on site during remediation. As earlier discussed, the auditor's work does not include consideration of geotechnical issues.

When clean-up works are undertaken, the auditor will not issue a certificate or statement of environmental audit until the work - undertaken in accordance with the SRSP/SESP and more detailed works plans - has been completed to his or her satisfaction. That is, it will not be issued until the contamination has been cleaned up to the extent practicable. The statement will include conditions for the management of residual pollution and may specify that the site cannot be used for a sensitive use.

In the absence of a completed audit, the SESP/SRSP may be presented to the Council as a means to demonstrate with a high degree of confidence a site can be remediated. It therefore has the potential to support a planning scheme amendment proceeding. In the present case, the 2014 SESP and various ESA(s) were amongst the environmental information available to the Council when the Proponent sought the Council's support for exhibition of the Amendment. The schedule to the CDZ also requires the later submission of these documents – originally at the time of permit applications but later changed to being input to the ODP.

The Panel is satisfied that definitions for the terms ESA and SESP could be devised and included in any statutory planning document to assist in precluding enforcement difficulties.

The Panel observes that it may be useful that a Practice Note or guideline about the required content of such documents be developed at State level which could be referenced in planning schemes.

(iii) Conclusion

The Panel concludes that:

- Clear definitions are required for the terms ESA and SESP and should be included in any future statutory planning document that allows the redevelopment of the Amendment site.

8.3 The assessment process for this site

(i) Evidence and submissions

A number of ESAs have been undertaken for the site including, but not limited to:

- *Environmental Site Assessment, Former Pioneer Quarry, Talbot Avenue, Oakleigh* April 2004, HLA
- *Environmental Site Assessment – Stage 2, Former Pioneer Quarry, Talbot Avenue, Oakleigh, Vic*, July 2004, HLA
- *Environmental Site Assessment – Phase 3, Former Pioneer Quarry, Talbot Avenue, Oakleigh, Vic*, January 2005, HLA

¹⁷⁹ Assessment of remediation options and the preferred approach has been done for the subject site in the Remediation Options Report.

- *Huntingdale Estate Zone 4, Environmental Site Assessment – Soil, Sediment & Surface Water, Zone 4 of 1221 to 1249 Centre Road and 22 Talbot Avenue, Oakleigh South, Vic* June 2014, Coffey
- *Huntingdale Estate Environmental Site Assessment: Soil, Groundwater and Landfill Gas Assessment, 1221 – 1249 Centre Road and 22 Talbot Avenue, Oakleigh South, Vic*, July 2014, Coffey.

At least one SESP has also been prepared by Coffey.¹⁸⁰ This was in 2013/14 for the combined permit application/amendment.

The position of each of the parties regarding the timing of assessment, clean up and the audit process is as follows.

The Proponent

The Proponent seeks to defer the environmental audit of this land to the permit stage rather than undertake the audit in advance of the Amendment being approved. To satisfy the Council that the land is or will be suitable for the intended use, the Proponent seeks to rely on the SESP and ESAs undertaken in 2014 (as listed above) to support the Amendment and the change of zone to CDZ. This deployment of an SESP to satisfy the Council at the Amendment stage that clean-up of the site is feasible, is consistent with its primary function identified by the 2012 Advisory Committee.

The Proponent referred to the 2012 Advisory Committee's comments on when it is '*difficult or inappropriate*' to obtain an audit prior an Amendment and quoted the following from the Advisory Committee report:

The emphasis needs to be on risk management and the phasing of approvals so that costly investigations are not required for a proposal that has no prospects of being approved.

It may be appropriate to require an audit before rezoning where there are no mechanisms for managing construction or the ongoing use and it is likely future residents would be directly exposed to the soil on the land. An example would be a low density residential development.

A deferral may be justified for a site specific amendment with land in one-ownership where the proponent seeks approval prior to undertaking an audit due to the significant cost involved.

An audit before the approval of an amendment may be appropriate when:

- *The likely development will be a sensitive use residential development where there will be no mechanisms for managing construction in detail or placing conditions on the use.*

An audit after the approval of an amendment may be appropriate when:

- *The site is a higher density residential or mixed use redevelopment of an area where contamination issues can be dealt with as part of overall construction, there are options for ongoing management, and where*

¹⁸⁰ Coffey: *Site Environmental Strategy Plan, 1221 to 1249 Centre Road, & 22 Talbot Avenue, Oakleigh South, Victoria*, November 2014.

there are reasonable development options for the site if some or all of the site it cannot be used for a sensitive use.

It is important to note that simply because an audit (or assessment) is delayed does not mean that the outcomes are guaranteed. Some councils feel that this uncertainty could expose them to liabilities, or at least the prospect of Court action.

The Proponent submitted that the ‘difficulty’ in this case was financial surety – it was necessary for the land to be rezoned to give the landowner the certainty that the land could be allowed (in a statutory sense) to be put to residential or other urban use, assuming the site could be remediated. This factor is also recognised in the Explanatory Report for the Amendment:

The CDZ will provide sufficient confidence to the land owner that the land can be used for some form of urban use. This will enable the completion of the environmental assessments and the undertaking of required levels of environmental works appropriate to the potential future uses.

And:

By proposing an urban zone, the amendment will provide confidence for the land owner to commence the clean-up of the site from its former use and removing an existing urban and environmental blight from the neighbourhood.

Mr Sinclair indicated that he considers that if the audit itself was to be required to be completed before approval of the Amendment, then development of the site is unlikely to occur.

The Proponent’s case at the Hearing was also directed to assuring the Panel that the intensity and nature of the development proposed reducing access to the soil, and the availability of measures to require ongoing remediation, met the audit deferral basis suggested in the Advisory Committee report.

Mr Sinclair also said that for complex sites like the Amendment site, ESAs and SRSP/SESPs are often used ahead of audits and multiple ESAs and SRSP/SESPs prepared.

The documents ‘Planning and Environment Approval Flow Chart’ and ‘Planning and Environment Approval Process’ submitted by the Proponent show that, post-Amendment, the Auditor would then endorse the SESP for the whole of the site, and staged Auditor-endorsed ESAs would be submitted to the Council.¹⁸¹ The Proponent also submitted that the SESP would be iteratively updated as ESAs were completed, and that if the site or parts of the site were found not to be suitable for sensitive uses, then ‘*alternative uses can be considered*’.

The Proponent proposes that the Amendment site be later audited in stages starting with Zone 4, followed by Zone 1 and then one or two audits for the remainder. Zones 4 and 1 are, according to Mr Sinclair, the more difficult zones.

The main conclusion of Mr Sinclair’s evidence states:

¹⁸¹ Doc 9, Tabs 8 & 9

I note that any assessment work may identify further environmental issues which need to be addressed and this is allowed for in the [further] SESP. However, I consider that the level of assessment completed so far provides a high level of confidence that significant unexpected environmental impacts that may result in the site being completely unsuitable for sensitive uses are unlikely.¹⁸²

The Auditor

Mr Mival, the appointed site auditor, who was called to give evidence by the Proponent, stated in a letter to Mr Slimmon dated 28 November 2014¹⁸³ that after having reviewed the November 2014 *Huntingdale Estate: Site Environmental Strategy Plan – 1221-1249 Centre Road & 22 Talbot Avenue, Rev 04-(2)*:

The final revision of the plan (Rev 04-(2)) is now considered to be a suitable framework to provide a strategy that, if implemented in accordance with the plan, is anticipated to achieve an acceptable outcome for the site for the proposed development.

Conclusions

Having considered the information available for the site up to November 2014, in our experience the remediation options being proposed by Coffey for this site in the Strategy Plan and the supporting documents listed in this letter, are consistent with similar approaches to remediation of these types of sites and are considered to be feasible if implemented diligently and with due regard to the physical site properties and the materials used.

Provided that they are suitably implemented in accordance with the Plan, good practice, and any conditions required by a Statement of Environmental Audit when issued, we consider that there is no overriding issue that would prevent redevelopment of the site, or portions of the site, subject to the suitable completion of the remedial processes outlined in Coffey's Strategy Plan, and completion of the audit process with acceptance by EPA.

Mr Mival indicated that while he considered the 2014 SESP to be out of date, he remained comfortable with its substance and what is said about the site. Mr Mival therefore expressed a measure of satisfaction that the intended outcome of site redevelopment was possible, giving support to the Amendment.

Mr Mival also indicated he is supportive of the approach of multiple ESAs and several audits based around the zones being prepared during the remediation and development phases. He said that he considers that, as part of the process, an auditor endorsed SESP and ESA(s) should precede or at least accompany applications for planning permits.¹⁸⁴

Mr Mival said that he was confident that Zone 4 could be developed for residential purposes, however he was less confident about Zone 1 and other parts of the site, as each zone has different challenges. He furthered this by saying on several occasions that he

¹⁸² Doc 9, Evidence Statement of Phil Sinclair, p20

¹⁸³ Appended to Doc 13, Mr McGurn's Statement, Appendix C. This letter was only attached to the version of his evidence forwarded electronically in advance of the Hearing

¹⁸⁴ Mr Mival, Hearing 12/10/17

cannot pre-empt the audit outcome, therefore it could be that the site or parts of the site may not be suitable for sensitive uses.

Mr Mival's opinion was that through the process of staged individual zone audits the site will ultimately undergo a total assessment that will take into account all on-site and off-site risks. He said that any remaining impacts would not put future and neighbouring residents or the environment at risk.¹⁸⁵

Mr Mival's evidence concurred with Mr Sinclair's that for complex sites like the Amendment site, ESAs and SRSP/SESPs are often used ahead of audits and multiple ESAs and SRSP/SESPs prepared.

Mr Mival referred to some examples of large complex sites where the auditing and assessments had been done in stages. These included the audit underway at the Amcor Alphington site where five audits have been completed and another three were underway. Other examples included the Dandenong Sewage Treatment Plant and Docklands Victoria Harbour.

The Council

The Council did not support the Proponent's view that an audit as being costly to undertake up-front was a sufficient reason to depart from the Ministerial Direction process of an up-front audit. It was accepted, however, that this is a complex and difficult site, and this did provide sufficient justification to defer an audit.

The Council expressed some concern that the EPA had changed its view on the staging of site assessments (see below) but indicated that it did not want to abandon the Amendment. The Council said that it was content to rely on an updated SESP as providing the reasonable satisfaction that the proposed use of the land could be achieved. The Council indicated, however, that no further information had been received from the Proponent on this matter since 2014.

The Council also advised that it had engaged Senversa consultants to assist in forming a view on the issue of whether the environmental conditions of the land are or will be suitable for the proposed residential use. Senversa's advice was based on the 2014 section 96A amendment/permit application.

The Senversa letter of advice to the Council did not discount staged auditing as a suitable approach and noted that it is commonly used for the development of large uncomplicated sites. Senversa noted, however, that for this site there is a risk that problem areas could be left behind if they became too difficult or market demand was to flatten.¹⁸⁶

The above view that the SRSP/SESP should be updated is similar to a view expressed in advice given to the Council in 2014 by Urbis. Moreover, Urbis commented that the updated SRSP should be exhibited with the Amendment so that the community can be informed about the process and timing for site remediation.¹⁸⁷

¹⁸⁵ This was in response to Dr Bell's expert evidence

¹⁸⁶ Senversa: *Review of Environmental Matters – Site Environmental Strategy Plan*, letter to King and Wood Mallesons, 27 August 2015, Background document provided by Council

¹⁸⁷ Doc 13, attachment C, Letter from Sarah Horsfield, Urbis, to Sue Wilkinson, City of Monash, 8 June 2014.

EPA

In its August 2017 submission, EPA indicated that it considered that ESAs and SESP are an acceptable alternative to the rigorous audit process and the audit could be deferred provided it was completed before building and works associated with a sensitive use commenced. EPA said that ESAs can be updated as the audit progresses and both the ESAs and the audit will inform the SESP. EPA then went on to say that:

The ESA and SESP should be seen as package of documents that will require updates subsequent to their initial verification by an environmental auditor.¹⁸⁸

EPA stressed that it had been its understanding that it was intended that the 2014 SESP would be updated, verified and endorsed by the auditor for submission to the Council prior to the exhibition of the Amendment. This had not happened.

EPA then also submitted that it considered that the ESAs and the 2014 SRSP/SESP on which the Amendment relied were:

... insufficient to inform the current proposal to rezone the land. The current SESP and ESA should be finalised, possibly revised in light of the recent works occurring on site and verified by the Auditor to be submitted to Council's satisfaction prior to this amendment being approved.¹⁸⁹

In its August 2017 submissions, EPA's position on the timing of the ESA and the SRSP/SESP was:

It is EPA's position that the ESA and SESP should be finalised and verified by an Environmental Auditor appointed under Part IXD of the EP Act and submitted to Council's satisfaction prior to this Amendment being approved. As the RA needs to satisfy itself that site can be made suitable for residential use and this consistent with the SEPP PMCL and Direction No.1.¹⁹⁰

EPA concluded in August 2017 that:

This approach [auditor verified SESP and ESA] ensures that a qualified assessment of risk, remediation potential and future uses are reasonably understood at the outset of the planning process. It is also recognised that this work provides a solid foundation to a s.53X Audit required as part of the Planning Permit.

In its submission in June 2018, EPA maintained its position that the November 2014 SESP should be updated prior to the Amendment being approved and that the audit could be deferred. It also submitted that an updated ESA (or ESAs) is not immediately required for the Amendment to proceed.

¹⁸⁸ Doc 8, EPA submission, para 47

¹⁸⁹ Ibid, para 60

¹⁹⁰ Doc 8, EPA submission, 10/8/2017

The Neighbours' Group

The Neighbours' Group submitted:

... although the Ministerial Direction gives the planning authority the discretion of determining the timing of the Statement it must be satisfied that the Statement has either been or will be issued. Certainty is required.

The most cautious of the two options is of course the need for an audit first at the start of the planning amendment process.

The planning authority must have regard to the Ministerial Direction and must arguably select the higher of the two options given the elevated risk associated with actually contaminated land.

There is no other way in which a planning authority can satisfy itself at the time of the rezoning that the site is suitable for sensitive use. This is particularly the case in light of the evidence that it will only be at the completion of the audit that the assessment as to the suitability of the land for the proposed use can be made.

The evidence ... is that it is not currently known whether or not the subject land can be capable of being used for a sensitive use. It is common ground that significant further site assessment work would need to be done over the next several years to delineate appropriate uses for the site.

Reliance on an ESA and SESP instead of environmental audit as a means of the planning authority satisfying itself of the suitability of the land does not comply with the Ministerial Direction.

The Neighbours' Group also submitted that the Advisory Committee process requires that the SRSP/SESP report needs to demonstrate that a site is 'highly likely' to be capable of being remediated. It also submitted that the Advisory Committee Report it is not a reference document nor an incorporated document within the Planning Scheme and should accorded limited weight.

The Neighbours' Group conclusion was that the requirements of the Ministerial Direction No. 1 have not been met as the Council cannot be satisfied that the site will be suitable for the proposed use.

Dr Bell, the Neighbours' Group witness, gave evidence that:

In the absence of the completion of a Statutory Environmental Audit at this time, the proposed uses of particular parts of the subject site, including commercial and residential as nominated in Figure 10A of Mr Sinclair's report, may not be technically possible as currently envisaged and may require alteration as part of progressing the Environmental Audit process based upon encountered conditions ...¹⁹¹

Dr Bell considered that the audit should be for the whole site, rather than a staged approach, as:

¹⁹¹ Doc 115, Expert witness statement by Dr Lyndon Bell, Section 6.5

- ESAs and SRSPs signed by the auditor do not constitute a statutory environmental audit.
- The site needs to be considered as whole as there is the potential for off-site migration of contaminants which may present a potential risk to both human health and the environment, in particular, his concerns related to landfill gas, volatile compounds and groundwater. These risks should not be transferred to off-site third parties.
- If the audit is undertaken in stages, there is the potential that some portions of the site may not be able to be redeveloped for the proposed uses as currently envisaged.
- The proposed controls nominated in Mr Sinclair’s expert witness report may not be technically feasible and may require alteration.
- The mechanisms to manage and maintain the engineering controls are critical to protect off site third parties.
- A whole of site statutory environmental audit provides the most certainty, however an alternative which has less certainty that the site can be developed as envisaged could be through an ESA and SRSP to be verified by the environmental auditor and prepared to the satisfaction of the Council.¹⁹²

(ii) Discussion

The Panel in reviewing this matter has had regard to:

- The site assessment and rezoning processes set out in Ministerial Direction No. 1. Notably the Ministerial Direction envisages that in preparing an amendment for contaminated land which would allow sensitive uses, a planning authority ‘*must satisfy itself that the environmental conditions of that land are or will be suitable for that use*’. Two options to do this are set out. The first is for an endorsed environmental audit. The second allows the environmental audit to be deferred provided the amendment documentation mandates a later audit.
- The Explanatory Report to that Direction. This explains that it is intended to allow deferral of the audit only if testing of the land before a notice of the amendment is given is ‘*difficult or inappropriate*’.
- Planning Practice Note 30 - Potentially Contaminated Land provisions which includes that an audit may be delayed where ‘*the rezoning relates to a large strategic exercise or involves multiple sites in separate ownership*’.
- The EPA’s Auditor Guidelines which prescribe the usual audit process, including EPA’s involvement. It includes a flow chart of the general audit process which is reproduced in Figure 5.¹⁹³
- The recommendations in the Potentially Contaminated Land Advisory Committee Report of 2012 that that the Ministerial Direction should be amended to allow a risk-based approach to site assessment of contaminated land proposed for rezoning, and that an audit should only be required in advance of rezoning when there will be no further management options (or limited further management options) for the development process. It also recommended that a Site

¹⁹² Doc 115, Expert witness statement by Dr Lyndon Bell

¹⁹³ Doc 17, *Environmental auditor (contaminated land): Guidelines for issue of certificates and statements of environmental audit*, EPA Publication 759.3, December 2015

Remediation Strategy Plan process or SESP should be formalised and included in the Practice Note as a way for planning authorities to satisfy themselves that contamination can be managed.

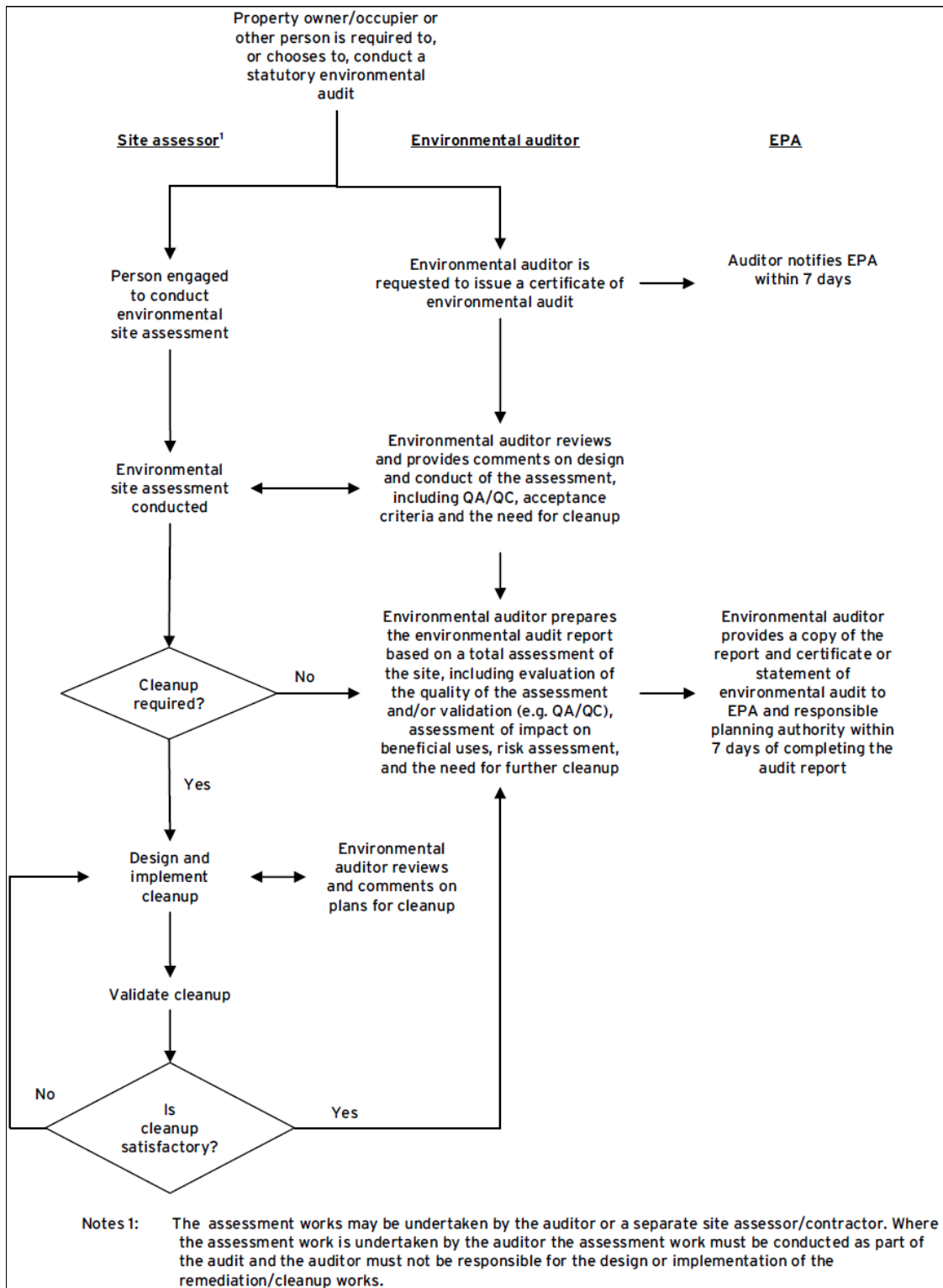


Figure 5: Outline of normal audit process.

(Source: Doc 17, *Environmental auditor (contaminated land): Guidelines for issue of certificates and statements of environmental audit*, EPA Publication 759.3, December 2015)

On one view, the assessment process proposed by the Proponent for this site could be seen as an enhanced version of the EPA guidelines for basic audits (as shown in Figure 5), where there are multiple assessments and where the final SESP presents the general design for the clean-up of the site. The endorsed SESP will also need to be supplemented by further detailed information on matters such as validation processes (that is, quality control and quality assurance), in order for the auditor to fully assess the clean-up proposal and provide feedback to the site assessor before the clean-up starts. It is only once the auditor is satisfied with the clean-up, that a statement can be issued.

The Proponent's proposed process, however, is rather more complicated than that shown in Figure 5.

To begin, the backfilling and stockpiling permits referred to in Chapter 1.6 have already been issued for initial remediation works on the site and these works are underway in advance of any rezoning. The permit conditions indicate that the works are not informed by the most up to date environmental information, let alone the further information acknowledged by the experts as required for remediation to begin. To the Panel's knowledge they are not being undertaken in line with any formally authorised SESP.

The second departure from the usual audit process shown on Figure 5 is that the rezoning is proposed to precede the audit process by which an understanding of whether the land able to be used for its intended purposes is established. The process proposed instead relies on environmental site assessments and a proposed remediation plan.

In the absence of an audit, the Panel and the Council need to be satisfied by the other information of the prospects for satisfactory development generally as proposed in the Comprehensive Development Plan before the land is rezoned.

The Proponent called a number of witnesses who sought to provide assurance that remediation and development as proposed is feasible. So far as contamination and remediation are concerned, they relied on previous ESAs and the 2014 SESP to provide this information, together with subsequent work, though some of this had not been fully completed. There was also some resistance or at least disinclination to provide an updated SESP at this stage and the most up to date results of site surveys.

Others submitted that the information to hand is not adequate to support the Amendment: the EPA and Council argued that the SESP requires updating before the Amendment would be approved. The Neighbours' Group submitted that the less rigorous assessment of the conditions of the land which the ESA/SESP process represents when compared to an audit, is not appropriate given the land is actually rather than potentially contaminated. It was suggested that the requisite level of certainty that the land can be put to urban uses as proposed, that it is 'highly likely' that it can be put to the use, can only be given by an environmental audit. This suggested that the Amendment is premature at best.

The condition of the site and incomplete investigations

In the earlier parts of this Report, the Panel has reviewed the evidence and submissions concerning the contamination and remediation prospects for the site. It is apparent that for each segment, much information is inconclusive or incomplete and that further work or monitoring is recommended by the experts.

In particular, the Panel's assessment and conclusions include:

- Soil contamination is widespread across the site.
- Recent soil sampling has been only to relatively shallow depths.
- Further investigations are required to ensure soils are not corrosive to buildings and other structures particularly in Zone 1.
- The most recent monitoring of gas bores reported to the Panel indicate elevated flows of LFG in several bores.
- Methane and carbon dioxide recordings were above the trigger level.
- Analysis of flow rates and monitored concentration levels for various gases through time is required to better understand the risks presented.
- Monitoring data of Talbot Park LFG emissions is required to fully understand the site's LFG situation.
- Further work to better identify the extent and nature of filled areas in Zone 2 and their required remediation, together with Zone 1 remediation effects, are a necessary input to the design of the gas monitoring and management measures.
- The gas mitigation measures need to be integrated seamlessly with the geotechnical design.
- The issue of required buffers needs to be addressed by a risk based assessment of the LFG for the whole site including the LFG contributed by the old Talbot Park landfill. Until this is done, the suitability of the site or parts of it for housing or other urban purposes cannot be assured.
- Buffers or, at a minimum, easements are likely to be required both during development and post development to allow access to LFG vents and boreholes.
- A Groundwater Management Plan needs to be prepared and ongoing monitoring of groundwater condition is required possibly indefinitely. It cannot be determined at this stage if proposed remedial measures will restore any of the beneficial uses for groundwater which results have shown to be contaminated.
- EPA is likely to issue a Post Closure Pollution Abatement Notice and declare a Groundwater Restricted Use Zone.
- Further work is required to determine the movement of leachate and possibly leachate extraction and treatment methodology.
- Further work is required to ensure that sediment meets contamination requirements. Further investigations are required as to the ultimate use or disposal routes for water and sediment from Zone 4.
- The geotechnical assessments remain as of particular concern. Only qualified support was given to the development by Mr Pedler on geotechnical difficulties, including dewatering and stabilisation of slimes, differential settlement of the base foundation, corrosive ground water affecting piles, potential unknown obstructive items impacting on the piles, impacts of required construction activities on LFG monitoring and capture equipment. Significant further geotechnical assessment is required and supported by a peer review.

In summary, essential further work that has not been considered or planned includes:

- A peer review of any geotechnical plans. A full assessment of the site geology and a structural design review needs to be undertaken by suitably qualified professionals - whether this be through the Technical Review Board or by others.

- A detailed risk assessment, and extreme care taken in the execution of works in Zone 4 in relation to the stability of the new apartments at 1213-1217 Centre Road, and the areas abutting the other batters in Zone 4.
- A risk assessment to determine the potential for seismic activity at the site and its impacts.
- Based on possible large strong objects having been buried on the site, a survey of the site using a suitable technique as an early component of site remediation.

In the Panel's view the inconclusive information and further work requirements erode the necessary confidence that is required for the Amendment to proceed.

The absence of precedents

The Panel's confidence about the prospects of remediating and developing the site has also been eroded by the absence of a clear precedent for a similar housing development on a very large site such as this with the particular combination of contamination by putrescible waste and geotechnical problems due to un-engineered fill and the presence of slimes - which factors are in part a legacy of unregulated past use.

Only qualified support by witnesses

Further, as noted, Mr Mival gave evidence at the Hearing that while he is confident that Zone 4 can be developed, he could not say that about the other zones. This was similar view to that expressed by Dr Bell. Also, in relation to the November 2014 SESP, Mr Mival indicated in oral evidence that he approved or agreed with that remediation strategy as a process, but his letter to Mr Slimmon of November 2014 does not say that he endorsed the SESP. The Panel was not provided with any written endorsement of the November 2014 SRSP.

In the Panel's assessment, the only person who clearly has a level of confidence that the site can be remediated to accommodate sensitive uses as proposed is Mr Sinclair. While Dr Bell also considered that the site could be remediated for sensitive uses, he indicated that the costs could override the development being commercially viable.

Staging contributes to the uncertainty

It is proposed to remediate, audit and develop the site in stages based on the zones. The Panel considers that a staged approach may be an appropriate response to logistical and financial difficulties, however, it compounds the uncertainty around the issue of whether the land will be developed as proposed.

As was acknowledged by Mr Mival, when a zone is remediated and developed, this is likely to impact on the environmental condition of the neighbouring zones, particularly with respect to LFG and groundwater. This is especially true of the backfilling of Zone 4.

This will necessitate additional ESAs and possible adjustment to the SESP, and to the ultimate use of those zones and the overall site layout. This further reduces the Panel's confidence that all the zones can be developed for their intended use as currently contemplated.

There were also concerns raised with respect to staged development that if some zones proved uneconomic to remediate, that the site might only be partially developed. This could compound the problem of housing being situated proximate to unremediated land – this

already occurs with respect to housing off-site. If the course of requiring an audit early in the development process was to be adopted, it could assist in avoiding this problem.

Advisory Committee criteria

The Panel's recommended cautious approach to rezoning in this case appears on its face to be a departure from the 2012 Advisory Committee recommendations which support a process whereby a SESP and ESA(s) preceding an Amendment could potentially provide adequate environmental information to give the necessary confidence about a successful development outcome for contaminated land. The Panel was made aware that such a SESP/ESA preliminary approach had been applied to a number of major urban renewal projects.

With respect to the recommended Advisory Committee approach, the submissions for the Proponent quoted from the report on the conditions to be met for the deferral of an audit to after an amendment is approved. This site meets some of the pre-conditions identified: the site is in one ownership; high density residential development, assisting in reducing access to contaminated soil, is proposed; and less-sensitive mixed use development is also proposed, albeit for relatively small part of the site.

The other criteria identified in the Committee's Report have not been met, however. No viable options for the ongoing management of the site have been presented (as discussed in Chapter 9); nor have alternate development options been presented which respond to the possibility that parts of the site will not be able to be used for a sensitive use. The 2014 SESP presupposes residential use and no alternatives are discussed: the CDZ schedule and Comprehensive Development Plan are principally directed to residential use.

This is not to say that an SESP/ESA process as envisaged by the Advisory Committee is an inappropriate approach to amendments involving remediating and developing other less challenging contaminated sites. Nor is it to say that there is no role for a SESP/ESAs in the South Oakleigh case. These documents inform (or should inform) and generally direct the site remediation process prior to the environmental audit - which audit should precede the rezoning.

In relation to applying the SESP/ESAs in their appropriate and necessary role of informing and directing remediation, the Panel agrees with the EPA submission that the 2014 SESP/SRSP needs to be updated. The Panel would also comment, however, that the absence of a final auditor-endorsed SESP has further detracted from the high level of confidence required to be established before the Amendment proceeds - that the site will be suitable for its intended use.

In summary, in the circumstances of this site, using a SESP/ESA process (whether or not those documents are up to date) as a mechanism to assure the Council of a successful remediation and development outcome in advance of rezoning is inadequate. The Panel does not consider that the requisite level of certainty of outcome envisaged by the Advisory Committee applies here, even considering the additional material presented to the Panel at the Hearing.

(iii) Conclusions

Overall the evidence presented to the Panel did not positively lead to the high degree of confidence that it and the Council should have before supporting an Amendment which would enable a contaminated site with geotechnical problems to convert to sensitive uses.

The Panel, having regard to the environmental characteristics of this site, agrees with the submissions by the Neighbours' Group that the Council should select the higher or more cautious of the two options in the Ministerial Direction in relation to the timing of an environmental audit for this land (that is before any Amendment is exhibited (or at least approved). The Panel notes that the more cautious approach is supported by the Practice Note on Potentially Contaminated Land which identifies this land as having a high level of contamination requiring a full audit.

The Panel agrees with the submissions that the evidence placed before us has affirmed that it is only when the audit is completed that the suitability of the site or parts of it for intensive housing as proposed will be conclusively known. Added to this are uncertainties caused by adverse geotechnical characteristics of the site.

Also, it is only once the prospect of using the various parts of the land for different urban purposes is made clear by the results of an audit, that a statutory scheme amendment can properly give effect to this. The current proposal where the CDZ provisions and the Comprehensive Development Plan prefer a housing outcome but, due to uncertainty of achieving it, must endeavour to both provide flexibility of development outcomes and at the same time provide a certain statutory framework, is unsatisfactory and confusing. This is discussed further in Chapter 10.

In light of the above factors, the exhibited Amendment cannot be supported.

9 Ongoing management of the site

9.1 The issue

The issue to be addressed here is:

- Can the future obligations for environmental management be satisfactorily met?

9.2 Evidence and submissions

The exhibited Comprehensive Development Plan 2016 at Figure 1 of this Report shows a broad concept for the development of the site. One small area is proposed for mixed use development with the majority of the site proposed for a mix of detached dwellings, townhouses, apartments and higher density residential accommodation. Three indicative public open space areas are shown in Zones 2, 3 and 4.

The Panel was informed that it is proposed to develop the site in stages commencing with Zone 4, then Zone 1, followed by the remaining zones. It was anticipated that for Zone 4, it would take about 18 months to fill the quarry void and then approximately two years to develop the land¹⁹⁴. The whole site could a decade or more to complete.¹⁹⁵

On the first day of Hearing in August 2017, the Panel asked the parties to address the issue of ongoing responsibility for the management of the site throughout its development and completed use phases. This was mainly directed to the Council, but also to the Proponent and EPA. The ongoing management of the site had been an issue raised by the Valentès in their initial submission. The Valentès were concerned about this matter as they had noted that it lies outside the scope of the Victorian Building Regulations.¹⁹⁶

The Panel indicated that, in determining whether this land should be rezoned for urban use including for residential purposes, it (and the Council) needed to be satisfied that not only would remediation of contamination and resolution of geotechnical problems be likely to be achievable, but it needed to be satisfied that practicable and enforceable ongoing management arrangements for the use of the site, both during remediation and once remediated and developed, could be implemented. Matters identified to be addressed included responsibility for the management of remediation infrastructure, reporting of results of monitoring, rectification of problems arising. The management arrangement information sought related principally to gas emissions, settlement and the regulation of access to the soil. Financial obligations needed to be identified, as well as the identity of the body responsible at various stages of development: the Proponent/developer, contractors, the landowner before subdivision, subsequent individual landowners, owners' corporations, as well as public agencies including the Council.

This matter was raised by the Panel on numerous subsequent occasions during the Hearing, in letters to the Council and in Panel Directions.¹⁹⁷

¹⁹⁴ Sinclair, Hearing, 6 June 2018

¹⁹⁵ Mr Mival volunteered on 4 June 2017 that he might be in his grave by the time the whole development would be completed.

¹⁹⁶ Doc 16, Submission, 11/8/2017

¹⁹⁷ Panel Directions of 17 August and 4 December 2017, 6 February, 23 March and 15 May 2018 (see appendix E); and letters to the Council of 23 March and 15 May 2018

For example, directions issued after Day 3 of the Hearing,¹⁹⁸ were as follows:

1. *In so far as there are few if any other Victorian examples of landfill sites being reused for residential purposes and as the Proponent has placed some reliance on the success of the Cavanagh Street site in Cheltenham, the Panel would be assisted if some further detail could be provided by the Proponent about the characteristics of that site, its method of development and subsequent management.*

We have been advised only that it is a smaller site than the subject site, was a former sand quarry, filled with non-putrescible hard waste plus possibly a small amount of putrescible waste and some 200 townhouses have been constructed. We have been advised that monitoring of land fill gas and groundwater occurred for 2.5 – 3 years and that the developer was required to fund the owners' corporation to implement the management plan.

2. *The Panel would also be assisted, in assessing the appropriateness of this Amendment, by the Proponent providing information about the proposed management arrangements for on-going monitoring of gas, leachate, ground water, and settlement, on and adjacent to the subject site once it is in residential or other use.*
3. *The Proponent should also address the management options that could be put in place to ensure that soil is not disturbed below a specified depth and any future building works requirements to avoid issues related to gas confinement or disturbance of gas membranes, monitoring equipment and services.*
4. *In particular, advice is sought on the legal and practical responsibility for the monitoring and correction of any failures, the reporting regime and enforcement responsibilities. The advice should consider the staged development of the site and any staging of monitoring responsibilities.*

At the next Hearing day, on 30 October 2017, the Council agreed that provisions relating to the ongoing management of the site could be included in the schedule to the CDZ and that the determination of the amount of money to be included in a sinking fund could possibly be determined through a Monte Carlo simulation. The Council offered to supply the wording for this. It was not forthcoming.

The Panel was also made aware that the Senversa advice to the Council was that ongoing management could be through a single owners' corporation for the whole site and might be enforced by Council through a section 173 agreement. Senversa did not provide any details on how such an owners' corporation would operate.¹⁹⁹

On 7 November 2017, the Panel requested the Council to:

Draft wording for CDZ Schedule 2, for inclusion in the ODP, a requirement for an overall site management plan and funding mechanism for monitoring,

¹⁹⁸ Written directions of 17/08/2018

¹⁹⁹ Senversa: *Review of Environmental Matters – Site Environmental Strategy Plan*, letter to King and Wood Mallesons, 27 August 2015, Background document provided by Council

maintaining and review of landfill gas emissions and funding basis (in track changes). Further advice regarding the funding methodology can be supplied separately.

It later emerged that there was a need for the Council to involve ERR in addressing this issue. The final response from the Council, in a joint statement with ERR, is provided later in this section.

A suite of information about the ongoing management of the Cheltenham site was provided by the Proponent. It included the City of Kingston's permit conditions, two section 173 agreements, and the Post Construction Management Plan for that site.²⁰⁰

A summary of these so far as is relevant is:

- Permit conditions included:

Within 60 days of the Statement of Environmental Audit, a company or owners' corporation is to be established and funded to coordinate and be responsible for, to the satisfaction of a suitably qualified environmental auditor accredited under Part IXD of the Environment Protection Act 1970:

- Remedial works to the gas venting system and any subsidence
 - Carry out ongoing monitoring of the landfill gas, soil contamination and other environmental indicators as required by the auditor
 - Pay a deposit of a financial security as determined by the council to ensure compliance with conditions of the permit.
- The section 173 agreement of 1 December 2012 requires the developer to pay seed funding of not less than \$50,000 and gives the owners' corporation the ability to levy further money from the developer for the purposes of implementing the statement of environmental audit until all lots are sold, at which point the developer and the Council are released from all obligations. The second section 173 agreement relates to public works.
 - The Post Construction Management Plan requires the owners' corporation at its inaugural meeting (the owners' corporation was established on 13 June 2013) to engage a contractor to do annual inspections and any necessary repairs of the venting system and to bi-annually assess subsidence.
 - There is a requirement imposed not to dig more than 0.5m and not to drill any bore holes.

On this issue, Mr Sinclair wrote:

Large professionally run owners' corporations, such as would be expected to be involved at Oakleigh South, have the ability to manage complex issues such as fire services in car parks, basement drainage, gas, electricity and sewerage services, air conditioning systems that can be affected by Legionnaires Disease and other issues that are comparable to the complexity to the measures that may be required to manage gas mitigation systems proposed at Oakleigh South.²⁰¹

²⁰⁰ Doc 29

²⁰¹ Doc 29, Tab 9

He also indicated his view that there could be several owners' corporations for this site²⁰² and that he considered that the conditions in the Statement of Environment Audit, which would need to be managed by the owners' corporation/s, would be no more onerous than the other issues that other owners' corporations manage.²⁰³ The Proponent confirmed that a sinking fund could be established.²⁰⁴

Also included in the Proponent's material is a table showing the steps in the planning and environmental process for the Amendment Site.²⁰⁵ Step 6, End of Development Stage, says:

Post development controls for ongoing monitoring of environmental issues.

- *Developer remains responsible for these activities while it is an owner of all or part of the site.*
- *Once a staged development has been completed and occupation by new owners occurs, the owners' corporation would be expected to become responsible for any ongoing monitoring in that stage. Initially the developer will own the majority of the property and so will exercise the greatest degree of control of the owners' corporation and its responsibilities. The owners' corporation will be provided with sufficient funds by the developer in order to implement any required maintenance of common property or environmental monitoring.*
- *Once all stages of development have been completed and occupation by all new owners has occurred, the developer would not have a role in the owners' corporation and would not be responsible for the any maintenance of common property or environmental monitoring.*
- *Environmental issues that could be expected to be dealt with in the OC rules are:*
 - *Prevention of excavations greater than 0.5m (or other nominated depth)*
 - *Groundwater monitoring*
 - *Groundwater use*
 - *Interference with gas mitigation system*
 - *Prevention of enclosure of some spaces, if final design includes spaces that are passively ventilated.*

Note not all restrictions may apply to all parts of the site.

After some delay to an agreed ERR input to drafting revisions to the CDZ schedule, on 24 May 2018, a joint response from the Council and ERR was received that included provisions relating to ongoing site management.

It was proposed that the following be included in CDZ2 (the proposed additions in the relevant sections are underlined).²⁰⁶

Purpose of the Schedule:

- *To identify a range of land uses that may be suitable for potentially contaminated or filled land subject to an appropriate management strategy*

²⁰² Hearing, 6/6/2018

²⁰³ Doc 147, Supplementary Expert Statement, p4

²⁰⁴ Hearing, 6/6/18

²⁰⁵ Doc 129, Tab 8, step 6

²⁰⁶ Doc 122

for the ongoing management of remediation requirements and monitoring including the costing of such requirements and the implementation of a fund to fully finance the Strategy and any contingent liabilities arising from the Strategy.

Under Clause 3.0 Overall Development Plan, the following changes (underlined below) were made to the list of matters that must be addressed:

Ongoing Site Management Plan

- A plan showing the remediation techniques for the whole site in accordance with the approved Site Environmental Strategy Plan (SESP), and including mechanisms for ongoing equipment maintenance, monitoring, and review of landfill gas emissions.
- An ownership management and funding structure that provides for the:
 - the ongoing management of remediation requirements and monitoring including the costing of such requirements and the implementation of a fund to fully finance the Strategy and any contingent liabilities arising from the Strategy, the form and quantum of that fund, which may take the form of a deposit or bond to be to the satisfaction of the Responsible Authority.
 - the ownership and responsibility to fund the remediation infrastructure and ongoing monitoring to be assumed by land owners within the site.

Under Clause 3.2 relating to the SESP and ESA, the following inclusions were recommended:

Prior to the lodgement of any planning application, the following reports must be submitted and approved to the satisfaction of the Responsible Authority:

- An Ongoing Site Management Strategy (OSMS) – (definition)
- The Ongoing Site Management Strategy must give effect to the ongoing management of remediation requirements and monitoring set out in the SESP and/or ESA, including the responsibilities for equipment, infrastructure, monitoring and the costing of such requirements and the implementation of a fund to fully finance the Strategy and any contingent liabilities arising from the Strategy, the form and quantum of that fund, which may take the form of a deposit or bond to the satisfaction of the Responsible Authority.

Under Clause 4.0 Use of Land, the Decision Guidelines at 4.3 were recommended to include:

The adequacy and day to day practicalities of the successful and ongoing compliance with the Ongoing Site Management Strategy to manage ongoing environmental issues and whether the funding quantum and allocation of ongoing site responsibility are adequate to ensure implementation of the Ongoing Site Management Strategy.

Under Clause 4.0 Permit Conditions, the following change was recommended:

- Before the use permitted commences, the owner of the land must enter into and execute a section 173 Agreement for the ongoing management of the site in accordance with the requirements of the certificate of environmental audit or the statement of audit, the Ongoing Site Management Strategy and any conditions of permit use/operations.

Under Clause 6.0 Building and Works, the Decision guidelines at 6.3 were recommended to include:

The responsible authority must consider, as appropriate:

- *The adequacy and day to day practicalities of the successful and ongoing compliance with the Ongoing Site Management Strategy to manage ongoing environmental issues and whether the funding quantum and allocation of ongoing site responsibility are adequate to ensure implementation of the Ongoing Site Management Strategy.*

And under Clause 6.4 the recommended change to Permit Conditions was:

- *Before the construction or carrying out of buildings and works in association with a sensitive use commences the owner of the land must enter into and execute a Section 173 Agreement for the ongoing management of the site in accordance with the requirements of the certificate of environmental audit or the statement of audit, the Ongoing Site Management Strategy and any conditions of permit use/operations.*

The Panel also sought input from others to the issue of the different obligations for the ongoing management of the site which might apply during development and after its completion.²⁰⁷ In addressing this and the Council/ERR revisions to the CDZ schedule, Mr Mival commented that he expected the site to be subject to extensive conditions, but he considered that the schedule looked too far into the future. He said that it could be that the schedule would need to be updated. He was of the view that the schedule would need to be flexible so that it might be changed.²⁰⁸

Dr Bell suggested that the Statement of Environmental Audit should include a Site Environmental Management Plan (SEMP) and/ or a Groundwater Quality Management Plan (GQMP). To ensure compliance with these plans, the owner/developer should be required to pay a financial assurance or a bond.²⁰⁹

Mr Mival said both these plans would be included in the Statement of Environmental Audit plus *'EPA may also issue a Post-Closure Pollution Abatement Notice for the landfill that will require this, along with regular reporting under the closed landfill guidelines. A body corporate organization will be required to take responsibility for this once the developer has finalized all site sales and completed all obligations of the building permit.'*²¹⁰

The Panel also asked about management of the open space proposed for the development and if the Council would be involved with the management of that space. The Council reply was that the Council did not want to have any ongoing involvement with the management of the open space or other aspects of the development, such as the roads and infrastructure, due to the ongoing resources required and the possible legal obligations.²¹¹ Mr Sinclair added that some areas of open space may not need gas protection although there would need to be a requirement that the soil is not to be disturbed, these details would be included in the statement of environmental audit.

²⁰⁷ Hearing, 6/6/2018

²⁰⁸ Hearing 5/6/2018

²⁰⁹ Doc 117 Dr Bell, Expert Witness Statement, p5

²¹⁰ Doc 147, Supplementary Expert Statement, p6

²¹¹ Hearing, 6/6/2018

The Council's and the Proponent's proposed final draft schedule is provided in Appendix F.

9.3 Discussion

The development proposal for this land involves staging over a number of years. Zone 4 is proposed to be developed first over a three and a half year period, including subdividing, building and the sale of all lots. Following completion of Zone 4, it is intended to similarly develop and sell lots in Zone 1, followed by the remaining Zones 2, 3 and 5. The development as a whole would take over a decade to complete. The lengthy and phased nature of the development introduces complexity into the required ongoing management of the Amendment site, particularly the management of the shared assets and environmental controls.

The Proponent said that under the proposed arrangements, until lots are sold, the developer would assume the responsibility for all obligations for the ongoing management, monitoring, reporting and maintenance of the landfill gas venting system, the groundwater monitoring system, and any leachate and sediment management and monitoring that may be required. It was said that an owners' corporation, or possibly multiple owners' corporations, would also be established. As lots were sold, the owners' corporation would gradually take over these responsibilities from the developer. The Proponent further said that it is likely that the developer would provide some funding to the owners' corporation(s) to meet these obligations. The Panel was told that this is the type of model used at the Cavanagh Street, Cheltenham site.

The Panel notes that the submissions and evidence by the Proponent and the Council in relation to this management issue, while they are explicit about there being owners' corporations for new lot owners, fails to distinguish clearly between the responsibilities of the owner of the site and the developer. This was one of the matters that the Panel considered required clarification as part of a practical ongoing management plan for the site. It is clear that only the site owner, together with individual lot owners, can be a member of a body corporate but the developer might be included as a party to a section 173 agreement as well as the land owner. Further thought needs to be given to this matter.

Also, the Panel observes that, while there are similarities between the Cheltenham project and that proposed for the Amendment site, there are substantial differences:

- Once remediated the Cheltenham site was developed over two or three years, but the Amendment site will take many years to develop.
- The Cheltenham site is about one fifth the size of Amendment site.
- The ongoing management issues at Cheltenham relate to LFG and subsidence, whereas the Amendment site issues that require management include LFG, groundwater, subsidence, leachate and possibly sediment.
- The overall environmental condition of the entire Cheltenham site was well known before development started. It follows that the design of the townhouses, the open space, the roads, the venting system and other infrastructure for the entire site would have been well understood at the outset, or at least once the statement of environmental audit was received. This made possible the establishment of one owners' corporation for the townhouses.

The establishment of one owners' corporation at Cheltenham meant there is one entity managing the shared assets such as open space, roads, etc and meeting the ongoing environmental obligations.

- The Comprehensive Development Plan purports to put a framework around the development of the Amendment site. Whether the land can be developed to accord with the Comprehensive Development Plan is unclear due to the proposed staged remediation and development of the zones, and the phased zone by zone statement of environmental audit.

This lack of certainty in the final layout and the long lead time in the development of the various zones makes it likely that multiple owners' corporations will need to be established, perhaps one for Zone 4, one for Zone 1 and one for other zones. These owners' corporations will assume responsibilities at different times with a relatively long time span between when the first owners' corporation is established and the last.

An implication of this arrangement is that at some stage an owners' corporation for one stage will likely be required to assume responsibility for the overall site's shared assets or parts of them, particularly the open space; and the owners' corporation will have nebulous obligations that it will be required take up some time in the future. The question of how the shared open space, roads etc, and particularly the environmental management, can be transferred to and managed by multiple owners' corporations established over more than a decade remains an unanswered question.

While Mr Sinclair may be correct that that the management of the shared remediation assets would be no more onerous than other matters which owners' corporations are required to manage, the Panel considers that this is only likely to be true once the site is developed, with interim arrangements during the years of development being potentially more complex.

Another implication of the gradual transfer of obligations to owners' corporations is the question of the responsibility for responding to any inter-zone environmental effects, such as were discussed in earlier chapters, as development proceeds on other zones in later stages.

It was not until the June 2018 Hearing that the parties entered into any real discussion on the ongoing management arrangements for the site. There was some reluctance by the Council and Proponent to do so – apparently on the basis that the generalised requirements relating to a management plan proposed jointly by the Council and ERR in revisions to the schedule would provide an adequate basis to resolve these issues sometime in the future. There was also some reliance placed on the inevitability of section 173 agreement requirements relating to maintenance and monitoring of equipment arising from a later statement of environmental audit, and the design of the Cheltenham site management arrangements.

The Panel does not agree that an adequate response has been made to this difficult matter.

The Panel considers that a management strategy should be regarded as a key component of the material necessary to properly satisfy the Council that the land can be satisfactorily put to urban use. It is one thing to say that the contaminants on the site have potential to be remediated and geotechnical issues can be addressed, but quite another to say that there

are implementable management systems to meet the ongoing requirements to manage and monitor the land and infrastructure into the future.

In response to the Panel questions, the Council and ERR proposed the generic management plan requirements above to be included in the ODP as part of the CDZ schedule. However, those generic requirements effectively leave the strategic thought about this issue until later. The subsequent redrafts of the schedule, such as that at Appendix F, similarly only introduce a generic provision in this regard.

The Panel considers that a comprehensive strategic document needs to be prepared for the land to inform the Council whether effective and practical arrangements can be put in place. It needs to clearly set out management arrangements for the developmental and developed stages of the project and allocate responsibilities through time by function. It needs to provide a sound financial basis for the arrangements. The correct approach to this management issue and its role in determining whether the Amendment should proceed is not simply to say that there must be a plan - attending to matters such as on-going monitoring and maintenance, costing and funding and contingent liabilities etc - but the structure of a workable plan for the developmental and post-development phases must be available now to the Council in order to assist in determining whether the Amendment should proceed.

If a satisfactory management plan were to be developed, it could be incorporated into the Planning Scheme.

9.4 Conclusions

The Panel concludes:

- The gradual transfer of site management responsibilities over many years presents a considerable challenge for the remediation and development of this site.
- Identifying suitable arrangements for the developmental stages is particularly problematic.
- All future owners of lots in the Amendment site, through owners' corporations, will have obligations in relation to the management and reporting of the environmental infrastructure both within their zone as well as for the shared open space areas and other infrastructure such as roads.
- With development occurring over a considerable period and sold in stages, these obligations, in particular future financial obligations for the shared assets, cannot be determined until the whole site is developed.
- No practicable and implementable model was proposed for on-going site management including through the developmental phase has been identified to inform whether the Amendment is appropriate. This is a further factor recommending against its approval.

10 Zoning and drafting difficulties

10.1 The issue

The key issues are:

- whether the choice of zone is appropriate
- whether the component parts of a CDZ are workable in the circumstances of contaminated land yet to be audited.

10.2 Evidence and submissions

The submissions for the Council at the Hearing included that the current zoning is inappropriate or no longer relevant. The SUZ is not relevant as the land has not been actively used for sand extraction for some 20 years and the GRZ2 was said to be an inappropriate zone because all of the land needs to be remediated as a (staged) single exercise.

The submissions for the Council on this issue were:

It is clear that the Special Use Zone is no longer an appropriate zone for the site. All quarry and landfill operations ceased a long time ago. The current zoning prohibits the potential use of accommodation. Accordingly, 'a zone that enables a master planned redevelopment of the site for residential or other suitable urban uses is required'.

But why need that part of the site zoned GRZ be rezoned? The primary reason is to ensure that the site is considered holistically. Planning for it may then proceed in an orderly fashion and environmental risks addressed together.

The Panel was advised that the choice of the CDZ as the replacement zone was based on the need for flexibility of controls for the land to enable different unknown land use outcomes.

The submission for the Council was:

The CDZ, unlike the more restrictive GRZ, allows for the consideration of a range of uses if it is not possible to develop the land for residential purposes or other sensitive uses

This flexibility was necessary because under the remediation and development process proposed, it would not be until applications were made for planning permits for sensitive uses (or all uses as was later suggested by Mr Mival) that an environmental audit would be completed giving certainty about the uses to which the land could be put.

The exhibited CDZ schedule nevertheless clearly supported the Proponent's preferred outcome for the land as a master planned residential community. Of the nine purposes of the schedule, three referred to managing existing contamination, two to issues relating to abuttals to neighbouring uses, one to uses other than residential, and the following three referred to residential use of the land:

- *To allow for an integrated residential and mixed use development which fosters social interaction, walkability and creates a sense of place and a new local identity*
- *To provide for a range of housing densities and building types*

- *To provide a framework for a contemporary residential development and opportunities for appropriately located and scaled higher density residential forms that reflect the site's size and limited physical connections with the surrounding neighbourhood.*

The table of uses in the CDZ schedule also shows an arrangement of uses which accords with a primarily residential land use area.

The proposed incorporated Comprehensive Development Plan shows the layout of the residential community (see Figure 1). Apart from a small mixed use area on Huntingdale Road, and two open space/stormwater filtration swales and a green 'spine', the land is given over to residential and higher density residential use. The layout of the uses on the site is consistent with that intended in the 2013/14 proposed scheme amendment/permit application, albeit in less detail.²¹²

During the Hearing, various revised versions of the CDZ schedule were presented. They included a post-exhibition version recommended by the Council, later Council redrafts and drafts by the Proponent. They were responses to submissions and to Panel queries concerning the lack of alternative options under the proposed zone for alternative uses to residential. Mr McGurn also made suggestions in his evidence report for revisions to the schedule which were generally resisted by the Council.

The Council's first revised version of the CDZ schedule followed Panel queries at the Directions Hearing. At that time the Council proposed adding a Development Contributions Plan Overlay (Schedule 2). This was resisted by the Proponent.

The final revised version of the CDZ Schedule was prepared by the Proponent in consultation with representatives of the Council in a workshop²¹³. It was reported to the final day of Hearing with comments provided by other parties.

10.3 Discussion

The Panel considers that the content of the exhibited Amendment and revised versions of it present insurmountable difficulties of logic, at least some of which arise because no environmental audit will precede the Amendment.

(i) The Comprehensive Development Plan

A key difficulty with the Amendment is that while the Comprehensive Development Plan suggests the form of the residential community proposed for the subject site:

- The basis for the site layout was in no way justified, that is, the basis for the choice of layout in 2013/14 (that was simply repeated in the present Amendment) was not explained. Nor was any explanation given of the placement of the open space areas, the mixed use zone or the high density areas - no general site analysis was offered.
- In the absence of thorough geotechnical investigations and a final audit of the land, there is no way of knowing whether the proposed layout of the site will be achievable.

²¹² The earlier plans were shown in various of the background reports that date from that period.

²¹³ See Appendix F

As was discussed at the Hearing, the use of the CDZ necessitates the incorporation of a Comprehensive Development Plan. It is not possible to apply the zone without such a plan. The key purpose of the CDZ as set out at Clause 37.02 of the Planning Scheme is:

To provide for a range of uses and the development of land in accordance with a comprehensive development plan incorporated in this scheme (Panel's emphasis).

The Panel considers that the Comprehensive Development Plan 2016 is very schematic, and it would seem to represent 'wishful thinking'. It is really to misuse the zone to seek to regulate land in accordance with a plan which appears to have neither a strategic basis nor certainty about whether it is a realistic outcome.

The further concern with respect to the incorporated plan and its relationship to the CDZ schedule is that, following some modifications to the purposes of the schedule to better recognise that the future use of this land is uncertain (see Appendix F for final suggested version of these by the Proponent and Council), and by referring to an intention to support a mix of uses on the land, this has caused the plan itself to become decidedly out of step with the purposes, in that it remains firmly residential in character.

The Panel also notes that the submission by the City of Kingston officers in response to notice of the Amendment commented that the officers were not able to discern what was proposed for the site. The Panel considers that notwithstanding some minor improvements in the various iterations of the CDZ schedule that were tabled over the course of the Hearing, the inconsistency between the plan and the schedule continues to make what is intended unclear.

The Panel notes that the exhibited plan is notated: *'the Responsible Authority may grant planning permits which vary from this plan from time to time'*.

The notation is recognised by the provisions of the exhibited schedule that, when considering permit applications for use and buildings and works, the Responsible Authority is to consider:

Consistency with the 'Former Talbot Quarry and Landfill Comprehensive Development Plan 2016' or, for applications that propose to vary from the approved Comprehensive Development Plan, the documented rationale for an alternative approach, due to the findings of the SESP and ESA.

The Panel has a concern that if the Comprehensive Development Plan proves inappropriate in light of the subsequent environmental assessment, the schedule simply allows permits varying from the plan to be granted, rather than requiring the inappropriate plan to be corrected, or the plan being correct in the first place.

(ii) Works exempt from permit

Another problem introduced by the proposed revisions to the schedule (at Appendix F) relates to Clause 2, which allows for the inclusion of remediation works without a permit in advance of completion of the ODP. They include earthworks and building works in accordance with a construction management plan. The building works are described as:

The construction of that part of any building which is associated with the remediation of land in accordance with or for the purpose of obtaining a

Certificate or Statement of Environmental Audit under the Environment Protection Act, provided the works are carried out in accordance with a Construction Management Plan prepared in accordance with this schedule.

This building works exemption would appear to be intending to allow in-ground monitoring equipment beneath dwellings or other structures.

There are two concerns here. The first is that there is no requirement that the works are to be consistent with the SESP, and nor can there be, as the requirement for the SESP is tied to the (later) preparation of the ODP. The second concern is that the exemption purports to be tied to a construction management plan prepared in accordance with the schedule. As is noted in Chapter 1.6 of this Report, planning permits for initial remediation works have already been granted with their own construction management plan which has lesser requirements. Those permits have been acted upon and can continue to be so, regardless of the requirements of the Amendment.

(iii) Timing of SESP

The principal problem of concern to the EPA and the Council, about the exhibited schedule also remains. The EPA and the Council expressed concern that the supply of the SESP and ESAs for the site should not be left to when applications for planning permits are being lodged. The Council said that post-Amendment it wanted the ESA and SESP at the earliest possible stage and not bit by bit.²¹⁴ It was submitted that a balance had to be struck under the Ministerial Direction: if the audit was to be deferred, as much information as possible had to be obtained early.

The final draft of the schedule presented to the Panel (at Appendix F) still may see the SESP and ESA(s) being available to the Council only at the permit application stage.

The required content of the ODP has been expanded to include the SESP, but the schedule still enables the ODP (and the SESP within it) to be submitted at the same time as the application for permit. The relevant parts of the clause are:

Before approving a planning application for the use, development or subdivision of the site ..., an Overall Development Plan must be submitted and approved to the satisfaction of the Responsible Authority.

10.4 Conclusions

The Panel concludes:

- The statutory drafting of the Amendment is problematic. It is inherently illogical and unclear.
- Most of these problems would not occur if an environmental audit was to precede the approval of the Amendment.
- These statutory difficulties further weigh against approval of the Amendment.

²¹⁴ Ms Hicks at Hearing, 30/10/2017

11 The need for open space

11.1 The issue

The issues are:

- Is the Council required to purchase the site for public open space?
- Is there more public open space required in Oakleigh South?

11.2 Evidence and submissions

The Comprehensive Development Plan for the Amendment site includes two areas of public open space and a 'green spine' that links the Davies Reserve and Talbot Park.

Clause 21.10 - Open Space of the Municipal Strategic Statement, includes in its objectives:

To encourage the provision of a diverse and integrated network of public open space to meet the sporting, recreational, health and environmental needs and preferences of the community and enhance the image of Monash as a quality environment to live, work in and visit.

To provide safe, appealing and accessible public open space that is within easy walking distance of the majority of residents.

In mid-2017, the Council released a draft Open Space Strategy for public comment. The Strategy includes in its vision:

*Open space will be acquired, developed and managed to provide a diversity of social, physical and environmental opportunities and experiences for the widest range of the population, both now and in the future.*²¹⁵

The Strategy estimates that the Oakleigh South population will grow by 17.6 per cent by 2026 and identifies several parcels of land for future public open space including the potential expansion of Davies Reserve.²¹⁶ The Strategy does not identify the Amendment site for public open space except that it suggests that there should be a path or trail through the Amendment site that links Davies Reserve to Talbot Park.²¹⁷

The Valentès' submission was that the draft Open Space Strategy 2017 shows that there is a lack of open space in the local area.²¹⁸

Mr McGurn disagreed in his evidence to the Panel. He identified the available open space near the Amendment site as:

- Talbot Park to the south which is an informal open space area that has BBQ and playground facilities
- Davies Reserve immediately to the north of the site which has an athletics track and associated recreational facilities as well as a Scout hall
- Bald Hill Park further to the south in the City of Kingston.²¹⁹

²¹⁵ Draft Open Space Strategy 2017, p4

²¹⁶ *ibid*, p75

²¹⁷ *ibid*, Map 12

²¹⁸ Doc 16 p31

²¹⁹ Doc 13, Statement of Town Planning Evidence, p2

He said that he considered that the Amendment site is well served with public open space.²²⁰

As noted, 341 late submissions were received by the Panel in late November 2017. They called for the Council to exercise its right under the 1993 section 173 agreement to purchase the Amendment site and convert the site into a sports field or some other open space facility. The submissions included that the draft Monash Open Strategy 2017 highlights the need for further open space in the local area.

The Valentès' submission and that of several others referred to a 'promise' made by the former City of Oakleigh, as predecessor to the City of Monash, that the site would be converted into public open space.²²¹ It was said that it is this promise that is reflected in the 1993 section 173 agreement.²²²

The section 173 agreement between the City of Oakleigh and the then site owner, Consolidated Quarries Limited, was an outcome of a settlement in relation to an enforcement matter before the then Administrative Appeals Tribunal. Clauses 4.2.13 and 4.2.14 of the agreement provide for the transfer of land to the Council. Relevantly, Clause 4.2.13 provides that the owner covenants that *'if required by Council, [the owner will] transfer filled or unfilled land progressively to the Council at a negotiated fair market price'*.

The submissions for the Council, however, indicated that it has no intention of purchasing the site²²³ for open space. The submissions also included that, to the extent that it is proposed for public management, the Council does not even support the provision of public open space as shown on the Comprehensive Development Plan. The Council does not want any ongoing responsibility for maintenance of those spaces including any requirements in the statement of environmental audit.²²⁴

The Valentès also submitted that sites of former quarries and landfills have traditionally been rehabilitated for use as public open space as it reduces the risk to Councils and ratepayers of possible future legal action due to the failures in the remediation measures required for housing development.²²⁵

The Panel has also noted that the Reclamation Management Plan implies that the site will be converted to parkland.²²⁶

The Proponent's submissions included that the purchase of the land is not a matter before the Panel.

²²⁰ Ibid, para 48

²²¹ Doc 16

²²² For example, LS5 and LS 21

²²³ Hearing, 8/8/2017

²²⁴ Hearing, 6/6/2018

²²⁵ Doc 16, p31

²²⁶ Doc 38, Reclamation Management Plan: Oakleigh Extraction Site EIL 44 and 1322, prepared by Pioneer Concrete August 1994

11.3 Discussion

It seems that at least a substantial group in the local community have had a long held expectation that the Amendment site would be purchased by the Council and converted to a recreational use. This belief has some foundation in so far as this possibility is mooted in the section 173. Also, it is not an unusual practice to convert former quarry sites to public open space as was submitted by Mrs Valente.

The Panel agrees with the submissions for the Proponent, however, that it is beyond the ambit of this Amendment, and the Panel's remit, for the Panel to make any recommendation to Council to take up the entitlement to buy the site. The Panel is also of the view that the section 173 agreement neither mandates the sale of the land to the Council nor its purchase by the Council, it simply provides for this possibility if the Council wished to activate the owner's obligation in this regard.

The Panel's consideration with respect to open space is therefore confined to whether there is such a need for open space in this area that it demands that the proposed use for housing or other built urban uses should be set aside in favour of it.

In this respect, there is a comprehensive analysis of open space requirements for the period to 2026 in the draft Open Space Strategy 2017 which generally supports Mr McGurn's conclusion that Oakleigh South is well served by public open space.

The Panel does note, however, that Clause 21.10 of the local planning policy framework of the Planning Scheme identifies the following further strategic work in relation to open space:

- *Undertaking a review of open space allocation across the municipality and developing a strategy to ensure equality of access from residential, industrial and business areas as appropriate.*

This may offer an opportunity to revisit the matter of open space availability in South Oakleigh.

11.4 Conclusions

The Panel concludes that:

- Council is not obligated to purchase the site for open space and it is not the role of the Panel to recommend that it must do so.
- There is no acknowledged demand for additional public open space in Oakleigh South.

12 Other issues

In this chapter we include for completeness some of the other less central matters raised at the Hearing. These issues do not form a basis for our recommending that the Amendment not proceed but they are included to inform future considerations about the use of the site. If the Amendment were to proceed against our recommendations, the comments about development contributions and community consultation might be taken into account.

12.1 Ecology

(i) The issue

- Has the ecology of the site been adequately assessed?

(ii) Evidence and submissions

The Panel was provided with an Ecological Assessment undertaken by Ecology and Heritage Partners in 2014.²²⁷ This assessment consisted of a desktop study of relevant databases to identify the flora and fauna that might be present at the site. The desktop study was followed by a 'rapid'²²⁸ site survey on 29 September 2014. While the report noted that due to the short duration of the site survey some migratory, transitory or uncommon fauna species and annual or cryptic flora species may have been missed, Ecology and Heritage Partners considered the site survey of terrestrial flora and fauna was 'adequate'.

Ecology and Heritage Partners identified three small patches of native vegetation: one patch of Coastal Tea Tree; and, two groups of River Red Gums. Ecology and Heritage Partners assessed them to be less than 10 years old. The two patches therefore do not require a permit for removal according to the Native Vegetation Information Management Tool (Department of Environment, Land, Water and Planning).

In addition, there were five scattered trees on the site, two dead stags and three Gippsland Manna-gums which are proposed to be removed. These were determined to equate to the removal of 0.355 hectares of native vegetation requiring a native vegetation offset of 0.011 General Biodiversity Equivalence Units. A planning permit will be required to remove of these trees and is likely to include the offset as a condition. If the trees are to be retained, then Tree Retention Zones will likely be applied and be included in any Construction Environment Management Plan.

According to Ecology and Heritage Partners no national or State significant flora species were considered likely to grow on the site.

Ecology and Heritage Partners also considered that a Weed Management Plan may be required as some noxious weeds were found on the site to remove weed and fauna species and due to the presence of pests a pest eradication plan may be required.

It was also considered that there is a low possibility that the critically endangered Swift Parrot and the Australasian Bittern may visit the site.

²²⁷Ecology and Heritage Partners Ecological Assessment at 1221-1249 Centre Road, Oakleigh South, Victoria, project number 5372, 2 October 2014

²²⁸ Ibid page 2

As there were other frogs in the dams, the Growling Grass Frog (also known as the Southern Bell Frog), which is listed as vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and threatened under the Victorian *Flora and Fauna Guarantee Act 1988*, had a moderate likelihood of being present as the onsite habitat was considered suitable for this frog together with its presence having been recorded within one kilometre. Ecology and Heritage Partners recommended that additional surveys of the site be undertaken, on two non-consecutive nights from November to March, to determine whether the Growling Grass Frog is present.

During the August 2017 accompanied site inspection, the sound of frogs was heard coming from Zones 2 and 4.

We were told for the Proponent at the Hearing that there had been no progress on any further ecological assessment and that it is not an issue related to the matter before the Panel.²²⁹ However a copy of a 24 December 2014 report by Ecology and Heritage Partners, 'Targeted Growling Grass Frog *Litoria raniformis* surveys at 1221-1249 Centre Road Oakleigh South' was later provided to the Panel.²³⁰ Surveys for the frog had indeed been conducted on 1 and 3 December 2014 using the call of the male frog to elicit responses from other adult frogs as well as an active search for the frog. No Growling Grass Frogs were observed. Other frogs - the Common Froglet, the Southern Brown Tree Frog and the Striped Marsh Frog - were heard on both occasions in and around the dams and water pools. The Ecology and Heritage Partners' Zoologists assessed that the site is unlikely to provide habitat for the Growling Grass Frog and the site was unlikely to support an 'important population' of the species.²³¹

(iii) Discussion

The site is highly modified through the past activities conducted there. Many parts of the site are also difficult to assess due to resulting terrain from past activities. Nevertheless, Ecology and Heritage Partners were able to assess the site with the assistance of aerial photos and as much on the ground survey work as possible.

(iv) Conclusions

The Panel concludes that:

- The Ecology and Heritage Partners' assessment is adequate to indicate that there are no nationally or state significant flora or fauna species on the site.
- Whenever development would proceed on the site, a weed and pest management plan is appropriate and as well as a Construction Environment Management Plan if the scattered trees are to be retained.
- If the trees are to be removed, a native vegetation offset of 0.011 General Biodiversity Equivalence Units is required.

²²⁹ Hearing, 8/8 2017

²³⁰ Doc 51, 30/10/2018

²³¹ Ibid, p 5

12.2 Development contributions

(i) The issue

- The question is whether a Development Contributions Plan Overlay (DCPO) or some other form of development contributions requirement should be applied to this land.

(ii) Submissions

The Council resolved, in response to the VPA submission, that it would recommend the inclusion of a DCPO for this land as an addition to the exhibited Amendment.

With respect to this issue, the Council submitted:

The Council acknowledge that there will be considerable development costs involved in the remediation and rehabilitation of the site and that will result both in a commercial benefit to the proponent and in a net community benefit.

However, as VPA recommended in its submission, as a large infill site the inclusion of a requirement for a development contribution is appropriate. This is also consistent with the approach that was taken in Amendment C125 for the renewal/growth areas of Clayton and in other recent Panel reports for Flemington Life and the Moonee Valley Racecourse.

The State Government is currently finalising an “off the shelf” development contribution for application in urban infill areas. It is appropriate to apply a Development Contribution Overlay to the site now. This introduces the collection mechanism, allowing Council to secure agreement payment of the contribution in the future, once introduced by the State Government.

This approach is also consistent with the degree of flexibility around potential urban land uses that arises from the remediation and management of the site.

12.2.2 Discussion

The proposal described above is in effect to add a DCPO to this land in advance of any schedule to the DCPO which would set the contribution to be paid.

The Panel considers that the payment of development contributions would not be inappropriate if the land were to be developed as proposed, given the public infrastructure implications of a large new community being introduced to the area. The Panel is, however, not certain that such an inclusion (an overlay without a schedule) in the Planning Scheme would be sanctioned by DELWP. The Panel also has concerns that a two-stage introduction of a DCPO would effectively preclude fair participation in the Scheme amendment process. Nor was such an overlay a component of the exhibited Amendment.

The Panel recommends that if the land is to eventually be developed for urban purposes, the Council should consider other development contribution mechanisms, such as permit conditions or section 173 agreements.

12.2.3 Conclusion

In the event that the site is to be developed for urban purposes, any proposal to introduce a DCPO without a schedule would not be appropriate.

12.3 Subdivision

(i) The issue

- Concern that small lots into which part of the land is already subdivided might be sold to unwitting buyers.

(ii) The submissions

This was an issue raised by the Neighbours' Group.

The submissions for the group raised concerns that part of the land was already subdivided into small lots and these could be sold off to unwitting buyers who may not realise the difficulties of the site development or who may 'cherry pick' the less difficult parts to develop.

The Proponent indicated a preparedness to accept a requirement to consolidate the titles to the land to overcome this concern.

The Neighbours' Group did not favour any such requirement: it was submitted that this would interfere with the property rights of the owner.

(iii) Discussion

The Panel does not consider the Neighbours' Group's concern to be a realistic one. To begin, if this matter is a problem, it exists now and is not something which would be a product of the Amendment. Also, the land is subject to an Environmental Audit Overlay and the difficulties of site development can be seen upon inspection. Further, the small lots are principally located in the SUZ rather than the GRZ2. The SUZ has an only limited range of uses permissible.

The Panel also considers that if this issue were of concern to the Council, either there could be a requirement for site consolidation or imposition of a Restructure Overlay.

(iv) Conclusion

The Panel concludes:

- the issue of the existing subdivision pattern does not appear to be a problematic one.

12.4 Impacts of post-remediation development

(i) The issue

- The issue is whether amenity issues for neighbours would arise if the site was developed as shown on the Comprehensive Development Plan.

(ii) Submissions and evidence

As noted in Section 1.6 of this Report, some of the original submitters raised amenity issues in terms of direct impacts for their properties from post-remediation development of the land, including by commercial developments in the mixed use area. There were also concerns expressed about traffic impacts and opposition to any re-opening of Talbot Avenue.

Some of the late submitters similarly addressed amenity issues and expressed opposition to higher density development on the land.

(iii) Discussion

The Panel agrees with the submissions for the Council that, if contrary to the Panel's recommendation, the Amendment were to proceed, these matters potentially could be addressed in the ODP required for the site by the CDZ schedule and which is proposed to accompany planning permit applications. Public notice is intended and enables input by affected local residents. The Panel notes that the re-opening of Talbot Avenue is not proposed in the Comprehensive Development Plan.

12.4.2 Conclusion

The Panel concludes:

- Amenity impacts on adjoining residential properties can be better dealt with when the ODP is under consideration.

12.5 Community consultation

(i) The issue

- Do arrangements for community consultation support the Amendment?

(ii) Evidence and submissions

The establishment of a community consultation arrangement was a requirement of the 1993 section 173 agreement which resulted from an AAT settlement.²³² Under that agreement, the owner of the land and the Council were required to establish a Community Consultation Committee for the purposes of monitoring compliance with the agreement as well as any relevant licences and permits. It is specified in the agreement that the Committee was to have two owner representatives, one representative from the Department of Manufacturing and Industry Development, three representatives from Council and three local residents. Meetings were required to be held every three months or at intervals determined by the Committee.²³³

Long-time residents of the area, Mr Chua and A and R Green, advised that the inaugural meeting of that Consultative Committee was only held on 30 September 2015 and included representatives of the local community, the Council, the Proponent and various advisors to the Proponent.²³⁴ According to the minutes of this first, and the only, meeting, the establishment of the Committee related to the back filling works only. It was said that the Committee had been established to enable direct dialogue with nearby residents while construction works were underway. The minutes also indicate that local residents would be advised through a newsletter drop about the works, including the start date of the backfilling works and the complaints procedure. The minutes record that the next meeting of the Committee would be approximately one month before backfilling works started.²³⁵

²³² The AAT was the predecessor to VCAT

²³³ Doc 2, Tab 5.

²³⁴ LS21 and LS56

²³⁵ LS56 attachment

The Proponent held two community information sessions in recent times in relation to the current activities on the site enabled by the 2015 permits: in November 2015 and January 2017.²³⁶

It appears also that between November and December 2017, there was some email correspondence between a Mr Green and D McInerney and Mr Slimmon about complaints from residents concerning work being undertaken outside permitted hours. Mr Slimmon responded and proposed that there be a community meeting in early 2018 as well as a quarterly community newsletter once backfilling started.

Ms Czajkowska submission lists some of the complaints she made in the period from September to December 2017 to EPA about odours from the site. She said that she received no follow up. She also complained to the Council. She said that this was also to no avail.²³⁷

Other submitters, including K and D Toth and Mr Chua, complained about recent and past odour, dust and noise coming from the site.

The conditions of the 1 June 2015 Planning Permits for backfilling and stockpiling both include a requirement that the operator must respond to all complaints within 24 hours and that the Responsible Authority informed of the complaints and the action taken.²³⁸ The exhibited schedule to the CDZ made no mention of any community consultative arrangement and the final re-draft of CDZ schedule requires that, as part of the Construction Management Plan, only a complaints handling process be established.

(iii) Discussion

Since 1993 there has been a requirement in the section 173 agreement that there is to be consultation with the community in relation to activities on the site allowed by planning permissions. There was no evidence presented to the Panel that indicated that the past and present owners had complied with this requirement before September 2015. Since 2015, after the backfilling and stockpiling permits were issued, communications have been limited to two information sessions and one Community Consultation Committee meeting about backfilling. Promises of newsletter drops appear not to have been fulfilled. It seems that no prior warning occurred of works commencing on the site.

The June 2015 planning permits also place complaints handling obligations on the owners. The submissions by some residents suggest that this also has not been complied with.

This history of non-observance of community consultation obligations is concerning in the circumstances of remediation works already taking place on this contaminated site and which are expected to continue for more than a decade.

The Panel supports the inclusion of a requirement for a Consultative Committee in any authorisation which applies to works on this land. It is nevertheless noted that it would only be when the 2015 permissions for early remediation works are no longer applicable and new authorisations would supplant them, that any requirement for such a Committee (whether or not this is included as a Construction Management Plan requirement) would have effect.

²³⁶ Doc 1, Presentation, G Slimmon, Sinclair Brooks

²³⁷ LS5

²³⁸ Doc 24 TPA43337, Condition 6 and in TPA43336

(iv) Conclusions

The Panel concludes that:

- There is a poor history of community consultation and complaints handling in relation to this site which goes back decades.
- Communications with local residents appear inadequate for a development of the size and scope proposed in this Amendment.
- The final re-draft of the schedule to the CDZ only proposed the establishment of a complaints handling process.
- The final draft of the CDZ schedule also envisages that the section 173 agreement would be ended which would discontinue that requirement for a Committee.
- Consideration should be given to establishing a Community Consultative Committee in relation to activities on the site, however this is done.
- This history of poor relations between owners and operators of the site and nearby residents is, however, not a reason for the Panel's recommendation that the Amendment not proceed.

13 Overall assessment

13.1 The Panel's assessment

In the foregoing chapters of this Report, the Panel has addressed the key issues and many of the other matters arising in submissions and at the Panel Hearing.

The Panel's key conclusions are:

- The evidence concerning the environmental condition of the land and its remediation prospects is incomplete and insufficient to persuade the Panel that the master planned urban community which is intended to follow the rezoning and as shown on the Comprehensive Development Plan is a likely outcome.
- The Panel considers that the geotechnical or structural issues and their interaction with the management of the contamination remediation works have not been adequately addressed.
- No suitable ongoing strategic management arrangements have been identified to manage risks during the lengthy staged development phases and in the post development period.
- No precedents for this proposal were identified – no sites to which the panel was referred was comparable in terms of scale and the combined geotechnical and contamination characteristics found at the subject site.
- The uncertainty which would remain, both at the time of rezoning and for some years to come, about the use which could be made of the subject land, makes the proposed statutory documentation confused and unworkable.
- While the strategic planning policies give general support to residential development in this locality, this presupposes the site itself can be made suitable.
- The information to hand recommends against the rezoning of this site in advance of a statutory environmental audit due to:
 - the size of this site; the extent and the even now not fully understood characteristics of the unregulated landfill
 - the absence of any buffer to existing and new residential development.
 - the site's contamination and structural problems being such that it is only the environmental audit process and a final structural assessment that will identify the purposes for which the land can be used and developed.

13.2 An alternative approach

The Panel's firm view is that with the exception of the correction of the boundary to the EAO, the Amendment should be abandoned, and that this land should be remediated and audited before the land is rezoned for urban purposes.

The Council should consider what else might be done in terms of statutory planning controls to further progress remediation and development of the site.

The Panel considers that an option might be to apply the new Clause 45.12 Specific Controls Overlay.²³⁹ This has replaced the former Clause 52.03.

²³⁹ The Specific Controls Overlay (SCO) replaces the particular provision Clause 51.01 - Specific Sites and Exclusions (previously Clause 52.03). It was introduced through VC148, gazetted 31/7/2018

The Panel considers that the ‘extraordinary circumstances’ test for application of the overlay can be met here. There simply is no zone available that offers the necessary flexibility required to accommodate both the remediation activities and the unknown future use and development without having to ‘artificially’ introduce a master plan or concept plan or nominate a new more particular zone.

The Panel considers that the land can be left in its current zoning for the present time and the overlay applied.

The new overlay provides:

Land affected by this overlay may be used or developed in accordance with a specific control contained in the incorporated document corresponding to the notation on the planning scheme map (as specified in the schedule to this overlay).

The incorporated document objectives could specify that it is an interim measure to enable/guide the remediation of the land which is intended to be used for residential or other urban purposes. This may give the owner/developer a degree of comfort about the outcome of a future rezoning request (assuming the contamination can be resolved and managed).

The overlay also provides that:

The specific control may:

- *Allow the land to be used or developed in a manner that would otherwise be prohibited or restricted.*
- *Prohibit or restrict the use or development of the land beyond the controls that may otherwise apply.*
- *Exclude any other control in this scheme.*

This appears to give flexibility to:

- exclude the ordinary operations of the current GRZ2 (and SUZ3) if considered appropriate
- introduce title consolidation and re-subdivision controls if considered to be required (though the Restructure Overlay may instead be useful in this regard)
- introduce requirements protecting neighbourhood amenity
- introduce requirements for the staging of remediation and development
- require development of an ongoing management plan and other requirements such as a geotechnical review before any future change of zoning
- introduce a ‘blanket’ permission requirement
- specify uses and developments exempt from the need for permits if they are considered required in the interim rehabilitation period
- include decision guidelines.

The Panel suggests that the intended post-rehabilitation development of the land once identified and cleared by an audit might then receive authorisation via a section 96A process.

13.3 Recommendation

Based on the reasons set out in this Report, which include the extent of contamination, inadequate planning for ongoing management, geotechnical uncertainties, incomplete and ongoing environmental information requirements, and statutory drafting difficulties, the Panel recommends that, except for the proposed extension to the Environmental Audit Overlay which should proceed, Monash Planning Scheme Amendment C129 be abandoned.

Appendix A Submitters to the Amendment

Original Submitters

No.	Submitter
1	South East Water (no comment)
2	Anthony Sammut
3	Colin Owen
4	City of Kingston officers
5	EPA (x2)
6	Michael Bunter
7	Victorian Planning Authority (x2)
8	A & S Valente & Associates Pty Ltd

Late Submitters

No	Submitter	No	Submitter
1	Su Lan Li	21	Jorgen Anderson
2	Colin Nicholl	22	Kathie Toth
3	Ron Hotton	23	Agneta Bell
4	Maria Velandi	24	Tim Collings
5	Anthony Sammut	25	Dorothy Toth
6	Rory Knowles	26	Kathryn Mackay
7	Angela Guidetti	27	Chris Murphy
8	Anastacia Moutsoulas	28	Ami Collings
9	Gauri Sanjanwola	29	Nadia Lu
10	Anna Cunico	30	Matthew Ellis
11	Angela Tsolaksis	31	Marisa Mowszowski
12	Chris Gatas	32	Ying Chan
13	Chrisoula Lingiaris	33	Graham Waddingham
14	E Lingiaris	34	Curt Thompson
15	George Lingiaris	35	Oksana Thompson
16	Evangelos Lingiaris	36	Rui Li
17	Daisy Qu	37	Robert Collins
18	Sofie (surname not provided)	38	M Michalopoulos
19	Raymond Lancelo	39	Alberto Cunico
20	John Pappioannou	40	I Cipusey

No	Submitter
41	Alex Harrison
42	Koula Myrionteis
43	Emily Katz
44	Laz Kasidiaris
45	E Drakos
46	N Drakos
47	M Alipan
48	Ron Costanzo
49	Colin Schoknecht
50	Lyell Schoknecht
51	Helen Stoupas
52	Maria Bonica
53	Helen Dempsey
54	Matthew Foley
55	Carlyn Bacvers
56	Maria Carnibell
57	Matthew Foley
58	Hilary Silva
59	Penelope Silva
60	Alan Rushen
61	Robert Shau
62	Liu Jian Feng
63	Brian Mallett
64	J Mallett
65	Miranda James
66	Peter James
67	Robyn Rushen
68	John Aivali
69	Kay Collins
70	Michelle Rushen
71	Lu Yun Shaw
72	Martin James
73	Louise James

No	Submitter
74	Maria Kouimtzis
75	Chris Mannering
76	Olivia Mannering
77	Elvia Menegatti
78	Susana Altoi
79	Nicholas Buick
80	Elizabeth Buick
81	Polydocos Antomiou
82	John Wilson
83	Sandra Nezerits
84	Maggie Durkin
85	Richard Menegatti
86	Despina Antoniou
87	Mary Patria Hotton
88	Arun Sugathan
89	Lance Hodgson
90	Sandra Hodgson
91	Fani Giannakis
92	Shahuir F (surname not provided)
93	Jonathan Tarjan
94	Ildiko Tarjan
95	Frank Tsan
96	Doron Bitterfeld
97	Hue Tsau
98	Geoff Foster
99	Anastasios Tsolakis
100	Lamrini Tsolakis
101	Kana Cooper
102	Jim Stav
103	Peter James
104	Jodie Smith
105	Scot Plummer
106	Margaret Brooker

No	Submitter
107	Nikki Kennedy
108	Fergal Hourihane
109	Katie Harley Li
110	Daniel Smith
111	Stephanie Cash
112	Jeremy O'Sullivan
113	Sonya Moreland
114	Tim Moreland
115	Lexie Seward
116	Rene Stolyнк
117	Steven Kyxontok
118	Chris McConnell
119	Simon Myers
120	Sarah House
121	Paula Hillis
122	Peter Higgins
123	K Hristodoulak
124	Sunil Sharma
125	Geethar Dheer
126	Caroline Servadei
127	Sarah Jane Moloney
128	Andrew Allan
129	Pankay Dheer
130	Jon Li
131	V Heinze
132	Craig Benson
133	Ina Knott
134	Mitchell Hudson
135	Anthea Hall
136	Paul Smith
137	Rafea N Hointoya
138	Rosa Cardona
139	Nikita Moutsoulas

No	Submitter
140	Rebecca Hateley
141	Irene Smith
142	Neville Smith
143	Greg Diamond
144	Name not given
145	Helen Kasidaris
146	D Mitrios
147	G Raditis
148	Dawn Rhodes
149	Litsa Karras
150	G Raditis
151	Christina Tsaltas
152	H Houttin
153	Wendy McPhee
154	Frank Subasi
155	Gavin Hopper
156	Miriam Poon
157	Christine Reeves
158	Adam Barakat
159	Shu Kong Lhang
160	Shirley (surname not provided)
161	Martha Morrow
162	Peter Chau
163	Joe Bonica
164	Tatyana Leznik
165	Lam Bgu Tran
166	Adriana Bonica
167	Paschal D'Onofr
168	Phillip Pham
169	Van Thu Phan
170	Tonia Nhi Pham
171	Scott Fu
172	Lingling Wu

No	Submitter
173	Dewlong Fu
174	Sue Chua
175	Luba Galashchuk
176	Kvita Galashchuk
177	Vlad Galashchuk
178	Michele Cimino
179	Franca Cimino
180	Izabella Leznik
181	Roman Leznik
182	Andrew Celle
183	Jenny Celle
184	Lew Celle
185	Minh Phu Vuu
186	Thi Cam Tuy - Nguyen
187	Brooke Flanders
188	Grant Uthmeyer
189	Harry Kasidaris
190	Daniel Rawlins
191	Jemma Rawlins
192	Merri Saunders
193	Mario Annarella
194	George Hondros
195	Mario Burrows
196	Joe Bernardo
197	Caro Linx DiConillo
198	Anastasios Shassiou
199	Christabell B
200	Mark Yin
201	Richard Menegatti
202	Alan van dan Bosch
203	Paul Shepard
204	Richard Predl
206	Robyn Scarfe

No	Submitter
207	Rachel Benson
208	Lisa Gleeson
209	Gavin Cooke
210	Kate McBride
211	Eloisa Ndorfer
212	Ren Downing
213	Sharyn Gordon
214	Kate Rawlinson
215	Ian Letcher
216	Dean Moloney
217	Mark Dessent
217A	Jodi Dessent
218	Jonathon Carter
219	Sarah Carter
220	C.H. Carvill
221	Dot and Ken Jenkin
222	Helene Longton
223	C.S. Garnier
224	R.F. Garnier
225	Debbie Campbell
226	Nathan Claxton
227	Pat Hill
228	Ann Koch
229	Unclear
230	Wilma Wheatland
231	Hui Shan Leong
232	David Logan
233	Kathryn Sloan
234	Willam Rendall
235	Anne Jenkins
236	Rob Gardiner
237	Con Petreropulos
238	Hayden (surname not provided)

No	Submitter
239	Emma Wallace
240	Lukas Stolarski
241	Denise Gianniakakis
242	Margaret Berry
243	Brian Berry
244	Jenni Sampson
245	Tass Georgas
246	Louise Berry
247	Lee Lan Li
248	Andrew Li
249	Terese Tran
250	Yue Wang (Michelle)
251	Qiyu Huo (Yulisa)
252	Jinfu Huo (Jeff)
253	Qiauang Huo (Harry)
254	Helen Berry
255	Dale Rawlinson
256	Adam Hayes
257	Kyung Hwan Kim
258	Leon E Borelli
259	Lisbeth Borelli
260	Andrea Young
261	Chris Georgiou
262	Dianne Georgiou
263	Robert Mete
264	Adele Mete
265	Perry Tasiopoulos
266	George Tasiopoulos
267	Edna House
268	Niabel Hibbert
269	Gordon Axon
270	Lorna Axonn
271	Jenny Wilson

No	Submitter
273	Kirstin Kenny
274	Avril Lochhead
275	Corey Houghton
276	Ian Letcher
277	Amanda MacPherson
278	Esmond Aponso
279	Mario Digregorio
280	Pat Hatton
281	JK Stewart
282	Julia Spina
283	Hilary Silva
284	Ashleigh Di Gregorio
285	Tony Di Gregorio
286	D Di Gregorio
287	Maria Di Gregorio
288	Frank Di Gregorio
289	Belinda Spina
290	Antonio Di Gregorio
291	Jonathon Carter
292	Sarah Carter
293	Willam Rendall
294	Mark Dessent
295	Debbie Campbell
296	Brendan Foley
297	Fiona Beveridge
298	A Tsolakis
299	K Filiopolos
300	Jim Raditsis
301	Claudia Nall
302	T Rogers
303	Cotiria Bonis
304	Angela
305	Helen Raditsis

No	Submitter
306	Matthew Nall
307	Spiridoula Antanapolou
308	Dimitrios Filiopolos
309	Netta Yogev
310	Michael McDermott
311	K A Morison
312	P.S and U.K Maheepa
313	P.S and U.K Maheepa (duplicate)
314	Ting Zhang
315	Marje Kamenev
316	Naomi Best
317	Ray Morton
318	Virginia Mansueti
319	Heather Murphy
320	Kon Georgakopoulos
321	Andrew Giannakopoulos
322	K Giannakopoulos
323	D Giannakopoulos
324	Ida Hill
325	Anastasia Scott
326	Nondas Economou
327	Filia Vecris
328	A Vecris
329	Stavros Melanitis
330	Vasiliki Melanitis
331	G Economou
332	Ting Zhang
333	K Czajkowska
334	Rebecca Czajkowska
335	Con Foundas
336	Irini Foundas
337	Georgia Foundas
338	Marylou A (surname not provided)

No	Submitter
339	Chris A (surname not provided)
340	Pat Hill
341	Rachel Benson

Appendix B Expanded late submissions and membership of Neighbours for Public Green Space, Oakleigh South Inc

Expanded late submissions

This is a list of those late submitters who made expanded submissions in response to the invitation of the Panel.

No.	Submitter	No.	Submitter
1	S Hodgson	31	A Starr
2	L Hodgson	32	C Starr
3	J Surace	33	R Starr
4	M Morrow	34	H Chen & N Lu
5	R Czajkowska	35	A & C Jenkins
6	R, E & S Menegatti	36	Y Chan & G Waddington
7	C Gatas	37	S Chua
8	A Tsolakis	38	L Celle
9	R Hateley	39	J Celle
10	K Kenny	40	D Filiopoulos
11	M Mowszowski	41	K Filiopoulos
12	M Ellis	42	V Nguyen
13	M Dias	43	A Bonica
14	K Toth	44	J Bonica
15	D Toth	45	M Bonica
16	L Stolarski	46	N Moutsoulas
17	A Celle	47	L Tsolakis
18	T Leznik	48	A Tsolakis
19	R Leznik	49	T Rogers
20	T Leznik	50	M Rogers
21	P Chua	51	Later withdrawn
22	L Schoknecht	52	Later withdrawn
23	M, R & L McDermott	53	C Deng
24	H Dempsey	54	A Zhang
25	P Antoniou	55	V Tang
26	D Antoniou	56	A & R Green
27	L Wu	57	O Murashova & C Thompson
28	H Fu	58	K Galashchuk
29	S Fu	59	L Galashchuk
30	A Moutsoulas	60	V Galashchuk

No.	Submitter	No.	Submitter
61	I Galashchuk	75	B Flanders
62	N Galashchuk	76	G Uthmeyer
63	B Lim	77	J Spina
64	J Lim	78	A Di Gregorio
65	H Lim	79	M Di Gregorio
66	N Buick	80	F Di Gregorio
67	L Buick	81	B Spina
68	J Jadenkus	82	D Giannakis
69	R Sharp	83	N & L McLeod
70	R Rushen	84	H Jinfu
71	A Rushen	85	W Yue
72	S Gordon	86	H Qiyu
73	A Lee		
74	H Qiguang		

Neighbours for Public Green Space, Oakleigh South Inc

Membership

Name	Name
Curt Thompson	Ying Chan
Oksana Thompson	Colin Jenkins
Peter Chua	Anne Jenkins
Susan Chua	Grant Uthmeyer
Harvey Fu	Brooke Flanders
Scott Fu	Andrew Green
Linda Wu	Sandra Hodgson
Richard Menegatti	Lance Hodgson
Susana Menegatti	Martha Morrow
Elvia Menegatti	Evangelina Tsolakis
Dorothy Toth	Christos Gatas
Kathie Toth	Julia Spina
Alvin Lee	

Appendix C Document list

This document list refers to the Panel Hearing documents as well as the extensive inter-Hearing and post-Hearing correspondence

No.	Date	Description	Presented by
1	8/8/2017	Presentation	Mr G Slimmon, Sinclair Brooks
2	8/8/2017	Folder of Documents	Ms L Hicks for Monash CC
3	8/8/2017	Submission	Ms L Hicks for Monash CC
4	8/8/2017	Flemington Hill & Epsom Road AC Stage 4 Report, 3 June 2016, pages 79-84	Ms L Hicks for Monash CC
5	8/8/2017	Moonee Valley Racecourse Redevelopment AC Report, 19 December 2013, pages 127-130	Ms L Hicks for Monash CC
6	10/8/2017	Yarra Planning Scheme, Schedule 11 to Development Plan Overlay, 18/7/2013	Ms L Hicks for Monash CC
7	10/8/2017	Whittlesea CC Meeting Minutes, 30/5/2017, pages 59- 70	Ms L Hicks for Monash CC
8	10/8/2017	EPA submission & attachment- October 2014 emails between Mr K Mival and others	Ms H Hutchinson, EPA
9	10/8/2017	Expert Evidence	Mr P Sinclair, Coffey Services Australia Pty Ltd
10	11/8/2017	Clause 21.05 Economic Development, Monash Planning Scheme	Ms L Hicks for Monash CC
11	11/8/2017	1213-1217 Centre Road, Oakleigh South Planning Permit TPA40514/A	Ms L Hicks for Monash CC
12	11/8/2017	Report NO. 210052, Environmental Audit of the Northern Portion of Lot 1 on PS419739 at 1213-1217 Centre Road Oakleigh South, Victoria, Environmental Earth Sciences Vic, April 2011	Ms L Hicks for Monash CC
13	11/8/2017	Expert Evidence	Mr S McGurn, Urbis
14	11/8/2017	Monash C129, Former Talbot Quarry and Landfill Comprehensive Development Plan 2016 Exhibition	Mr S McGurn, Urbis
15	11/8/2017	Expert Evidence	Mr I Pedler, Coffey
16	11/8/2017	Submission on behalf of Mr A Valente (with attachments A-F)	Mrs S Valente
17	11/8/2017	Environmental Auditor (Contaminated Land): Guidelines, EPA publication 759.3, Feb 2015	Ms J Lardner for Sterling Global

No.	Date	Description	Presented by
18	11/8/2017	Draft Schedule 2 to the Comprehensive Development Zone (incorporates revisions)	Ms J Lardner for Sterling Global
19	11/8/2017	Work Authority 389	Ms J Lardner for Sterling Global
20	11/8/2017	Oakleigh Planning Scheme, Planning Permit, Talbot Ave South Oakleigh, 1/5/1989	Ms J Lardner for Sterling Global
21	11/8/2017	Historic Photos of Site (Panel and EPA only)	Mr A and Mrs S Valente
22	31/8/2017	Mr P Hitchcock, Landfill Case Study, Australian Environmental Auditors	Mr A and Mrs S Valente
23	4/9/2017	Response 1 September 2017 to Panel Directions of 17 August 2017 including: <ul style="list-style-type: none"> Letter with definitions of Site Environmental Strategy Plan, Site Environmental Assessment and Site Remediation Plan Work Authority 389, Work Plan, approved 28 September 1998 Variation to Work Authority, 20 December 2001 Coffey Environments, <i>Remediation Options Report, 1221 to 1249 Centre Road & 22 Talbot Avenue, Oakleigh South, 27 May 2014</i> Schedule 11 to the DPO, City of Yarra Planning Scheme (Amcor, Heidelberg Road, Alphington) Site Layout Plan approved 28/9/1998 	Norton Rose Fulbright
24	11/9/2017	Planning Permit TPA / 43337 (endorsed 29/10/15) Construction Environmental Plan: <ul style="list-style-type: none"> Site zones and features Proposed works within boundary buffer zones Existing site levels and vegetation Extent of site for backfilling and stocking 	Ms S Hopkins, Monash CC
25	11/9/2017	Email, additional information	Ms H Hutchinson, EPA
26	9/10/2017	Letter and Mr K Mival Expert Witness Statement	Norton Rose Fulbright
27	12/10/2017	Schedule 2 to Comprehensive Development Zone	Ms L Hicks for Monash CC
28	12/10/2017	Outline of submissions	Ms J Lardner for

No.	Date	Description	Presented by
			Sterling Global
29	12/10/2017	Folder of Panel Documents	Ms J Lardner for Sterling Global
30	12/10/2017	Proforma requests for Monash CC to purchase site	Ms L Hicks for Monash CC
31	12/10/2017	Notification plan	Ms L Hicks for Monash CC
32	12/10/2017	BS 8485:2015 Code	Ms J Lardner for Sterling Global
33	16/10/2017	Letter to ERR	Panel
34	30/10/2017	<i>Assessing planning proposals within the buffer of a landfill</i> (EPA publication 1642, October 2017)	Panel
35	30/10/2017	C129 Talbot Quarry Open Space Proforma Submissions (summary table)	Ms L Hicks for Monash CC
36	30/10/2017	Response to Panel Questions (Table)	Mr I McLeod, Earth Resources Regulation
37	30/10/2017	Attachment 1 to Document 38	Mr I McLeod, Earth Resources Regulation
38	30/10/2017	Reclamation Management Plan - Oakleigh Extraction Site (EIL 44 & 1322) prepared by Pioneer	Mr I McLeod, Earth Resources Regulation
39	30/10/2017	Attachment 2 to Document 38	Mr I McLeod, Earth Resources Regulation
40	30/10/2017	Attachment 3 to Document 38	Mr I McLeod, Earth Resources Regulation
41	30/10/2017	Attachment 4 to Document 38	Mr I McLeod, Earth Resources Regulation
42	30/10/2017	Attachment 5 to Document 38	Mr I McLeod, Earth Resources Regulation
43	30/10/2017	Additional late submissions	Ms L Hicks for Monash CC
44	30/10/2017	Summary of late submissions	Ms J Lardner for Sterling Global
45	30/10/2017	Letter with comments on Remediation Options Analysis, from Mr P Sinclair, Coffey	Ms J Lardner for Sterling Global
46	30/10/2017	Schedule 2 to Comprehensive Development Zone (tracked changes)	Ms J Lardner for Sterling Global
47	30/10/2017	Public Notification – List of Names (TPA/43336)	Ms J Lardner for Sterling Global

No.	Date	Description	Presented by
48	30/10/2017	Public Notification – List of Names (TPA/43337)	Ms J Lardner for Sterling Global
49	30/10/2017	Submission on behalf of Mr Angelo Valente re Work Authority and Work Plan	Mrs S Valente
50	30/10/2017	Council Meeting 28 April 2015 Section 4.2	Ms L Hicks for Monash CC
51	30/10/2017	Targeted Growling Grass Frog <i>Litoria raniformis</i> surveys, Ecology & Heritage Partners (Panel only)	Ms J Lardner for Sterling Global
52	30/10/2017	Planning Map – Talbot Quarry title particulars	Ms J Lardner for Sterling Global
INTER-HEARING DOCUMENTS			
53	30/10/2017	Additional late submissions to date – 224 (emailed, Panel only)	Mr S McNamee, Monash CC
54	8/11/2017	Further directions from the Panel	Panel
55	10/11/2017	Notice to be sent to late submitters	Panel
56	10/11/2017	Corrected summary of 343 late submissions - response to Direction 3 (emailed, Panel only)	Mr S McNamee, Monash CC
57	14/11/2017	Confirmation that notice to late submitters sent - Response to Direction 4	Mr S McNamee, Monash CC
58	16/11/2017	Email from Panel re: Direction 11	Panel
59	16/11/2017	Email to Norton Rose Fulbright, regarding Direction 12 and requested documents	Mrs S Valente
60	16/11/2017	Email and attachments: <ul style="list-style-type: none"> • Letter • Track changes of CDZ Schedule 2 (Direction 6) • Targeted Growling Grass Frog survey report by Ecology and Heritage Partners (Direction 13) 	Norton Rose Fulbright
61	21/11/2017	Email and letter regarding site inspection follow up and Urbis legal advice (Directions 1,2 &12)	Norton Rose Fulbright
62	21/11/2017	Email and attachments responding to Norton Rose Fulbright letter regarding Direction 12	Mrs S Valente
63	22/11/2017	Legal advice and copy of email correspondence between DEDJTR and Daniel Fyffe, Hanson (Direction 10)	Mr D Wilson, ERR
64	28/11/2017	Draft CDZ Schedule 2, (Response to Direction 6) Remediation of Talbot Reserve (Response to Direction 15)	Ms S Hopkins, Monash CC

No.	Date	Description	Presented by
65	10/11 - 30/11/2017	Bundle of 86 written submissions to Panel from late submitters to Council	Various
66	30/11/2017	Email and attachments: Draft CDZ with tracked changes EHP - Growing Grass Frog targeted survey report Copy of NRF 15/11/2017 letter to Panel	Mr S McNamee, Monash CC
67	30/11/2017	Email and letter	Dr C Thompson, submitter
68	4/12/2017	Further Directions Advice from DEDJTR (ERR) Email from WA holder Spreadsheet - Talbot Quarry proforma update	Panel
69	5/12/2017	Letter and redacted copy of Urbis advice (Direction 3)	Norton Rose Fulbright
70	8/12/2017	Response to Direction 4	Mr D Wilson, ERR
71	18/12/2017	Email and attachments Letter with responses to directions Copy of objection to 1221-1249 Centre Road Oakleigh South permit applications Copy of email from G Slimmon regarding Community Consultative Committee	Mrs S Valente
72	19/12/2017	Further Directions	Panel
73	19/12/2017	Letter (emailed) regarding ERR (Direction 2)	Mr S McNamee, Monash CC
74	19/12/2017	Letter (emailed) response to Direction 6	Norton Rose Fulbright
75	19/12/2017	Further Directions	Panel
76	20/12/2017	Letter to ERR and attachments	Panel
77	27/12/2017 – 25/1/2018	Request to be heard forms	Various
78	4/1/2018	Letter – request for extension of time (Direction 9)	Ms E Paddle, ERR
79	5/1/2018	Response to ERR 4/1/2018 letter	Panel
80	29/1/2018	Letter and copy of 16/1/2018 letter from Mr Sean McNamee, Monash CC	Ms A Wiltshire, DEDJTR
81	1/2/2018	Copies of authorisations to be represented by Neighbours for Public Greenspace, Oakleigh South Inc	Dr C Thompson
82	6/2/2018	Request to change hearing dates	Hall & Wilcox

No.	Date	Description	Presented by
83	6/2/2018	Panel Direction, Document list V5, letter from Ms A Wiltshire 25/1/2018, letter Doc 80, Doc 78	Panel
84	7/2/2018	Request for missing documents	Ms S Hopkins, Monash CC
85	8/2/2018	Letter re 6/2/2018 Panel Directions	Hall & Wilcox
86	8/2/2018	Panel Direction	Panel
87	13/2/2018	Response to email Doc 85	Panel
88	16/2/2018	Letter	Ms G Guthrie, Guthrie Legal for Neighbours for Public Green Space, South Oakleigh Inc
89	19/2/2018	Email acknowledging withdrawal by two submitters	Panel
90	19/2/2018	Directions 16 February 2018	Panel
91	22/2/2018	Email and attachment responding to Panel Direction	Ms S Hopkins, Monash CC
92	27/2/2018	Email and documents for Monash CC website	Panel
93	27/2/2018	Email request for documents	Ms S Hopkins, Monash CC
94	3/3/2018	2 emails requesting extensions to respond Directions	Ms S Hopkins, Monash CC
95	6/3/2018	Email noting Document 94	Panel
96	15/3/2018	Letter	Hall & Wilcox
97	16/3/2018	Response to Direction 4	Ms S Hopkins, Monash CC
98	16/3/2018	Letter re: expert evidence	Guthrie Legal
99	19/3/2018	Letter re: parties represented	Guthrie Legal
100	19/3/2018	Letter part response to Direction 5	Ms A Malhotra, DEJTR for ERR
101	20/3/2018	Email re: RTBH	Panel
102	21/3/2018	Email: do not wish to be heard	Ms R Czajkowska
103	23/3/2018	Letter to Ms S Hopkins: Follow up on Direction 4	Panel
104	23/3/2018	Letter to Ms G Guthrie: re additional documents	Panel
105	29/3/2018	Direction 5 response - Joint Statement	Ms S Hopkins, Monash CC
106	6/4/2018	Response to Direction 22 March - Minutes and Title	Ms S Hopkins, Monash CC

No.	Date	Description	Presented by
107	10/4/2018	Hearing Timetable	Panel
108	11/4/2018	Letter to Panel	Guthrie Legal
109	16/4/2018	Letter to Mr R O'Connor	Panel
110	16/4/2018	Letter to Ms G Guthrie	Panel
111	26/4/2018	Email 1: <ul style="list-style-type: none"> file ENA UABTF00751AA_R06 (Rev 03), Workplan for Supplementary ESA, Coffey, 12/8/2015 file ENA UABTF00751AA_R06 (Rev03) V1, Fill Assessment in Zone 1, 1221 to 1249 Centre Road & Talbot Avenue, Oakleigh South, Coffey, 10/9/2014 	Hall & Wilcox
112	26/4/2018	Email 2: <ul style="list-style-type: none"> Environmental Site Assessment, Former Pioneers Quarry, Talbot Avenue, HLA, Oakleigh 23/4/2004 Letter to Panel, 26/4/2018 	Hall & Wilcox
113	26/4/2018	Email 3: Environmental Site Assessment – Phase 3, Talbot Avenue, Oakleigh, HLA, 17/1/2015	Hall & Wilcox
114	15/5/2018	Letter to Council following up ongoing management arrangements	Panel
115	15/5/2018	Expert witness statement by Dr Lyndon Bell	Guthrie Legal
116	18/5/2018	Email & draft CDZ Schedule	Ms S Hopkins, Monash CC
117	21/5/2018	Email regarding serving Expert witness statement	Guthrie Legal
118	22/5/2018	Email request for time extension for expert statements in reply	Hall & Wilcox
119	22/5/2018	Email to Mr D Wilson, ERR, request for comments on CDZ Schedule	Panel
120	24/5/2018	Email: draft CDZ schedule with ERR inclusions	Mr D Wilson ERR, and Monash CC
121	24/5/2018	3 Emails re: recalling expert witnesses and date for expert statements	Hall & Wilcox
122	28/5/2018	Monash CC endorsement of ERR inclusions in draft CDZ Schedule	Ms S Hopkins, Monash CC
123	30/5/2018	Letter	Hall & Wilcox
124	30/5/2018	Evidence replying to Dr Bell – Mr Phil Sinclair	Hall & Wilcox
125	30/5/2018	Evidence replying to Dr Bell – Mr Ian Pedler	Hall & Wilcox

No.	Date	Description	Presented by
126	30/5/2018	Supplementary Witness Statement – Mr Ken Mival	Hall & Wilcox
127	30/5/2018	Witness statement by Mr Peter Flavelle and accompanying email	Guthrie Legal
128	1/6/2018	Supplementary Expert Witness Report of Dr Lyndon Bell	Guthrie Legal
RECONVENED HEARING DOCUMENTS			
129	4/6/2018	Submissions on behalf of Neighbours for Public Greenspace, Oakleigh South Inc, and others	Ms M Gassert for Neighbours for Public Greenspace, Oakleigh South Inc
130	4/6/2018	Folder of Documents	Ms M Gassert
131	4/6/2018	Amendment C129 Planning Map Monash Planning Scheme	Ms M Gassert
132	4/6/2018	Extract from Hansard 12 /9/1989	Ms M Gassert
133	5/6/2018	EPA further submissions	Ms M Vallas, EPA
134	6/6/2018	<i>Sita Aust and PWM Lyndhurst v Dandenong CC</i> [2007] VCAT 156	Ms Lardner for Sterling Global
135	6/6/2018	Further submissions	Mrs S Valente
136	6/6/2018	Letter 26/10/2017, Mr S McNamee, Monash CC to Dr Thompson, response to questions.	Ms L Hicks for Monash CC
POST RECONVENED HEARING DOCUMENTS			
137	7/6/2018	Directions	Panel
138	8/6/2018	Email with attachments: A. CDZ Schedule clean copy B. CDZ Schedule marked up copy	Hall & Wilcox
139	12/6/2018	CDZ Schedule marked up copy and accompanying email	Guthrie Legal
140	12/6/2018	Email with comments on CDZ Schedule	Mrs S Valente
141	14/6/2018	Letter from Mr I Pedler	Hall & Wilcox
142	20/6/2018	Directions	Panel
143	20/6/2018	Email and attachment in response to Panel Directions of 20/6/2018	Mrs S Valente
144	20/6/2018	Email and letter in response to Panel Directions regarding Harris Trains	Mrs S Valente
145	20/6/2018	Email regarding Harris Trains	Mr R Menegatti
146	22/6/2018	Email regarding Harris Trains	Ms S Hopkins, Monash CC

No.	Date	Description	Presented by
147	22/6/2018	Supplementary expert statements from Mr Sinclair, Mr Pedler and Mr Mival	Hall & Wilcox

Appendix D Background environmental reports

Author	Title	Report Date	Reference
A.S. James	<i>Proposed Elderly Persons Development, Part Volume 3645 Pioneer Site, Talbot Avenue, Oakleigh (Ref No. 100569)</i>	Jun-00	Mr Pedler EWS
AECOM	<i>Landfill Gas Monitoring and Reporting – Former Quarry, Talbot Avenue, Oakleigh South</i>	Nov-10	Mr Sinclair EWS
AMAL Black	<i>Proposed Residential Development Ex Pioneer Quarry Property Talbot Avenue Oakleigh, Geochemical Assessment of Environmental Embankments (Ref No. V500R Volume 1)</i>	May-00	Mr Pedler EWS
AMAL Black	<i>Preliminary Geochemical and Geotechnical Investigation, Ex Pioneer Quarry Property, Talbot Avenue, Oakleigh, Vic</i>	10 -May -02	Mr Sinclair EWS
AMAL Black	<i>Geochemical Assessment of Environmental Embankments, Ex Pioneer Quarry Property, Talbot Avenue, Oakleigh, Vic</i>	Sep--02	Mr Sinclair EWS
AMAL Black	<i>Hydrogeological Assessment, Ex Pioneer Quarry Property, Talbot Avenue, Oakleigh, Vic</i>	Sep-02	Mr Pedler EWS/ Mr Sinclair EWS
BFP Consultants	<i>Borehole Logs BH1 to BH6 drilled during the period from 26 to 27 July 2004</i>	Jul-04	Mr Pedler EWS
Coffey	<i>Geotechnical Advice Regarding Slimes, Former Pioneer Quarry Western Pit, Talbot Avenue, Oakleigh (Ref No. M5683/1-AF)</i>	Oct-04	Mr Pedler EWS
Coffey	<i>Preliminary Conceptual Geotechnical Design, Controlled Filled Former Quarry Pit (Zone 3 and the Plant Zone), Proposed Residential Development, Talbot Avenue, Oakleigh South (Ref: M5683/2-AI-Draft)</i>	Aug-05	Mr Pedler EWS
Coffey	<i>Geotechnical Investigation, Zone 3 and the Plant Zone, Proposed Residential Development, Talbot Avenue, Oakleigh South (Ref: M5683/2-AN)</i>	Dec-05	Mr Pedler EWS
Coffey	<i>Preliminary Conceptual Geotechnical Design, Controlled Filling of Former Quarry Pit (Zone 4), Proposed Residential Development, Talbot Avenue, Oakleigh South (Ref: 5683/2-AG)</i>	Jan-06	Mr Pedler EWS
Coffey	<i>Site Backfilling Protocol 1121-1249 Centre Road & Talbot Avenue, Oakleigh South, Victoria: (Ref ENAUBTF00751AA) R02 Final</i>	12-Aug-13	Mr Mival

Author	Title	Report Date	Reference
Coffey	<i>Huntingdale Estate - Development Proposal 1221-1249 Centre Road & 22 Talbot Avenue, Oakleigh South as presented to Council prepared by Urbis & Coffey</i>	7-Nov-13	Mr Mival
Coffey	<i>Concept Design Models, Huntingdale (Ref 9257AA-AJ Rev 2)</i>	Dec-13	Mr Pedler EWS
Coffey	<i>Draft Report for Talbot Road Finance Pty Ltd – Issues Summary Report 1129 to 1149 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic</i>	3-Dec-13	Mr Mival
Coffey	<i>Concept Design Report on Controlled filling of Zone 4 (Ref 8257AA-AI)</i>	Aug-13	Mr Pedler EWS
Coffey Geotechnics	<i>Report on Geotechnical Investigations, Huntingdale Estate, 1221 – 1249 Centre Road, Oakleigh South, Vic</i>	Dec-13	Mr Sinclair EWS/ Pedler
Coffey	<i>Workplan for Environmental Site Assessment: Zone 4 of 1129-1149 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic (Revised)</i>	14-Feb-14	Mr Mival
Coffey Environments	<i>Initial Site Investigation, 1221 to 1249 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic</i>	May-14	Mr Sinclair EWS
Coffey	<i>Huntingdale Estate Environmental Site Assessment – Zone 4 of 1221 to 1249 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic</i>	15-May-14	Mr Mival
Coffey	<i>Remediation Options Report – 1129 to 1149 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic dated 3 December 2013, Ref ENAUABTF00751AA - R04, subsequently finalised</i>	27-May-14	Mr Mival
Coffey Environments	<i>Issues Summary Report, 1221 to 1249 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic</i>	Jun-14	Mr Sinclair EWS
Coffey Environments	<i>Huntingdale Estate Zone 4 Environmental Site Assessment – Soil, Sediment & Surface Water, Zone 4 of 1221 to 1249 Centre Road and 22 Talbot Avenue, Oakleigh South, Vic</i>	Jun- 2014	Mr Sinclair EWS
Coffey	<i>Draft Report Soil, Groundwater and Landfill Gas Assessment 1121-1249 Centre Road & Talbot Avenue, Oakleigh South, Victoria, Ref ENAUABTF00751AA - R08a dated</i>	5-Jun-14	Mr Mival
Coffey	<i>Huntingdale Estate Zone 4 Environmental Site Assessment – Soil, Sediment & Surface Water</i>	24-Jun-14	Council
Coffey Environments	<i>Huntingdale Estate Environmental Site Assessment: Soil, Groundwater and Landfill Gas Assessment, 1221 – 1249 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic</i>	July 2014	Mr Sinclair EWS

Author	Title	Report Date	Reference
Coffey,	Environmental Site Assessment – Phase 3, Talbot Avenue, Oakleigh, HLA, 17/1/2015	10-Sep-14	Council
Coffey	Fill Assessment in Zone 1 1221-1249 Centre Road, & 22 Talbot Avenue, Oakleigh South, Vic	10-Sep-14	Mr Sinclair
Coffey	Site Environmental Strategy Plan 1221 to 1249 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic	28-Oct-14	Mr Mival
Coffey	Huntingdale Estate: Site Environmental Strategy Plan – 1221-1249 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic	28-Nov-14	Mr Mival
Coffey Geotechnics	Zone 4 Backfill Design Specification, Huntingdale Estate, Oakleigh South, Vic	Jun-15	Mr Sinclair EWS
Coffey	Zone 4 Backfill Design Report, Huntingdale Estate, Oakleigh South, Vic	Jun-15	Mr Pedler EWS/ Mr Sinclair EWS
Coffey	Workplan for Supplementary Environmental Site Assessment	1 Jun-15	Mr Mival
Coffey Environments	Workplan for Supplementary Environmental Site Assessment, 1221 – 1249 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic	Aug-15a	Mr Sinclair EWS
Coffey	Workplan for Supplementary ESA	12 Aug-15	Council
Coffey	Huntingdale Estate Zone 4 Backfill Design Report	25 Sep-15	Council
Coffey	Site Backfilling Protocol	25 Sep-15	Mr Sinclair EWS/Panel
Coffey Environments	Construction Environmental Management Plan – Backfilling Works, 1221 to 1249 Centre Road & 22 Talbot Avenue, Oakleigh South, Vic	Sep-15	Mr Sinclair EWS/Panel
Coffey	Zone 4 Detailed Design (9257AA-AQ Revision 10)	Sep-15	Mr Pedler EWS
Coffey	Zone 4 Construction Quality Assurance Plan, Huntingdale Estate, Oakleigh South, Vic	Nov-15	Mr Pedler EWS Mr Sinclair
Earth Sciences Vic	Report No. 210052, Environmental Audit of the Northern Portion of Lot 1 on PS419739 at 1213-1217 Centre Road Oakleigh South, Vic	Apr-11	Council
Ecology & Heritage Partners	Targeted Growling Grass Frog <i>Litoria raniformis</i> survey report	24 Dec-14	Proponent
Ecology & Heritage	Ecological Assessment at 1221-1249 Centre Road, Oakleigh South, Vic	2 Oct-14	Council

Author	Title	Report Date	Reference
Partners			
Golder Associates	<i>Report on Geotechnical Investigation, Talbot Avenue Quarry, South Oakleigh, Vic (Ref No. 00612002/008)</i>	Feb-00	Mr Pedler EWS
Golder Associates	<i>Draft Report on Preliminary Geotechnical and Contamination Assessment, Former Pioneer Quarry Site, Cnr Centre and Huntingdale Road, Oakleigh South (Ref No. 03612069/001)</i>	Jun-03	Mr Pedler EWS
Golder Associates	<i>Peer Review of the Backfill Design of Zone 4 Huntingdale Estate</i>	19 Feb-15	Council
HLA,	<i>Environmental Site Assessment, Former Pioneer Quarry, Talbot Avenue, Oakleigh, Vic</i>	23 Apr-04	Mr Sinclair EWS
HLA	<i>Environmental Site Assessment – Stage 2, Former Pioneer Quarry, Talbot Avenue, Oakleigh, Vic</i>	Jul-04b	Mr Sinclair EWS
HLA	<i>Stockpile Sampling, Talbot Avenue Development, Oakleigh</i>	May-05	Mr Sinclair EWS
HLA	<i>Environmental Site Assessment – Phase 3, Former Pioneer Quarry, Talbot Avenue, Oakleigh, Vic</i>	Jan-05	Mr Sinclair EWS
HLA	<i>Groundwater Numerical Modelling - Former Quarry, Talbot Avenue, Oakleigh, Vic</i>	Jul-05c	Mr Sinclair EWS
HLA.	<i>Assessment of Risk Posed by Landfill Gas - Former Quarry, Talbot Avenue, Oakleigh.</i>	Jan-06	Mr Pedler EWS/Mr Sinclair
Lane Piper	<i>Environmental & Geotechnical Feasibility, Talbot Avenue, Oakleigh South, Vic</i>	Nov-10	Mr Sinclair EWS
Lane Piper	<i>Landfill Gas Report of 1 November 2010, Talbot Avenue, Oakleigh South, Vic</i>	Nov-10	Mr Sinclair EWS
Senversa	<i>Letter to King and Wood Mallesons: Review of Environmental Matters – Site Environmental Strategy Plan</i>	27 Aug-15	Council
Tonkin and Taylor	<i>In-situ Soil Classification Assessment, Talbot Avenue, Oakleigh South, Vic</i>	May-11	Mr Sinclair EWS
URS	<i>Proposed Redevelopment of Talbot Road Landfill Site at 1221-1249 Centre Road, Oakleigh, City of Monash Victoria – Site Environmental Strategy Plan</i>	28 Nov-14	Mr Pedler EWS

Appendix E List of Panel Directions

Date	Summary of Direction
13/6/2017	Notice of Directions Hearing
06/7/2017	Hearing dates To be supplied <ul style="list-style-type: none"> • Statement of grounds by Sterling Global • Current zone and overlay map • Expert witness statement: <ul style="list-style-type: none"> - Contamination - Planning • Previous site contamination assessments • Environmental Site Assessment report, Coffey July 2014 • Ecological report (circa 2014) Previous planning reports (circa 2014) • Track changes of Amendment documentation
17/8/2017	To be supplied <ul style="list-style-type: none"> • Details of legal & practical responsibilities for monitoring and correcting failures, as well reporting and enforcement responsibilities and having regard to staged development • Copies of 2016 permits • Details about Cavanagh St Cheltenham site • Proposed ongoing management arrangements, post development, for ongoing monitoring of gas, leachate, groundwater and settlement on and off-site. • Management options to ensure soil is not disturbed & future building works avoid issues with landfill gas infrastructure • Definitions of SESP, ESA SRSP • Work Authority work plan for sand extraction • Plans from 1989 • Expert witness statement – Site Auditor
08/11/2017	Site visit arrangements copies of Copies to be provided: <ul style="list-style-type: none"> • late submissions and summary • legal advice to ERR re WA and Work plan • email from Hansen to ERR

Date	Summary of Direction
	<ul style="list-style-type: none"> • legal advice to Urbis concerning the planning applications in 2015 • Growling Grass Frog Survey report <p>Information to be provided:</p> <ul style="list-style-type: none"> • Draft letter to late submitters • Draft wording for inclusion of geotechnical review in CDZ Schedule 2 • Draft wording for inclusion of ODP in CDZ Schedule 2, • Drawing showing the footprint of the on-site landfill/s • Map showing original submitters • Addition advice on remediation options • Remediation issues arising from Talbot Reserve
04/12/2017	<ul style="list-style-type: none"> • Supply of outstanding responses to Directions • Parties may respond to ERR supplied legal advice • Request for Urbis legal advice • ERR to provide greater detail about the location of the sites in Western Australia • Parties may respond to late submissions
20/12/2017	Notice of Directions Hearing
06/2/2018	<p>Reconvened hearing dates</p> <ul style="list-style-type: none"> • Neighbours for Public Green Space, Oakleigh South Inc to provide details of its members, its legal representative, name of any expert witness/es and date for circulation of statement/s • Proponent to advise if witnesses to be recalled and date for these statements • ERR & Monash CC to provide a Joint statement re: status of WA • Council to: <ul style="list-style-type: none"> - upload documents onto website - provide information about issue of 1989 Planning Permit No. TP4731 for extractive industry by the City of Oakleigh, including whether this permit applied to the land then zoned Residential - advise on what 1954 zoning as depicted on the plan attached to the Council letter (Exhibit 78) and then details of any subsequent rezoning - provide more details about Talbot Park including gas migration, any groundwater, land subsidence problems and revegetation experience - make recommendations on ongoing management arrangements in response to the earlier Panel Direction 6 of 7 November 2017
16/2/2018	<p>Confirmation of hearing dates</p> <p>Council to advise on Documents held</p>
23/3/2018	<p>Council to:</p> <ul style="list-style-type: none"> • provide copy of Council minute regarding TP4731

Date	Summary of Direction
	<ul style="list-style-type: none"> • clarify its response regarding Talbot Park or provide further information • respond to previous request concerning ongoing management arrangements • put documents on website • ERR and Council to provide joint statement
23/3/2018	Neighbours to advise on requested documents
10/4/2018	Hearing timetable
16/4/2018	Proponent to provide certain reports
15/5/2018	Further request to Council to advise on ongoing management arrangements
07/6/2018	<p>Further hearing scheduled</p> <p>Parties to workshop CDZ Schedule</p> <p>Redrafted CDZ Schedule to be circulated and comments invited on redraft</p> <p>Mr Pedler to provide response re: Harris trains and comments invited</p>
19/6/2018	<p>The Valentines can comment on Mr Pedler’s letter regarding Harris trains</p> <p>Council and Proponent can respond to above.</p> <p>The Valentines to provide links to Amcor material.</p>

Appendix F Proponent and Council revised version of proposed CDZ (Schedule 2)

This final revised version of the CDZ schedule was prepared by the Proponent in consultation with representatives of the Council in a workshop between the last two days of Hearing. It was reported to the final day of Hearing enabling comments to be provided by other parties.²⁴⁰

²⁴⁰ The Panel has formatted, spell checked and given continuous numbers to the clauses in this version of the schedule.

DD/MM/YY
Proposed C129

SCHEDULE 2 TO COMPREHENSIVE DEVELOPMENT ZONE

Shown on the planning scheme map as **CDZ2**.

FORMER TALBOT QUARRY AND LANDFILL COMPREHENSIVE DEVELOPMENT PLAN

Land

No. 1221-1249 Centre Road, Oakleigh South (former Talbot Avenue Quarry) as shown on the Former Talbot Quarry and Landfill Comprehensive Development Plan – the land comprises the following land parcels:

CT Vol 3645, Folio 846 (Lots 1-41 LP 12090)

CT Vol 9402, Folio 344 (Lot 1 TP805390J)

CT Vol 8186, Folio 871 (Lot 1, LP 38793)

CT Vol 6313, Folio 437 (CA 6A Sec 2)

CT Vol 10378, Folio 210 (Lot 2, PS 409879V)

CT Vol 8343, Folio 532 (Lot 1-3 TP 803687).

Purpose

- To recognise the past uses of the land (including as a former quarry and landfill) and the residual environmental conditions of the land.
- To allow for a range of residential and non-residential land uses that may be suitable for potentially contaminated or filled land subject to implementation of an appropriate strategy for the remediation of the land and the ongoing management and monitoring requirements.
- To recognise and protect the lower density suburban amenity of existing residential properties and public open space to the north, south and east of the site.
- To provide a framework for urban uses and development, including alternative non-residential land uses that complement surrounding residential development, at an appropriate scale, height and density that takes into account the site's location, size as well as the limited physical connections with the surrounding neighbourhood.
- To provide an opportunity for an integrated residential and mixed use development that fosters social interaction, walkability and creates a sense of place and a new local identity.

1.0

Table of uses

DD/MM/YY
Proposed C129

Section 1 - Permit not required

Use	Condition
Animal keeping (other than Animal boarding)	Must be no more than 2 animals.
Minor utility installation	
Railway	
Tramway	
Any use listed in Clause 62.01	Must meet the requirements of Clause 62.01.

Section 2 - Permit required

Use	Condition
Accommodation	

Use	Condition
Agriculture (other than Animal keeping, Animal training, Apiculture, Horse stables and Intensive animal husbandry)	
Animal keeping (other than Animal boarding) – if the Section 1 condition is not met	Must be no more than 5 animals.
Car park	Must be used in conjunction with another use in Section 1 or 2.
Car wash	The site must adjoin, or have access to, a road in a Road Zone.
Community market	
Convenience restaurant	The site must adjoin, or have access to, a road in a Road Zone.
Convenience shop	
Food and drink premises (other than Convenience restaurant)	
Home occupation	
Medical centre	
Leisure and recreation (other than Motor racing track)	
Office (other than Medical centre)	Must have frontage to a road in a Road Zone
Place of assembly (other than Amusement parlour, Carnival, Circus, Nightclub and Place of worship)	
Place of worship	The gross floor area of all buildings must not exceed 250 square metres. The site must adjoin or have access to a road in a Road Zone.
Plant nursery	
Service station	Must have frontage to a road within a Road Zone
Shop (other than Adult sex bookshop, Bottle shop and Convenience shop)	Must be on the land shown as Mixed use in the approved Comprehensive Development Plan to this zone.
Store	Must be in a building, not a dwelling, and used to store equipment, goods, or motor vehicles used in conjunction with the occupation of a resident of a dwelling on the lot.
Utility installation (other than Minor utility installation and Telecommunications facility)	
Any other use not in Section 1 or 3	

Section 3 – Prohibited

Use

Adult sex bookshop

Amusement parlour

Use

Animal boarding

Animal training

Brothel

Cinema based entertainment facility

Horse stables

Industry (other than Car wash)

Intensive animal husbandry

Motor racing track

Nightclub

Retail premises (other than food and drink premises, shop, plant nursery and community market)

Saleyard

Stone extraction

Transport terminal

Warehouse (other than Store)

2.0

Permits prior to the approval of the Overall Development Plan

DD/MM/YY
Proposed C129

A permit may be granted before an Overall Development Plan has been approved for the site or before the issue of a Certificate or Statement of Environmental Audit under the Environment Protection Act 1970 for the following:

- Any earthworks associated with the remediation of the land in accordance with or for the purpose of obtaining a Certificate or Statement of Environmental Audit under the Environment Protection Act 1970 provided the works are carried out in accordance with a Construction Management Plan prepared in accordance with this schedule;
- The construction of that part of any building which is associated with the remediation of land in accordance with or for the purpose of obtaining a Certificate or Statement of Environmental Audit under the Environment Protection Act, provided the works are carried out in accordance with a Construction Management Plan prepared in accordance with this schedule;
- The removal of any building for the purpose of remediation of the land in accordance with or for the purpose of obtaining a Certificate or Statement of Environmental Audit under the Environment Protection Act, provided the works are carried out in accordance with a Construction Management Plan prepared in accordance with this schedule;
- Consolidation of land
- Removal or creation of easements or restrictions

For the purposes of this clause, remediation means all measures sufficient to protect human health and the environment.

Before granting a permit the responsible authority must be satisfied that the permit will not prejudice the future use and development of the land in an integrated manner.

3.0 Construction Management Plan

Prior to the commencement of any works including site remediation and demolition, a Construction Management Plan (CMP) must be prepared to the satisfaction of the responsible authority. The CMP must detail how the development of the land will be managed to ensure that the amenity of the nearby area is not detrimentally affected.

The CMP must address, but is not limited to:

- Staging of construction
- Management of the construction site
- Site access, parking and traffic management
- Parking for construction staff and heavy construction vehicles
- Storage of plant, equipment and construction materials
- Location of site offices
- Location of cranes
- Demolition, site remediation, bulk excavation
- Protections of nominated trees on the site, and native vegetation on adjoining land
- Land disturbance
- Hours of construction
- Controls of noise, dust and soiling of roadways
- Public safety – security fencing, lighting
- Construction vehicle road routes and traffic management
- Management and disposal of site waste, including any potentially contaminated materials
- Discharge of polluted water and stormwater
- Redirection of any above or underground services

The CMP must also address methods for responding to complaints associated with the construction works and provide site manager contact details.

All development and construction must be carried out in accordance with the approved CMP to the satisfaction of the responsible authority.

4.0 Overall Development Plan

DD/MM/YY
Proposed C129

Before approving a planning application for the use, development or subdivision of the site and subject to clause 2.0, an Overall Development Plan must be submitted and approved to the satisfaction of the Responsible Authority. The Overall Development Plan must be generally consistent with the Former Talbot Quarry and Landfill Comprehensive Development Plan 2016.

The Overall Development Plan must address and include the following:

- Existing site and context issues, including identifying:
 - Adjacent land uses and recent development;
 - Prevailing built form characteristics in the local area;
 - Adjoining roads and pedestrian links;
 - Potential flooding issues, and
 - Topography
- A Site Remediation Strategy Plan (SRSP) which must address and make recommendations in relation to the:
 - Types and Location of possible land or groundwater contamination;

- Potential impacts of any land or groundwater contamination (including the potential for vapour intrusion or gas migration) on the proposed land use, the arrangement of the land use across the land, and any particular design requirements the development may be subject to;
- Preferred options for remediation of the site taking into account logistics, technology availability, estimated cost, and likely effectiveness;
- A schedule of remediation activities including any staging of work;
- Proposed pattern of land uses across the site;
- An indicative site map showing locations across the site of any identified contamination and any proposed clean-up work;
- Targeted condition of the site to suit the proposed range of land uses or development;
- Expected pattern/staging and indicative timeframes for signed Certificates and Statements of Environmental Audit across the site following the clean-up of the site;
- Indicative site management and monitoring controls that will be necessary following each clean up activity; and
- Identifying the parties responsible for key activities and for subsequent site management and monitoring.

The SRSP must be prepared and undertaken by a suitably qualified environmental consultant and verified by an accredited environmental auditor appointed pursuant to the Environmental Protection Act 1970.

The SRSP may be amended, as required by the auditor, to reflect the recommendations or requirements of a Certificate or Statement of Environmental Audit.

The verification by the environmental auditor must confirm that the SRSP is consistent and adequately seeks to address and manage the residual site contamination issues from the past land uses.

- Land use, built form and urban design principles and outcomes, including:
 - Indicative uses, with proposed building heights, setbacks, site coverage, number of dwellings and areas of commercial space;
 - Urban design guidelines to ensure the orderly development of the public realm; and
 - Interface treatments to the subject site boundaries and the differing uses presented internally on the subject site.
- Open Space and Landscaping:
 - Existing significant vegetation on the subject site;
 - Proposed landscape theme for the site;
 - Open space and community infrastructure management plans;
 - Location of communal garden areas for any higher density residential development; and
 - Percentage of permeable surfaces proposed across the site.
- Community facilities (depending on the scale and intensity of the proposal):
 - Existing community infrastructure in the local areas; and
 - Proposed facilities to be incorporated within the proposal.
- Access and movement:
 - A traffic and transport plan that assesses vehicle movements, access to public transport and the provision of walking and cycling infrastructure in the local area;

- Detail regarding the internal circulation network within the site;
- Provision of cycling facilities; and
- Potential for public transport and active transport upgrades associated with the proposal.
- Ecology:
 - Impacts on flora and fauna; and
 - Noxious Weeds and Pest Control Measures
- Engineering infrastructure:
 - Existing infrastructure and utilities on the subject site;
 - Drainage plans; and
 - An infrastructure contributions plan that considers transport, public realm, recreation and community infrastructure needs of the proposed use and development of the site.
- Environmentally sustainable development outcomes across the site:
 - Water Sensitive Urban Design measures required within the site; and
 - Techniques to achieve the use of alternative water sources such as rainwater and stormwater.

4.1 Approval of the Overall Development Plan

Before approval of the Overall Development Plan the Owner and the Responsible Authority agree to take all steps necessary to end the existing Section 173 Agreement, Reference S505281N, and remove it from the land and to enter into a new Section 173 Agreement to give effect to the requirements of the SRSP.

Before deciding whether to approve the Overall Development Plan required by this schedule, the responsible authority must display the Overall Development Plan for public comment for a minimum period of 28 days.

Notice of the Overall Development Plan must be given to:

- the owners and occupiers of land as highlighted on Map A;
- Kingston City Council;
- Environment Protection Authority; and
- VicRoads.

MAP A



The Overall Development Plan may be amended to the satisfaction of the Responsible Authority and is exempt from any notice requirement provided that any amendment is generally consistent with the approved plan, as applicable.

5.0 Environmental Site Assessment

Prior to the lodgement of any planning application, an Environmental Site Assessment (ESA) must be submitted and approved to the satisfaction of the Responsible Authority.

The ESA must provide the information required by Appendix 2 of *EPA Publication 759.3 Environmental Auditor Guidelines*, or any document which amends or supersedes it.

The ESA may be prepared in stages where the development is proposed to be undertaken in stages.

The ESA may be amended as required to reflect the recommendations or requirements of a Certificate or Statement of Environmental Audit.

The ESA must be prepared and undertaken by a suitably qualified environmental consultant and verified by an environmental auditor appointed under the Environmental Protection Act 1970.

The verification by the environmental auditor must confirm that the ESA is consistent with the SRSP and adequately seek to address and manage the residual site contamination issues from the past land uses.

6.0 Use of land

6.1 Amenity of the neighbourhood

A use which is not a sensitive use should not detrimentally affect the amenity of the neighbourhood, including through the:

- Transport or materials, goods or commodities to or from the land.
- Appearance of any building, works or materials.
- Emission of noise, artificial light, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, wastewater, waste products, grit or oil.

6.2 Application requirements

Planning applications can be staged across the site and must be consistent with the approved Overall Development Plan, SRSP and ESA.

6.3 Permit Conditions

A planning permit for the use of the land must contain the following conditions.

- Before the use permitted commences, the owner of the land must provide either:
 - A certificate of environmental audit issued for the land in accordance with Part IXD of the Environment Protection Act 1970, or
 - A statement made by an environmental auditor appointed under the Environment Protection Act 1970 in accordance with Part IXD of that Act that the environmental conditions of the land are suitable for the use.
- Before the use permitted commences the owner of the land must enter into and execute a Section 173 Agreement that provides for:
 - responsibilities for the ongoing management of the site in accordance with the requirements of the certificate of environmental audit or the statement of audit,
 - any conditions of permit use/operations; and
 - the funding for the management and implementation of any conditions of a statement of audit requiring ongoing monitoring and management, including the costings of management and implementation and a reasonable allowance for contingent liabilities to the satisfaction of the responsible authority, if required.

7.0 Subdivision

7.1 Permit Required

A permit is required to subdivide the land.

7.2 Application requirements

An application to subdivide land must be accompanied by the following information, as appropriate:

- A plan drawn to scale which shows:
 - The boundaries and dimensions of the site.
 - Adjoining roads.
 - Relevant ground levels.
 - Areas of subdivision, including any areas of common property.

8.0 Buildings and works

8.1 Permit Required

A permit is required to construct a building or construct or carry out works.

8.2 Application requirements

- Plans drawn to scale showing
 - The boundaries and dimensions of the site.
 - Adjoining roads.
 - Relevant ground levels.
 - The layout of existing and proposed buildings and works.
 - All driveway, car parking and loading areas.
 - Proposed landscape areas.
 - All external storage and waste treatment areas.
- Elevation drawings and floor plans for all buildings to scale showing the colour and materials of all buildings and works.
- Construction details of all drainage works, driveways, vehicle parking and loading areas.
- A landscape layout which includes the description of vegetation to be planted, the surfaces to be constructed, site works specification and method of preparing, draining, watering and maintaining the landscape area.
- For buildings and works intended for non-residential use, a statement must be submitted to the responsible authority addressing any potential amenity impacts on nearby areas set aside and used for dwellings.

9.0 Permit Conditions

Requirement

Subject to Clause 2.0 of this Schedule, a planning permit for development that facilitates a sensitive use (residential use, child care centre, pre-school centre or primary school) must contain the following conditions.

- Before the construction or carrying out of buildings and works in association with a sensitive use commences, the owner of the land must provide either:
 - A certificate of environmental audit must be issued for the land in accordance with Part IXD of the Environment Protection Act 1970, or
 - A statement made by an environmental auditor appointed under the Environment Protection Act 1970 in accordance with Part IXD of that Act that the environmental conditions of the land are suitable for the sensitive use.

10.0 Advertising signs

Advertising sign requirements are at Clause 52.05. This zone is in Category 3.

11.0 Decision guidelines

Before deciding on an application to use or subdivide the land or for buildings and works, the responsible authority must consider, as appropriate:

- The historical use of the land and any relevant environmental, geotechnical and contamination issues.
- Consistency with the 'Former Talbot Quarry and Landfill Comprehensive Development Plan 2016' or, for applications that propose to vary from the approved Comprehensive Development Plan, the documented rationale for an alternative approach, due to the findings of the SRSP and ESA.
- Consistency with the approved Overall Development Plan for the site.
- Amenity impacts on adjoining and nearby residential properties.

- The requirements of Clause 55 (ResCode) or Clause 58 (Apartment Developments), as relevant, for residential development.
- The relevant provisions of Clause 56.
- The relevant requirements of authorities specified as referral authorities in Clause 66.
- Whether the proposed rehabilitation eliminates or minimises, as far as reasonably practicable, any risks posed to the environment, to members of the public or to land, property or infrastructure.
- For non-residential uses, the potential amenity impact on areas set aside and used for dwellings.
- The availability of and connection to urban services and utilities.
- The effect of traffic to be generated from the site on the existing road network.
- If required by the responsible authority, an independent peer review of any geotechnical report relating to the structural design submitted by the permit applicant, with the costs of such review to be met by the permit applicant.
- Any other matters which relate to the use of the land.
- The Site Remediation Strategy Plan (SRSP) prepared for the site and the Environmental Site Assessment (ESA) relating to the stage(s) impacting on the proposed use.
- The funding for the management and implementation of any conditions of a statement of audit requiring ongoing monitoring and management, including the costings of management and implementation and allowance for any contingent liabilities.