Report

Donnybrook JV Pty Ltd

Expert Buffer Assessment

960 Donnybrook Road, Donnybrook

October 2020

This report has been requested by Gadens on behalf of Donnybrook JV Pty Ltd.

Environment, Health & Safety, and Sustainability Consultants

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USE OF REPORT

The preparation of this report has been undertaken for the purpose of providing expert advice in relation to the amenity buffers proposed in the Shenstone Park Precinct Structure Plan for submission to the Planning Panel. The report is to include opinions on the appropriateness of the proposed amenity buffers and the impact of the proposed buffers on the land at 960 Donnybrook Road, Donnybrook, Victoria and it is not intended that this report should be used for any other purpose.

LIST OF ABBREVIATIONS

Act	*Environment Protection Act 1970*
BCS	Biodiversity Conservation Strategy
WA	Work Authority
EPA	Environment Protection Authority Victoria
IRAE	Industrial Residual Air Emissions
PSP	Precinct Structure Plan
SEPP	State Environment Protection Policy
SEPP (AQM)	State Environment Protection Policy (Air Quality Management)
SPPF	State Planning Policy Frameworks

1. INTRODUCTION

I was engaged by Gadens on behalf of their client, Donnybrook JV Pty Ltd, to provide an expert opinion in relation to the amenity buffers proposed in the Shenstone Park Precinct Structure Plan (the PSP) as part of the Amendment C241 to the Whittlesea Planning Scheme. A copy of the letter of instruction from Gadens regarding my expert witness statement is provided as **Appendix A**.

I have been asked to consider the appropriateness of proposed buffers in the PSP and the impacts of the buffers on the land at 960 and 1030 Donnybrook Road, Donnybrook, Victoria (the Site). The Site is owned by Donnybrook JV Pty Ltd and comprises approximately 275 hectares (approximately 44%) of land forming the Shenstone PSP area.

2. EXPERT EVIDENCE DETAILS

2.1 Expert Witness Details

Expert Witness:	Mr Peter Ramsay
Address:	Level 10, 222 Kings Way, South Melbourne, Victoria, 3205
Company:	Peter J Ramsay & Associates Pty Ltd

2.2 Expert's Qualifications and Experience

I am the Managing Director and Principal Consultant of Peter J Ramsay & Associates Pty Ltd. I am a chemical engineer and hold a Graduate Diploma of Management and a Master of Environmental Science. I have over 35 years' experience in environmental auditing, environmental impact assessment, air quality, site assessment and remediation. I also have extensive experience in determining appropriate buffer distances between industrial facilities and sensitive land uses to mitigate the impact of industrial residual air emissions. Prior to establishing Peter J Ramsay and Associates, I was Assistant Director of the Victorian Environment Protection Authority (EPA) and was responsible for Victoria's Air Quality Management Program.

I am a Fellow of Engineers Australia and a Chartered Professional Engineer. I am appointed as an Environmental Auditor under the Victorian *Environment Protection Act 1970* for both Industrial Facilities and Contaminated Land and accredited as a Site Auditor under the New South Wales *Contaminated Land Management Act 1997*. I am a Registered Professional Engineer in Queensland and I have written numerous papers on environmental management.

My curriculum vitae is provided in **Appendix B**.

2.3 Expert's Area of Expertise

My professional career has focused on identifying and resolving environmental issues at industrial and commercial facilities and the interface with residential land uses. This includes assessments of separation distances for industrial premises including landfills. I have expertise and experience in air quality assessments, dispersion modelling, waste management, and environmental auditing of odour emitting facilities.

2.4 Statement of Expertise

In view of my professional qualifications and expertise, I am well qualified to prepare and present this expert witness statement to the panel.

2.5 Other Significant Contributors to the Report

I have been assisted in the preparation of my report by Mr Nathan Williams.

Mr Nathan Williams, Senior Consultant, holds Bachelors' degrees in chemical engineering and science and has seven years' experience in environmental consulting. He is experienced in the preparation of odour impact assessments, air dispersion modelling, and designing and operating equipment for pollution control at industrial facilities. He has specific expertise in assessment of separation distances from industry for amenity impact and environmental auditing of landfill facilities. Nathan has assisted me in the preparation of numerous expert evidence reports in relation to separation distances and amenity impact in Victoria.

2.6 Instructions that Defined the Scope of the Report

I received written instruction from Gadens on behalf of Donnybrook JV Pty Ltd on 27 July 2020. A copy of the instruction from Gadens is provided in **Appendix A**.

The letter of instruction of 27 July 2020 outlines that aspects in relation to buffers be addressed in the expert advice.

My opinions on these aspects are provided in **Section 6** of this report.

2.7 Facts, Matters and Assumptions on which the Report Proceeds

The following facts, matters and assumptions were used in the preparation of this report:

- The site includes 960 Donnybrook Road, Donnybrook, Victoria, defined as Lot 1 on TP374144X (Title Volume 11260 Folio 109), and Lot 1 on TP371225P (Title Volume 11260 Folio 110);
- The site includes 1030 Donnybrook Road, Donnybrook, Victoria, defined as Lot 1 on TP380512K (Title Volume 6229 Folio 723), though this portion of the site is not encroached upon by any of the proposed amenity buffers;
- The site is located in a predominantly rural agricultural area with some extractive industries (on the basis of recent aerial photography);
- Amendment C241 to the Whittlesea Planning Scheme includes the Shenstone Park Precinct Structure Plan (the PSP) (September 2019);
- Amendment C241 rezones the majority of the land within the PSP area as Urban Growth Zone 7;
- The Woody Hill Quarry is located within the PSP Land while the Phillips Quarry is located outside of the PSP Land;
- Various amenity buffers are proposed in the PSP to protect existing and proposed land uses from adverse amenity impact against encroachment of residential land use;

- The facts and matters detailed in the Brief of Documents and Letter of Instruction as provided by Gadens;
- Current Shenstone Park Precinct Structure Plan, surrounding Precinct Structure Plans and zoning provided by the Victorian Planning Authority;
- Regulatory guidelines and other literature; and
- My professional judgement and expertise as specified in my curriculum vitae in **Appendix B**.

2.8 Documents and Other Materials Used to Prepare the Report

The documentation and materials used to prepare this report included:

2.8.1 Reports and Documents provided by Gadens

On 27 July 2020, along with the written instructions, Gadens provided a copy of the follow documents:

- Brief of Documents (Index to Brief of Documents presented in **Appendix C**).

2.8.2 Other Information Sources

- EPA 2013, *Recommended separation distances for industrial residual air emissions*, Publication 1518, Environment Protection Authority Victoria, March 2013;
- The letter provided by from Barro, care of Mr Leon Ponte, 15 October 2020, ref /94094071
- Planning Panel Reports in relation to basalt quarries using blasting in Victoria:
  - Melton C162 Final Panel Report (PSA) [2016] PPV 154, dated 9 December 2016
  - Hume C207 and C208 (PSA) [2017] PPV 138, dated 15 December 2017
  - Moorabool C58 (PSA) [2015] PPV 27, dated 31 March 2015
  - Whittlesea C187 Part A Report (PSA) [2016] PPV 35, dated 1 April 2016.

2.9 Tests or Experiments

No tests or experiments were performed to assist in the preparation of this report.

2.10 Summary of Opinions

My opinions are summarised in **Section 6** of this report.

2.11 Provisional Opinions

The opinions expressed are not considered to be provisional.

2.12 Limitation

I consider myself qualified to prepare and present the report. I have not addressed questions falling outside my area of expertise, and do not consider it incomplete or inaccurate in any respect.

My advice is based on the Brief of Documents, which was provided by Gadens, my review of relevant legislation, guidelines and documents referred to in **Section 2.8** and my experience with undertaking buffer assessments on similar sites.

2.13 Declaration

I declare that:

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

3. BACKGROUND

The Shenstone Park Precinct Structure Plan (the PSP) is within the boundary of the Whittlesea City Council and is immediately south of the Donnybrook-Woodstock Precinct Structure Plan area and east of the English Street Precinct Structure Plan area. The PSP is bounded by Donnybrook Road to the north and the Sydney-Melbourne railway line to the west. The precinct accommodates a mix of residential housing, town centres, employment and community facilities. The precinct also covers the existing Woody Hill Quarry and a Biodiversity Conservation Strategy (BCS) Conservation Area. Various amenity buffers are proposed in the PSP to protect the existing and proposed land uses from adverse amenity impacts. The buffers have been considered based on the information provided in the following two buffer assessment reports prepared by GHD:

- GHD 2017, *Impact Assessment Report for the Shenstone Park Precinct Structure Plan*, GHD Pty Ltd, December 2017 (the GHD Impact Assessment); and
- GHD 2019, *Shenstone Park Impact Assessment Woody Hill Addendum*, GHD Pty Ltd, September 2019 (the GHD Addendum).

The proposed buffers are shown on Plan 15 of the PSP and as provided on **Figure F3** of this report.

The buffers are considered in relation to:

- The existing Wood Hill Quarry within the Shenstone PSP boundary, operating under Work Authority 492 (**Woody Hill Quarry**) and an approved extension under Work Authority 6437 (the **Woody Hill Extension**); and
- The proposed Philips Quarry located immediately south of the Shenstone PSP boundary under Work Authority 6852 (**Philips Quarry**).

Under the Shenstone PSP, Donnybrook JV's property located at 960 and 1030 Donnybrook Road, Donnybrook, Victoria (the Site) has an area of approximately 275 hectares which comprises approximately 44% of the 628 hectares of land forming the Shenstone PSP area. The location of the Site is shown in **Figure F1** attached. The location of the various local government area boundaries are shown on **Figure F2**, attached. The proposed buffers are shown on **Figure F3**.

The portion of the Site subject to the buffers of Woody Hill Quarry (including the buffer of the potential Woody Hill extension area), is designated for industrial and light industrial uses. A portion on the southern part of the Site identified to be 'future residential area', has been affected by the buffer associated with the Phillips Quarry and development of the area is not planned until the Phillips Quarry buffer is no longer required. The remainder of the Site is identified to be used for residential, town centre, open space and biodiversity conservation purposes.

Gadens instructed me to provide my expert opinion on the appropriateness of the proposed amenity buffers recommended in the GHD Impact Assessment and the GHD Addendum, and those adopted in the PSP, and potential amenity impact from the existing or likely land uses on the potential for the development of land within the Site.

I have considered the buffers for the quarries with respect to the potential impact on the sensitive uses from operation of the quarries as a result of operational noise, blast generated vibration, dust, and blast generated fly-rock.

3.1 Recent Buffers Following Planning Panels in Similar Situations

There are many quarries operating across Victoria and many of these have been subject to potential encroachment by development of new sensitive land uses. The problem being grappled with, with respect to managing the appropriate separation distances around quarries, has been dealt with many times before.

I am not aware of any recent (within the last 5 years) panel recommendation from a Planning Panel that a separation distance from sensitive land use more than 500 m should be applied to a quarry involved in blasting of basalt.

I am aware of four recent Planning Panels where the application of separation distances from quarries involved blasting of basalt. In all four cases the Planning Panels have recommended the adoption of a sensitive use buffer of 500 m and a quarry blast buffer of 200 m, when such buffers were considered. These are summarised in **Table 1** and provide a reference for the typical extent of such buffers.

Table 1 Summary of Similar Planning Panel Outcomes

Reference Number	Report Date	Quarry Material	Sensitive Use Restrictions	Building Restrictions	Notes
Melton C162	9 Dec 2016	Basalt	Quarry Sensitive Use Buffer – 500 m	Quarry Blast Buffer – 200 m	From Approved Extraction Area
Hume C207 and C208	15 Dec 2017	Basalt	Quarry Buffer – 500 m	Not discussed	-
Moorabool C58	31 Mar 2015	Sand with basalt overburden	Quarry Buffer – 500 m for sensitive uses	Not discussed	-
Whittlesea C187	1 Apr 2016	Basalt	Quarry Buffer – 500 m for sensitive use	Construction Restriction Buffer – 200 m	-

4. LEGISLATION, POLICY AND GUIDELINES

4.1 Recommended Separation Distances for Industrial Residual Air Emissions

EPA Publication 1518 “Recommended Separation Distances for Industrial Residual Air Emissions”, (EPA Publication 1518) recommends separation distances to account for the potential impact of industrial residual air emissions (IRAEs) on human health and wellbeing, local amenity and aesthetic enjoyment.

IRAEs are unintended emissions which are often intermittent or episodic, including both fugitive emissions and upset conditions. IRAEs include odour and particulate emissions such as dust. An adequate separation distance should allow IRAEs to dissipate without adverse impacts on sensitive land uses. It is important to note that even ‘state of the art’ facilities cannot be guaranteed to operate without IRAEs 100 per cent of the time.

The EPA recommended separation distances have been determined through reviewing a large set of empirical data for odour and dust emissions from a range of industries. The aim of the Guidelines is to inform planning authorities, as well as responsible authorities, in the preparation and consideration of planning scheme amendments and planning permit applications. I therefore consider it pertinent to consider the Amendment in the context of the separation distances recommended in the Guidelines.

EPA Publication 1518 clearly states that separation distances should be measured from the activity area of the activity with the potential to cause IRAEs.

However, recommended separation distances in this guideline have not been provided for the consideration of noise and vibration impacts.

4.1.1 Effect of Separation Distance on Neighbouring Landowners

Applying a separation distance to a facility does not result in a change to the IRAEs released from the premises. All reasonable measures should still be taken by the commercial or industrial facility to prevent the emission of odours and dust beyond the site boundary. The separation distance is intended to account for intermittent or episodic IRAEs.

All industrial facilities will periodically experience upset conditions which are beyond the control of the facility. On such occasions IRAEs can travel beyond the boundaries of the premises. In order to prevent IRAEs having adverse impacts on sensitive receptors, a separation distance must be maintained around the source of the IRAEs. The separation distance helps to minimize the impact of IRAEs.

4.1.2 Sensitive Receptors

In accordance with the Guidelines, a sensitive land use is *"any land use which requires a particular focus on* protecting *the beneficial uses of the air environment relating to human health and wellbeing, local amenity and aesthetic enjoyment".* Sensitive receptors include residences.

4.1.3 Variation to Recommended Separation Distances

A variation of the recommended separation distance can be sought if there are considered to be exceptional circumstances at the site that will justify a site-specific variation. A site-specific variation should not be granted until the relevant land use issues have been resolved to the satisfaction of the EPA.

Table 4 of the Guidelines provides a guide to the criteria that must be considered during the assessment of a site-specific variation. Consideration of these criteria is a prerequisite for a site-specific variation, but not a guarantee that a variation is justified.

The criteria that may justify a site-specific variation are:

- The industry has formally indicated it will transition out of the area over a specified timeframe;
- Engineering controls have provided a high standard of emission control technology;
- An Environmental Risk Assessment (ERA) justifies a change in the prescribed separation distance;
- The plant is considerably smaller or larger than comparable industries;
- If the site exhibits exceptional meteorological or topographical characteristics which can affect dispersion; and
- Particular IRAEs are either highly likely or highly unlikely to occur.

Detailed site assessments involving modelling should only be undertaken if a variation from the recommended Guidelines values can be justified.

4.2 The State Planning Policy Framework

The State Planning Policy Framework (SPPF) articulates several relevant policies regarding encroachment. Although there are no prescribed, or recommended distances in this document, the SPPF identifies the need for separation distances between commercial and industrial facilities with potential adverse amenity impacts and sensitive land uses.

The following are excerpts of the key provisions:

- Clause 11 states that '*planning is to prevent environmental problems created by siting incompatible land uses close together*'.
- Clause 13.04-2 states that planners should '*ensure, wherever possible, that there is suitable separation between land uses that reduce amenity and sensitive land uses*.'
    - The following reference documents are considered to be relevant in achieving this objective:
        - State Environment Protection Policy (Air Quality Management); and
        - Recommended Buffer Distances for Residual Industrial Air Emissions (EPA Publication 1518, 2013) (The Guidelines which are discussed in Section 4.1).

5. EXPERT OPINION

The letter of instructions of 27 July 2020 from Gadens on behalf of DJV (**Appendix A**) included a request for an expert opinion in relation to the amenity buffers proposed in the Shenstone Park PSP as part of the Amendment C241 to the Whittlesea Planning Scheme. The PSP provides buffers to protect the ongoing operation of the Woody Hill Quarry, proposed extension of the Woody Hill Quarry, and the proposed Phillips Quarry. Buffers for the quarries included separate buffers for operational noise, blast generated vibration and dust, and blast generated fly-rock.

The term separation distance is used in EPA Publication 1518, whereas buffer distance is used in many other documents. These terms are interchangeable as both refer to the distance between the potential generator and receptor of an environmental amenity impact.

I have been provided with a plan of the future works annotated on aerial photography for the Woody Hill Quarry and Extension and Phillips Quarry in the letter from Mr Leon Ponte dated 15 October 2020. In particular, the attached plans Barro Plan 2, 3, and 4 show the proposed extent of the extraction areas on the quarries.

My opinion is provided on the buffers included in the Impact Assessment Report, Impact Assessment Addendum, Plan 15 of the original PSP, the revised PSP Plan 15, and the proposed FUSP, as well as my recommendations for the buffer distance below.

Also, I provide an opinion on the appropriate separation distances for the Woody Hill Quarry, proposed extension of the Woody Hill Quarry and the proposed Phillips Quarry.

5.1 Process for Determination of Buffers

The first set of buffers was considered in the Impact Assessment Report prepared by GHD (2017). The buffers recommended in this assessment are shown in Figure 32 of the Impact Assessment Report. The buffers shown are based on the existing operation of the Woody Hill Quarry, the proposed operation of the Phillips Quarry under WA160, and the potential recycled water treatment plant.

The potential expansion of the Woody Hill Quarry is considered in the second buffer report, the Woody Hill Addendum, prepared by GHD (2019). The scope of the assessment was to determine the potential for expansion of the Woody Hill Quarry east of the existing quarry. This informed the selection of the area marked Woody Hill Possible Extraction in Plan 15 of the original PSP (September 2019). This involved selection of the area that the quarry could expand eastwards into within the proposed noise buffer of 900 m (GHD 2017) from the existing Woody Hill Quarry extraction area.

EPA Publication 1518 provides recommended separation distances for industrial land uses, including extractive industries where there is potential for generation of industrial residual air emissions despite the application of best practice operation. For these land uses, occasional amenity impacts can be expected within the separation distance due to the residual emissions of odour and dust.

IRAEs of odour and dust emissions are typically more difficult to control through application of good practice design and operation. Noise emissions can be controlled at the source through equipment selection, acoustic shields, and construction of physical barriers such as earthen bunds, vegetation screens, and acoustic walls. Such options are not able to control air emissions.

In general, the application of a separation distance as recommended in EPA Publication 1518 will provide sufficient distance to prevent amenity impact of other potential impacts, such as noise and vibration, provided best practice design and operation are implemented.

5.1.1 Variation to EPA Separation Distances

As I have mentioned in Section 4.1.3 of this report, EPA Publication 1518 provides a mechanism for variation to the recommended separation distances. The criteria for a site-specific variation includes consideration of topography and meteorology. As explained in Table 4 of Publication 1518, this allows for change only when, "*There are exceptional topographic or meteorological characteristics which will affect dispersion of IRAEs.*"

A site-specific variation to the recommended separation distances is proposed by GHD through the application of directional buffers in both the Impact Assessment Report and Addendum Report. However, there is no discussion as to whether any of the criteria for a site-specific variation to the recommended separation distances have been considered and met.

The directional buffer has the effect of shifting the separation distance to the east due to a predominance of westerly over easterly winds.

I note that most of Melbourne, indeed most of Victoria is subject to a predominance of westerly rather than easterly winds. Therefore, this is not an exceptional condition. Also, the topography is not considered exceptional.

The use of directional buffers in this context is not appropriate and there is no justification for the use of a site-specific variation to the recommended separation distance. Therefore, the standard linear measurement from the outer extent of the activity area should be applied as recommended in EPA Publication 1518.

5.2 Woody Hill Quarry

The Shenstone Park PSP includes the presence of buffers to protect the ongoing operations of the Woody Hill Quarry. The buffers included in the PSP relate to operational noise, blast-generated vibration and dust and blast generated fly-rock. A number of these buffers encroach on the Site and will preclude the development for some sensitive land uses for the duration of the quarry operation.

5.2.1 Extent of Operational Noise Buffers

In the Impact Assessment Addendum (GHD 2019), GHD suggests an operational noise buffer for Woody Hill Quarry of 600 m from the extraction area boundary. This buffer is prior to any operational noise mitigation being implemented.

In the Impact Assessment Report (GHD 2017), GHD recommends a buffer of 900 m from the approved extraction area for the Woody Hill Quarry.

Plan 15 of the original PSP suggests an operational noise buffer of 900 m from the extraction area boundary; this buffer was not changed in Plan 15 of the revised PSP dated October 2020.

The operational noise buffers proposed by GHD and adopted in the PSP have not considered any mitigating factors such as the presence of new bunding embankments, vegetation screens or other mitigation measures. These separation distances have been modelled on incomplete information, have not been validated by field observation, are much larger than what is in place for many similar quarry operations, and have not included consultation with the quarry operator.

EPA Publication 1518 provides recommended separation distances for quarries; however, it does not consider noise impacts. In practice, the buffers recommended for control of nuisance dust are typically capable of controlling noise impacts. There are many more options available for control of noise emissions, and best practice operation of quarries is typically able to contain noise impacts within the recommended separation distances.

I note that the inputs to the noise modelling provided in the Impact Assessment Report (GHD 2017) and Addendum Report (GHD 2019) provide for elevated noise sources with no noise controls in place. The existing quarry operations from the Woody Hill Quarry could have been monitored rather than modelled. I note that some background noise monitoring was performed for preparation of the Impact Assessment Report (GHD 2017). In this report, GHD includes the following note regarding noise monitoring, "*Note that there was no Woody Hill Quarry operational noise audible at the time of GHD site visit at both monitoring locations"*. This attended monitoring was performed on the 25th of August 2017.

I also note that Figure 22 of the Impact Assessment Report (GHD 2017) suggests the existing quarry operations would have approximately 15 dB(A) difference in predicted noise impact at the monitoring Location 1 and 2. Whereas, the unattended monitoring indicated a measured difference of 2 to 3 dB(A) in daytime ambient noise between the locations, according to a comparison of Tables 9 and 10 of that report.

Therefore, I consider that the acoustic modelling performed in the Impact Assessment Report (GHD 2017) is not reliable. It does not demonstrate the need for a 900 m separation distance between the existing Woody Hill Quarry extraction area and future sensitive land use.

I consider the use of the 500 m separation from the area where blasting may occur (i.e. the Approved Extraction Area within WA492) and the 250 m separation from other areas of potential quarry operation (i.e. the WA492 boundary) to be appropriate to provide protection against noise impacts. This is consistent with the buffers applied to similar quarries as discussed in Section 3.1 in this report.

Figure 1 below shows the proposed operational noise buffers for Woody Hill Quarry.

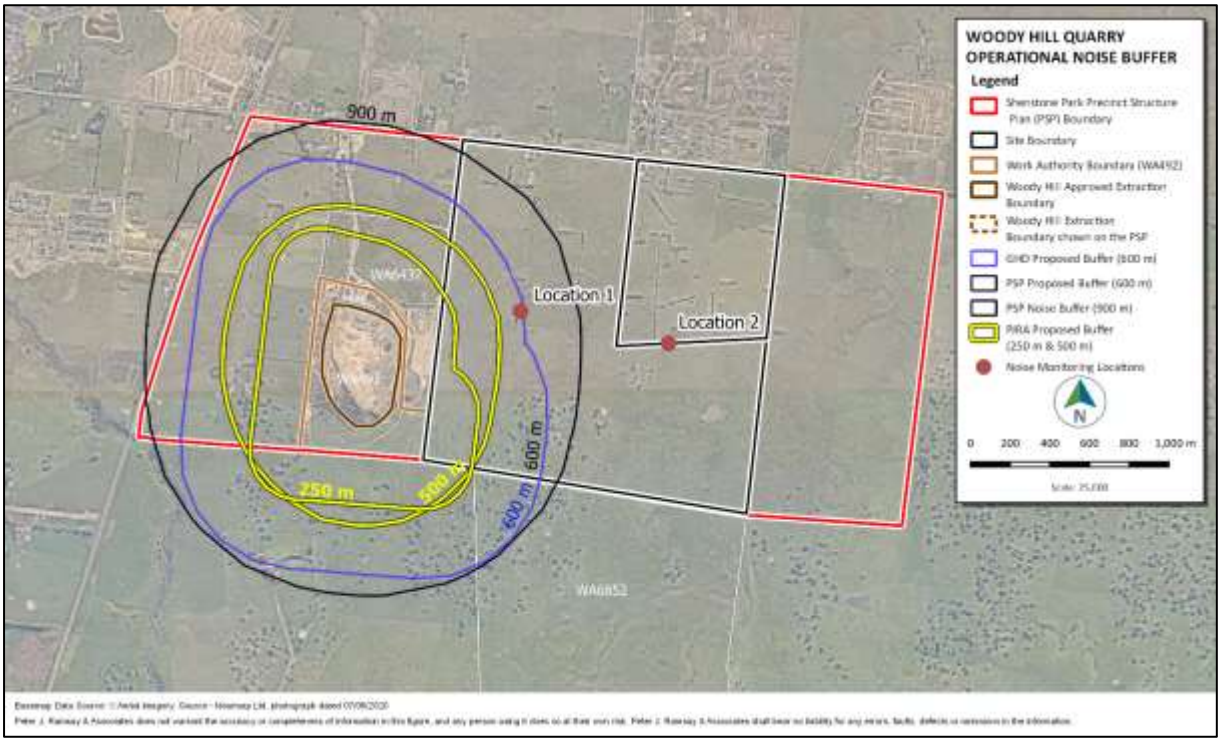


Figure 1 Woody Hill – Extent of Operational Noise Buffers

5.2.2 Extent of Blast Generated Vibration Buffers

GHD recommended a 550 m buffer due to the impact of vibration on sensitive land use (GHD 2017 and GHD 2019). This recommendation was adopted in the original PSP with a sensitive use buffer for Woody Hill Quarry of 550 m from the extraction boundary.

The basis for the separation distance proposed in the GHD Impact Assessment (GHD, 2017) is a vibration assessment from a British Standard. However, GHD did not discuss whether this standard is applicable for this particular setting with regards to the geology and blasting methods. I note that the standard allows for different separation distances based on different blasting methodologies, however the operator of the quarry was not consulted regarding the planned blasting practice.

EPA Publication 1518 provides recommended separation distances for quarries. It does not consider vibration impacts, however in practice the buffers recommended for control of nuisance dust are typically capable of controlling vibration impacts. There are many more options available for control of vibration, including appropriate blast design. Additionally, best practice operation of quarries is typically able to contain vibration impacts within the recommended separation distance for dust.

In most situations that I am aware of, the impact of vibration from quarry blasting is not known to cause adverse impact beyond the 500 m separation distance that is recommended in EPA Publication 1518 to protect against the amenity impact from dust. I understand that best practice blasting does not typically generate vibration impacts beyond 500 m from the extraction area.

I consider the use of the 500 m buffer from an area where blasting may occur, as provided for control of dust impact in EPA Publication 1518, to be appropriate to provide protection against vibration impacts. This is consistent with the buffers applied to similar quarries as discussed in Section 3.1 of this report.

Figure 2 below shows the proposed blast generated vibration buffers for Woody Hill Quarry.

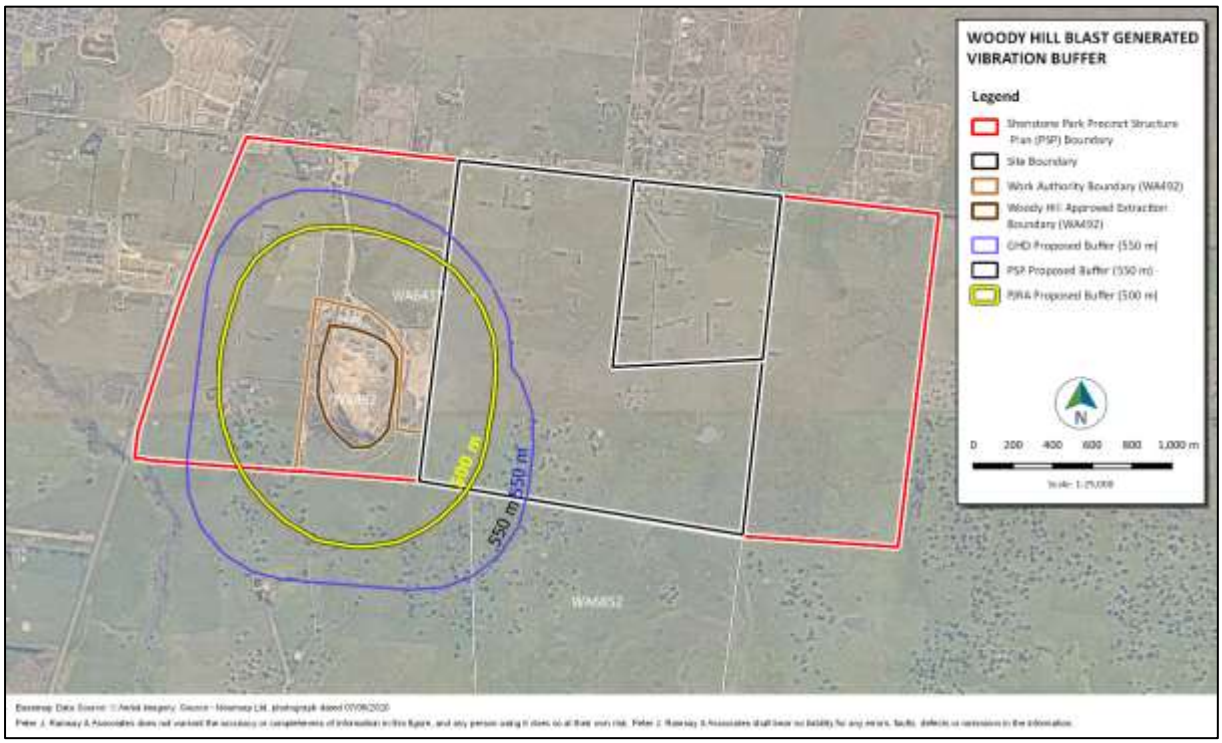


Figure 2 **Woody Hill – Extent of Blast Generated Vibration Buffers**

5.2.3 Extent of Blast Generated Dust Buffers

The PSP provides a 550 m buffer from the outer extent of the area marked "Woody Hill possible extraction expansion" on Plan 15 of the PSPs to protect against dust impacts from the quarry operations. I assume that this is intended to provide protection against blasting activities and other quarry activities at the Woody Hill Quarry.

GHD (2019) recommends using a 500 m directional buffer to protect against dust impacts from quarry operations. The buffer is proposed to extend more than 500 m east of the Work Authority Boundary.

I consider the use of the 500 m buffer from an area where blasting may occur, as outlined in EPA Publication 1518, to be appropriate to provide protection against dust for more sensitive uses. There is no justification for the use of a directional buffer, therefore this should be a linear separation distance from the outer extent of the Approved Extraction Area on WA492. This is recommended in EPA Publication 1518 and is consistent with the buffers applied to similar quarries as discussed in Section 3.1 of this report.

Figure 3 below shows the proposed blast generated dust buffers for the proposed Woody Hill Quarry.

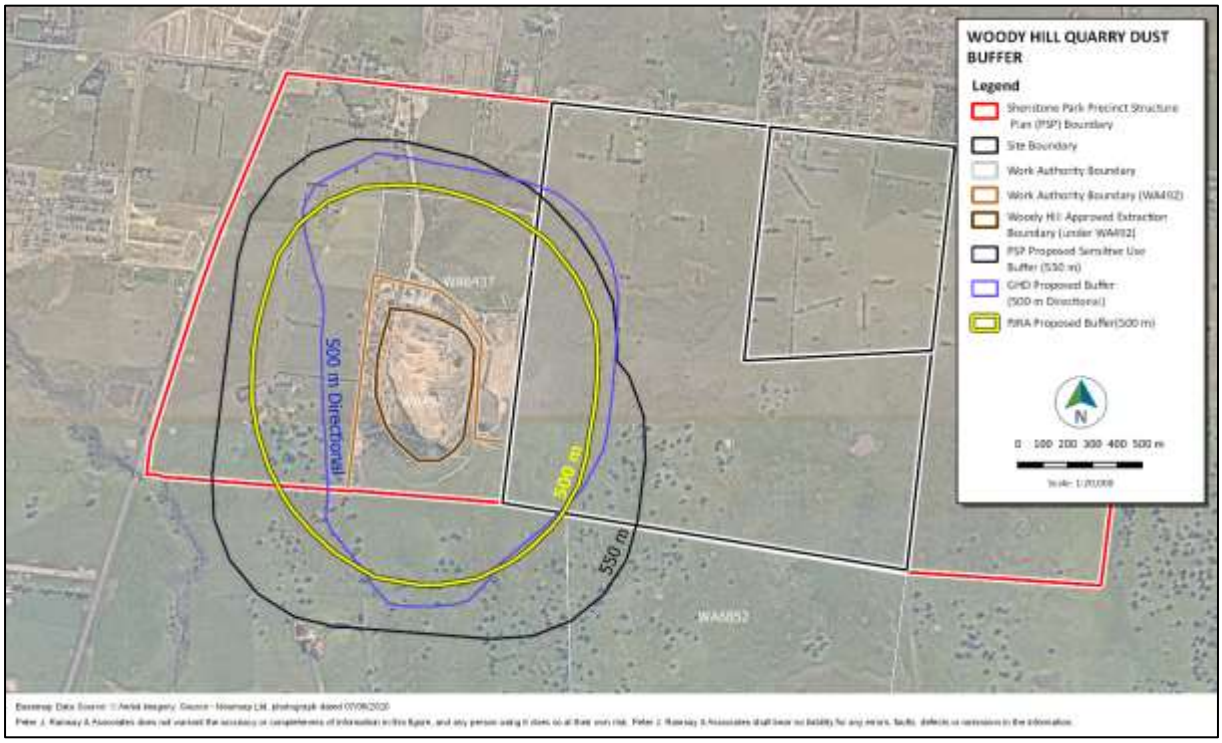


Figure 3 Woody Hill – Extent of Blast Generated Dust Buffers

5.2.4 Blast Generated Fly-Rock Buffers

I consider the use of a 200 m buffer from the proposed extraction area to be appropriate to provide protection against blast generated fly-rock impacts. This is consistent with the buffers provided to similar quarries as discussed in **Section 3.1** of this report.

Figure 4 below shows the proposed blast generated fly-rock buffers for the proposed Woody Hill Quarry expansion.

Figure 4 Woody Hill – Blast Generated Fly-Rock Buffers

5.3 Woody Hill Quarry Expansion

The operator of the Woody Hill Quarry has applied for an expansion to the extraction area and the area of the Work Authority to include land under WA006437. This includes a proposed expansion of the extraction area for the land subject to WA492.

The PSPs provide for an expansion to the extraction area for the Woody Hill Quarry in Plan 15 of the original PSP dated September 2019, and the revised PSP dated October 2020.

From review of the Impact Assessment Addendum (GHD 2019), it appears that this marks out a hypothetical maximum extraction area while remaining within the proposed 900 m separation distance from the existing Woody Hill Quarry excavation area.

I do not consider that the 900 m separation distance is required to protect the future sensitive receptors from the operations of the existing Woody Hill Quarry. Therefore, the basis for assessing the potential expansion area is not valid.

The extent of the proposed extraction area for the Woody Hill Quarry expansion is described in the information provided by Barro and is contained within the boundaries of WA492 and WA006437.

I understand that the land marked *Future Extractive Industries* on the DJV preferred FUSP to the east of WA492 and WA006437 is intended for use as a screening bund and access route to connect the Phillips and Woody Hill Quarries. It should be noted that no extraction and no quarry activities are proposed beyond the boundaries of WA492 or WA006437.

The area shown as *Woody Hill possible extraction expansion* on Plan 15 of the original and revised PSPs that extends onto 960 Donnybrook Road should not be considered in assessing the recommended separation distances for the PSP.

5.3.1 Extent of Operational Noise Buffers

GHD (2019) recommends an operational noise buffer for the Woody Hill Expansion of 600 m from the possible extraction area boundary. The original PSP also adopts the operational noise buffer of 600 m from the possible extraction area boundary.

As discussed in **Section 5.2.1**, I consider that the methodology for assessing the extent of the separation distance is flawed. As also discussed in **Section 5.2.1**, I consider the adoption of a 250 m buffer from the outer boundaries of the land subject to WA492 and WA006437 appropriate to provide protection against noise impacts.

Figure 5 below shows the proposed operational noise buffers for the proposed Woody Hill Quarry expansion.

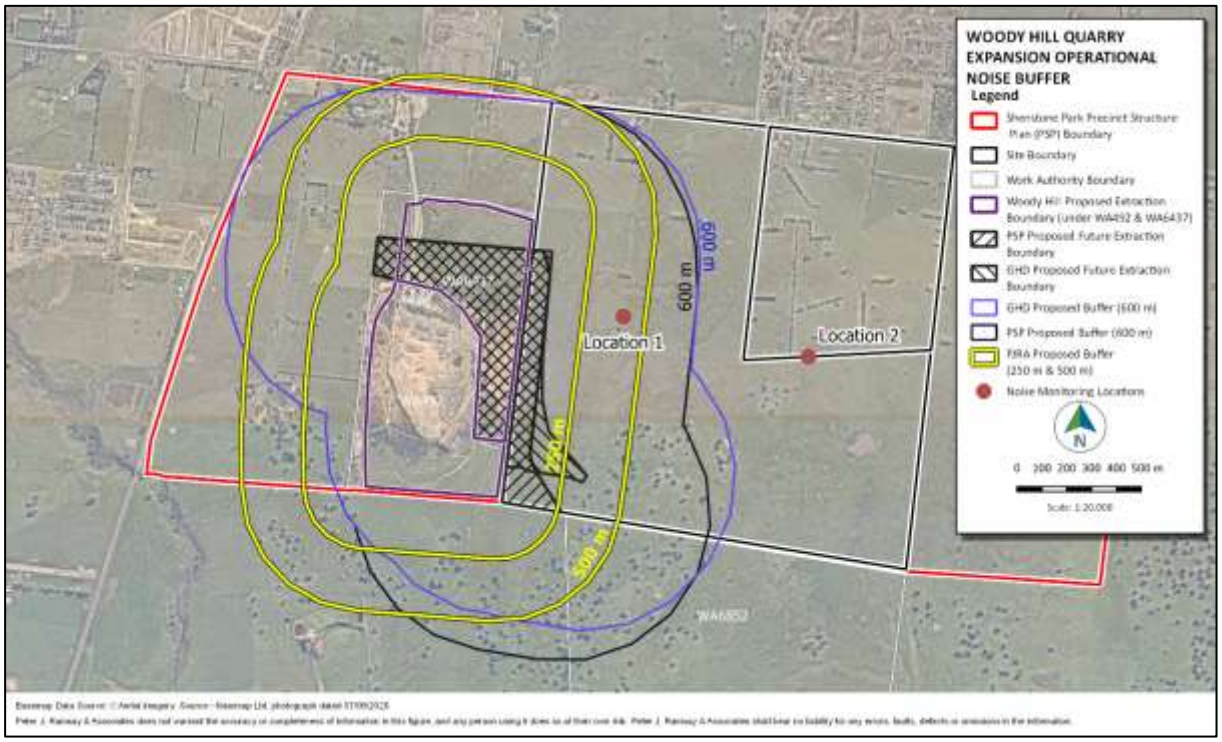


Figure 5 Woody Hill Expansion – Extent of Operational Noise Buffers

5.3.2 Extent of Blast Generated Vibration Buffers

As discussed in **Section 5.2.1**, I consider that a separation distance of 500 m from the proposed extraction areas on the land subject to WA492 and WA006347 appropriate to protect sensitive receptors from vibration due to blasting.

Figure 6 below shows the proposed blast generated vibration buffers for the proposed Woody Hill Quarry expansion.

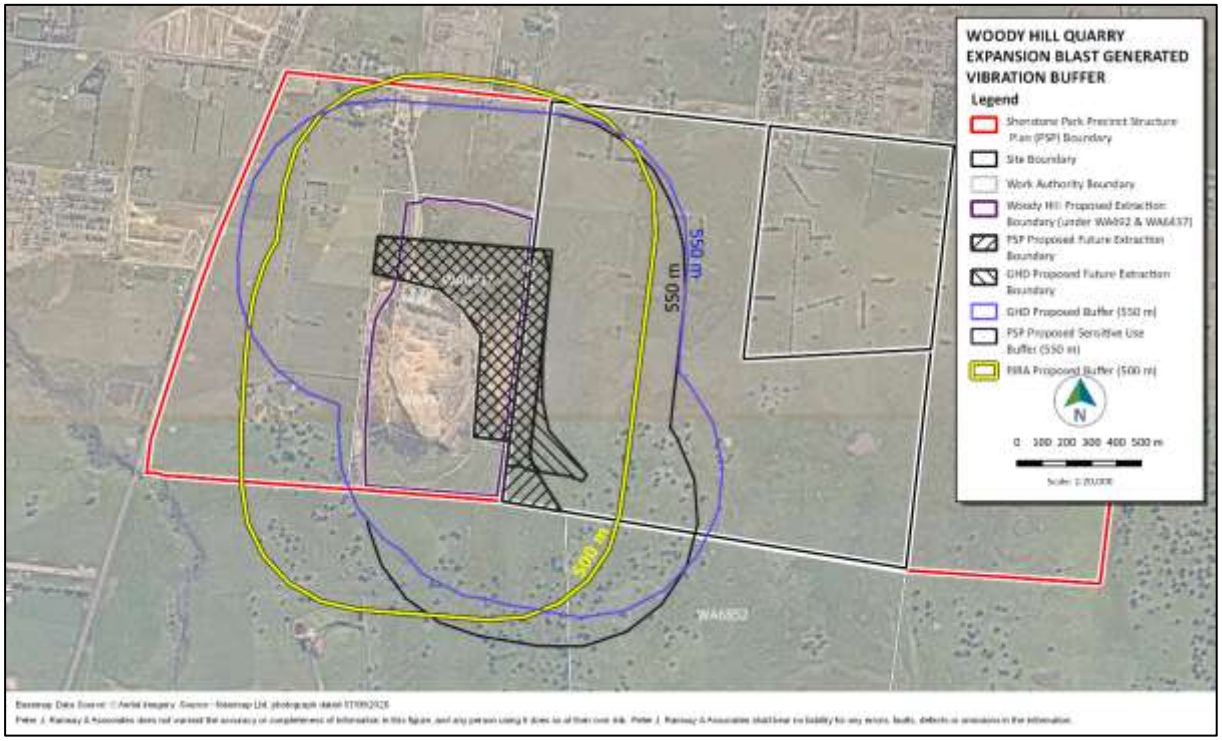


Figure 6 **Woody Hill Expansion – Extent of Blast Generated Vibration Buffers**

5.3.3 Extent of Blast Generated Dust Buffers

As discussed in **Section 5.2.1**, I consider that a separation distance of 500 m from the proposed extraction areas on the land subject to WA492 and WA006347 is appropriate to protect sensitive receptors from vibration due to blasting.

Figure 7 below shows the proposed blast generated dust buffers for the proposed Woody Hill Quarry expansion.

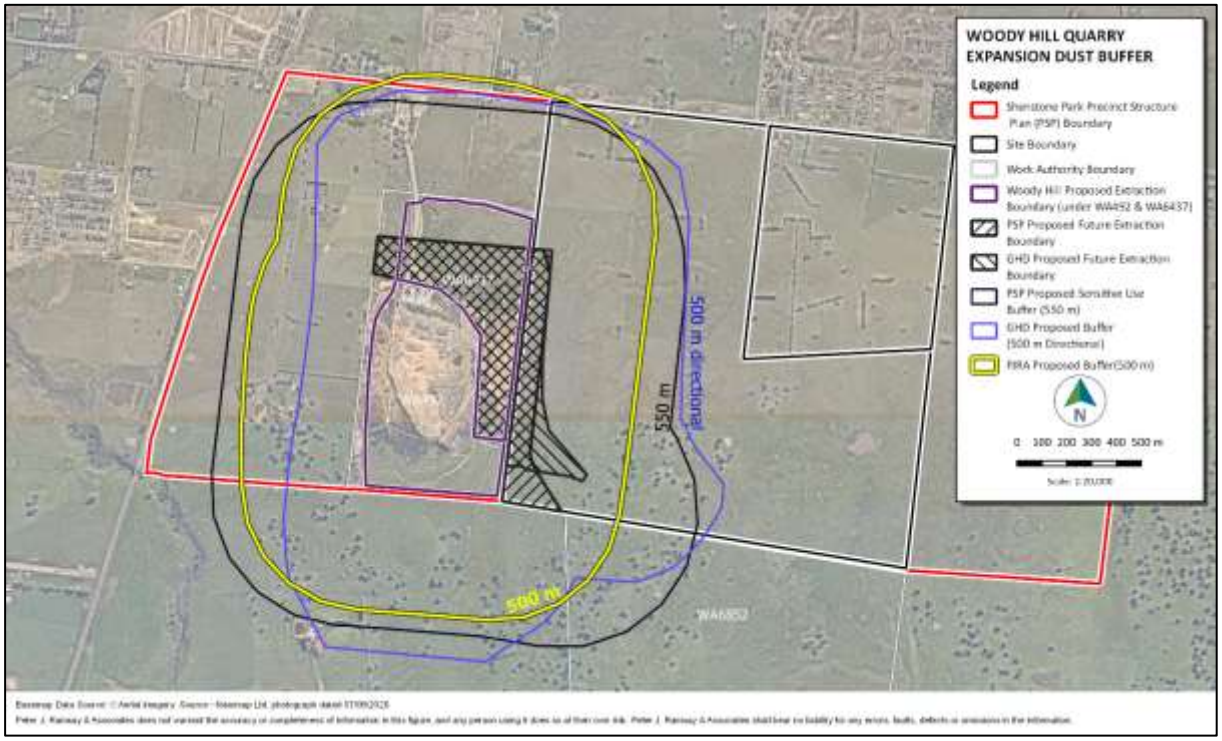


Figure 7 **Woody Hill Expansion – Extent of Blast Generated Dust Buffers**

5.3.4 Extent of Blast Generated Fly-Rock Buffers

GHD (2017) recommends a 200 m separation distance for protection against blast generated fly-rock. This was adopted in Plan 15 of the original PSP dated September 2019 and retained in Plan 15 of the revised PSP dated October 2020.

I consider the adoption of a 200 m buffer from the proposed extraction boundary within WA492 and WA006437 to be appropriate to provide protection against blast generated fly-rock impacts.

Figure 8 below shows the proposed blast generated fly-rock buffers for the proposed Woody Hill Quarry expansion.

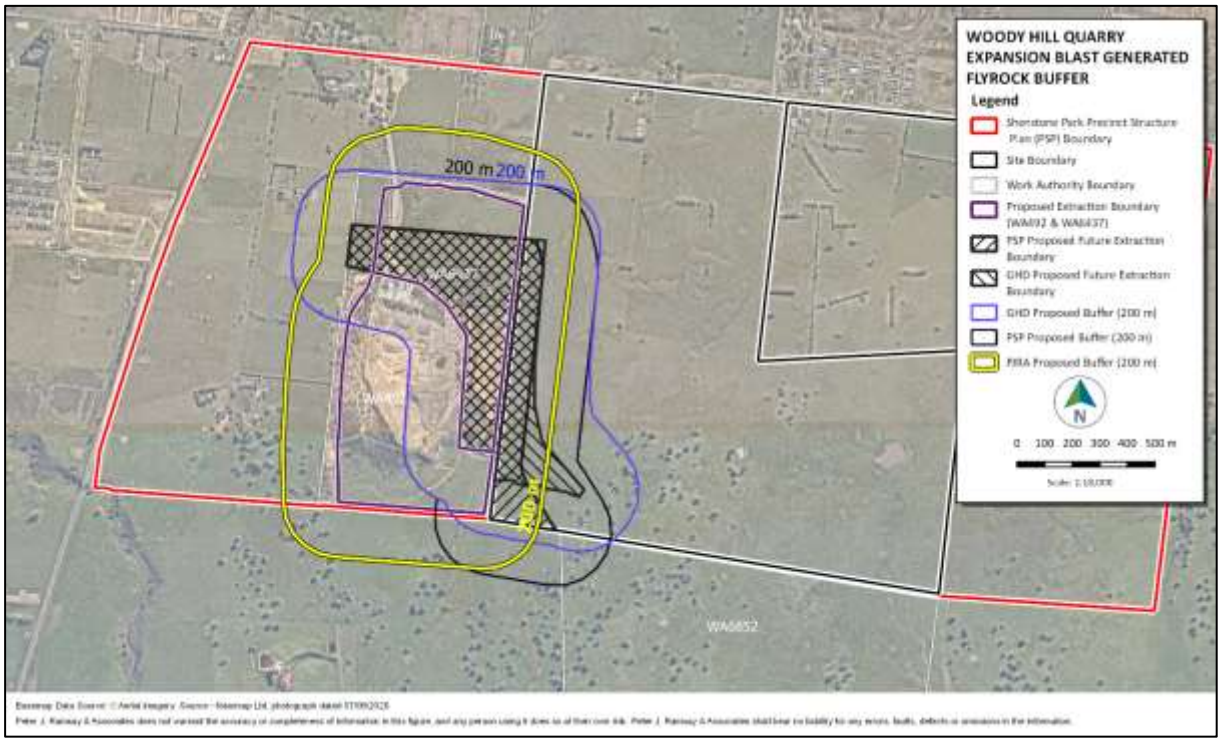


Figure 8 Woody Hill Expansion – Extent of Blast Generated Fly-Rock Buffers

5.4 Phillips Quarry

Phillips Quarry has been proposed under WA006852 and would be located to the south of the site. The Shenstone Park PSP includes buffers to protect the operations of the proposed Phillips Quarry. The buffers included in the PSP relate to operational noise, blast-generated vibration and dust and blast generated fly-rock. A number of these buffers encroach on the site. I provide my opinion on the buffers included in the Impact Assessment Report (GHD 2017), Impact Assessment Addendum (GHD 2019) and Plan 15 of the PSP dated September 2019, and Plan 15 of the PSP dated October 2020.

5.4.1 Extent of Operational Noise Buffers

GHD (2017) recommends an operational noise buffer from the proposed Phillips Quarry of 600 m from the proposed extraction boundary.

The PSP adopted a noise buffer for the proposed Phillips Quarry of 300 m from the proposed works authority boundary.

The same methodology was used to assess the future impact of the Phillips Quarry as was used to assess the potential noise impact from the Woody Hill Quarry and Woody Hill Quarry Expansion. As discussed in **Section 5.2.1**, a 250 m separation from areas of the quarry operations and 500 m separation from the proposed extraction area for the Phillips Quarry, are appropriate to provide protection against noise impacts.

Figure 9 below shows the proposed operational noise buffers for the proposed Phillips Quarry.

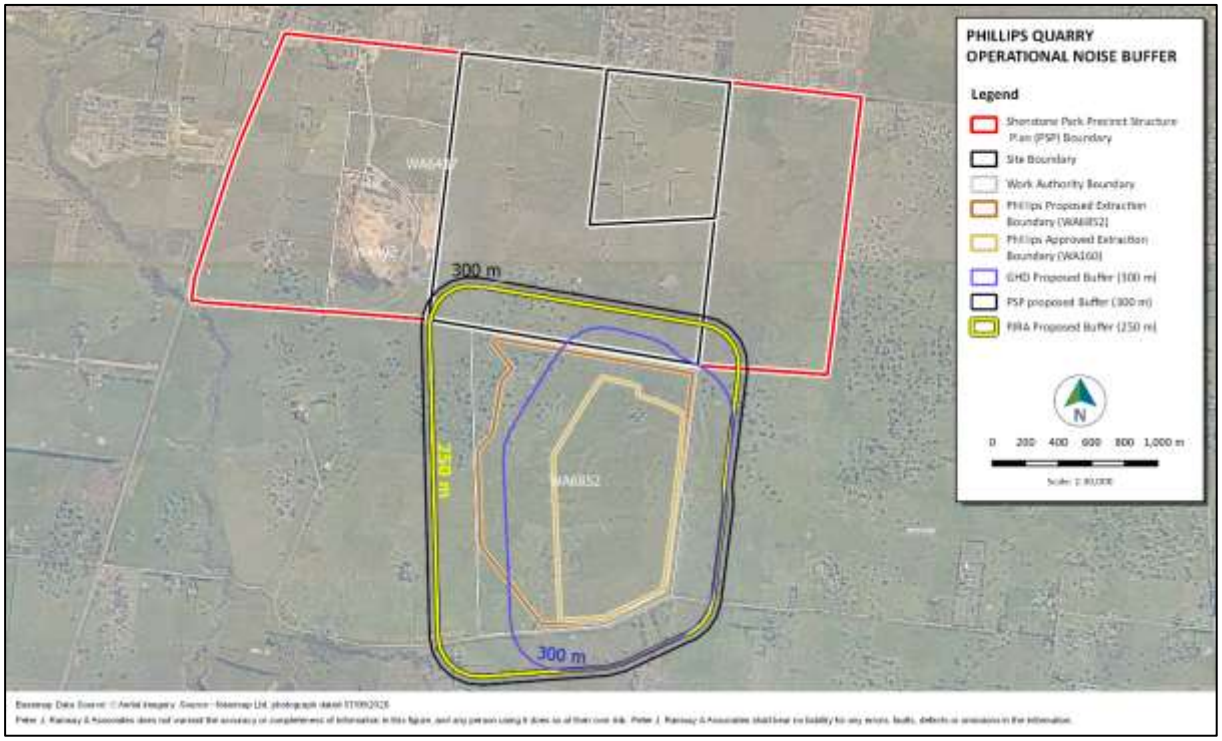


Figure 9 **Phillips Quarry – Extent of Operational Noise Buffers**

5.4.2 Extent of Blast Generated Vibration Buffers

GHD (2019) recommends a blast generated vibration buffer from the proposed Phillips Quarry of 550 m from the approved extraction boundary.

The PSP adopts this under the sensitive land use buffer from the proposed Phillips Quarry of 550 m from the proposed works authority boundary.

For the reasons discussed in section 5.2.4 of this report, I consider the use of a 500 m buffer from the approved extraction boundary to be appropriate to provide protection against blast generated vibration impacts.

Figure 10 below shows the proposed blast generated vibration buffers for the proposed Phillips Quarry.

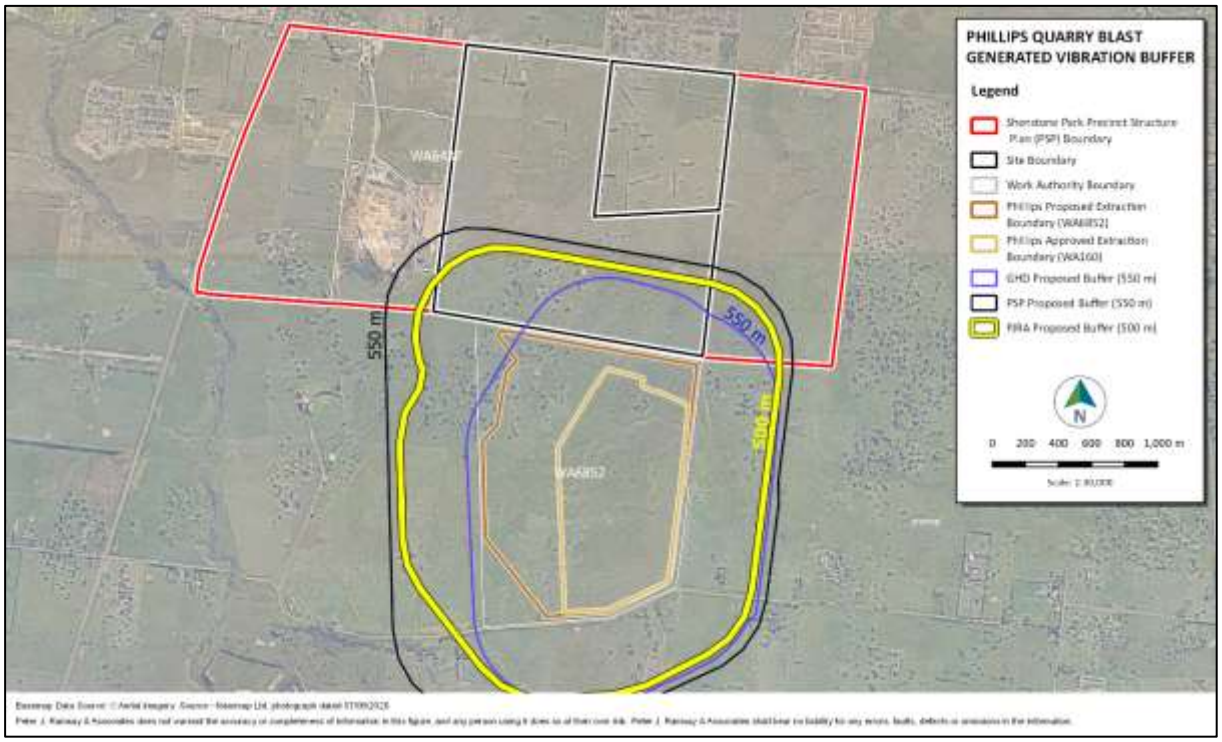


Figure 10 Phillips Quarry – Extent of Blast Generated Vibration Buffers

5.4.3 Extent of Blast Generated Dust Buffers

The PSP recommends a blast generated dust buffer from the proposed Phillips Quarry of 550 m from the proposed works authority boundary.

Both GHD (2019) and I consider the use of a 500 m buffer from the approved extraction boundary to be appropriate to provide protection against blast generated dust impacts.

Figure 11 below shows the proposed blast generated dust buffers for the proposed Phillips Quarry.

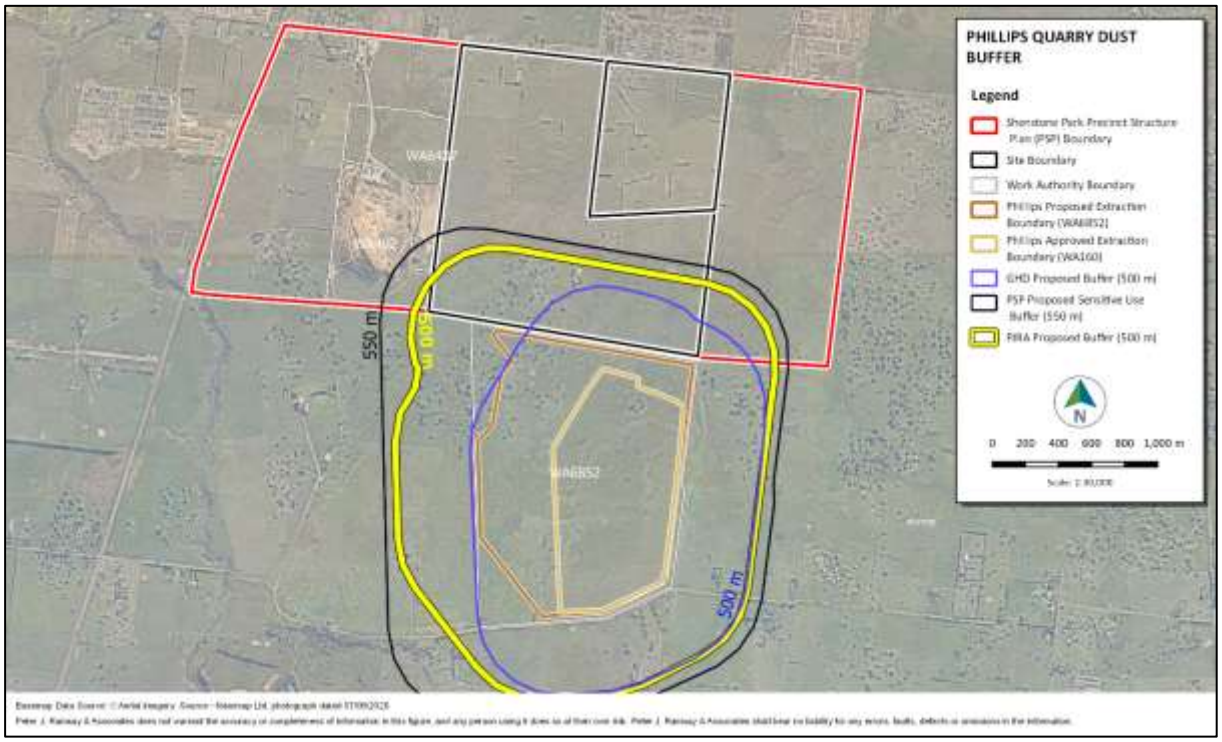


Figure 11 Phillips Quarry – Extent of Blast Generated Dust Buffers

5.4.4 Extent of Blast Generated Fly-rock Buffers

In the Impact Assessment Report (GHD 2017), GHD recommends a 200 m separation distance for protection against blast generated fly-rock. This was adopted in Plan 15 of the original PSP dated September 2019 and retained in Plan 15 of the revised PSP dated October 2020.

I consider the adoption of a 200 m buffer from the proposed extraction boundary within WA006852 to be appropriate to provide protection against blast generated fly-rock impacts.

Figure 12 below shows the proposed blast generated fly-rock buffers for the proposed Phillips Quarry.

Figure 12 Phillips Quarry – Extent of Blast Generated Fly-Rock Buffers

6. CONCLUSION AND SUMMARY OF OPINION

The methodology used to determine the appropriate buffers by GHD in the GHD Impact Assessment Report (GHD, 2017) and the GHD Addendum Report (GHD, 2019) is not consistent with the methodology outlined in EPA Publication 1518.

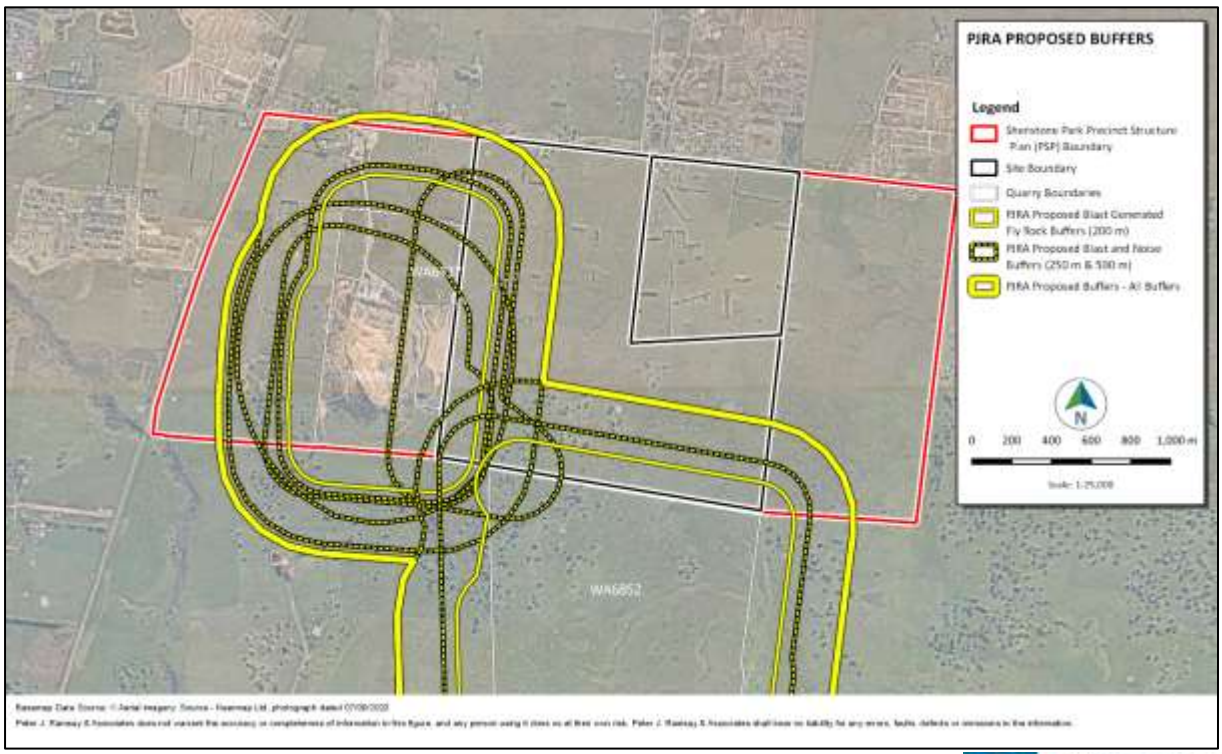
In accordance with EPA Publication 1518 separation distances should be measured from the relevant activity area. In the case of impacts associated with blasting and excavation, where reliable information is available regarding the areal extent of such works, then the separation distances should be measured from this extent.

The findings are not in accordance with the recommended separation distances between hard rock quarries using blasting techniques in similar geology, that have been applied in other recent situations where a separation distance has been put in place.

The separation distances I have recommended are typically those that are applied to quarries which are operating to industry standard best practice.

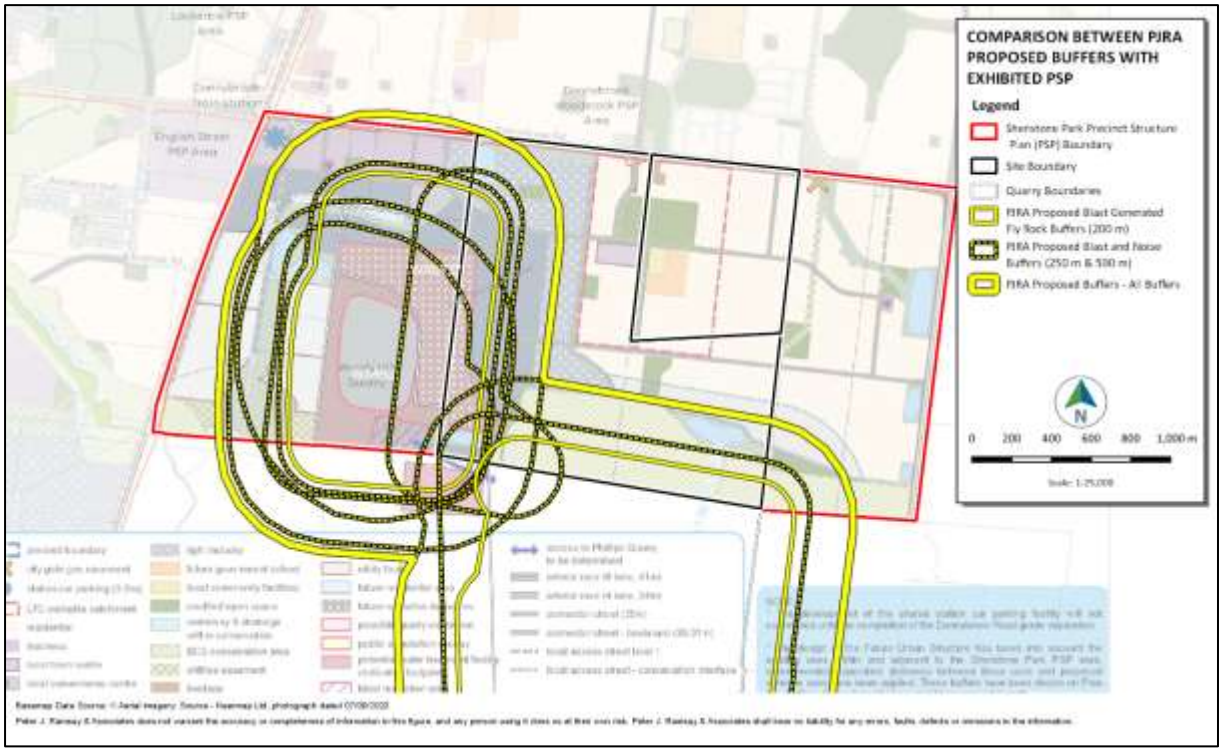
I have also considered the likely area of quarry operation based on the information provided by Barro as to the proposed extent of the Phillips Quarry under WA006852, and the extent of the endorsed extraction area proposed for expansion of the Woody Hill Quarry under WA492 and WA006437.

The extent of these separation distances is shown on **Figure 13** below.

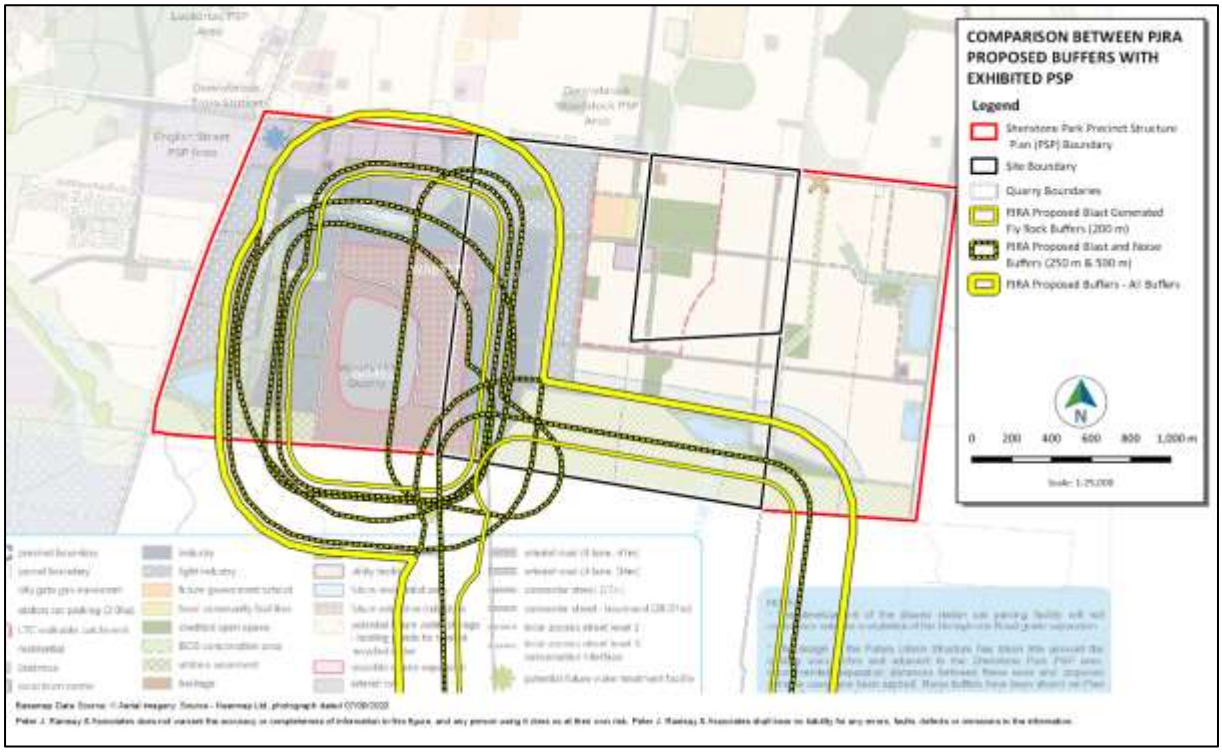


500 **Figure 13 Summary of Recommended Separation Distances**

501 The buffers do not align with the interface land uses proposed in the initial PSP, shown in **Figure 14**; or
502 to the land uses proposed in the revised PSP which are shown in **Figure 15**.

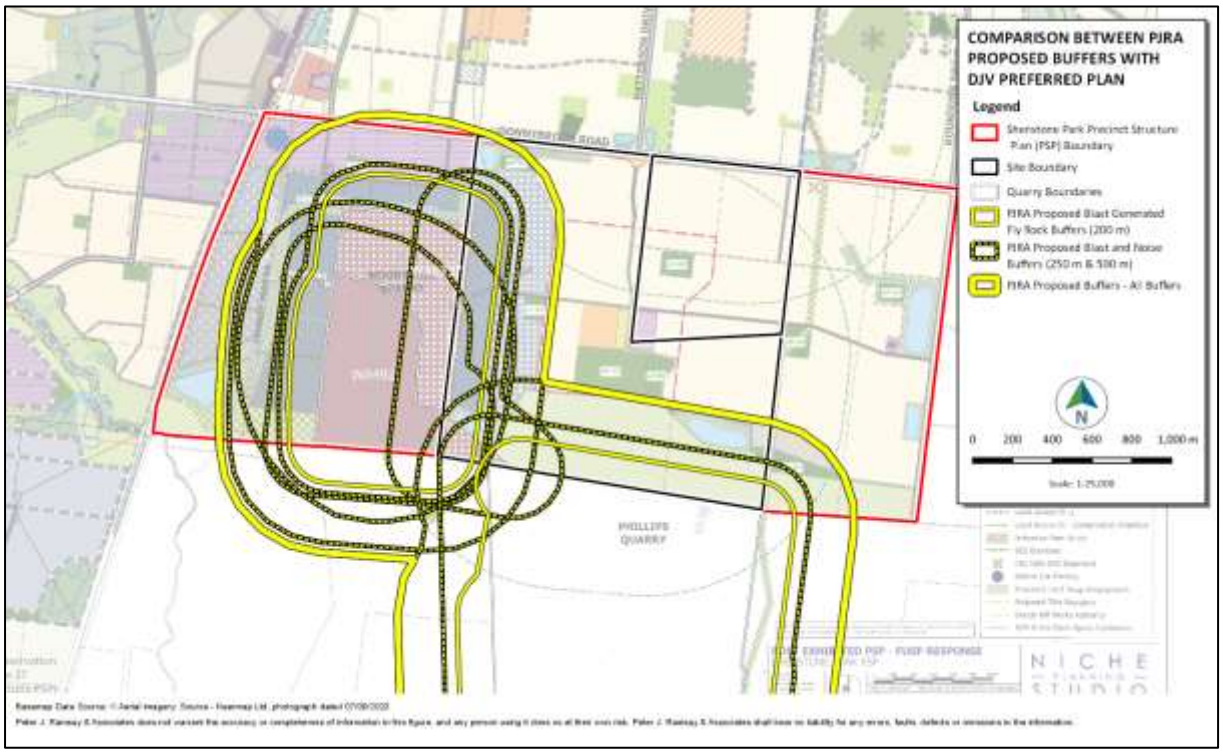


503 **Figure 14 Summary of Recommended Separation Distances on Exhibited PSP**



504 **Figure 15 Summary of Recommended Separation Distances on Revised PSP**

505 The interface land uses proposed in the FUSP put forward by the Donnybrook Joint Venture align with
506 the separation distances and interface land uses I recommend. This is shown in **Figure 16**.

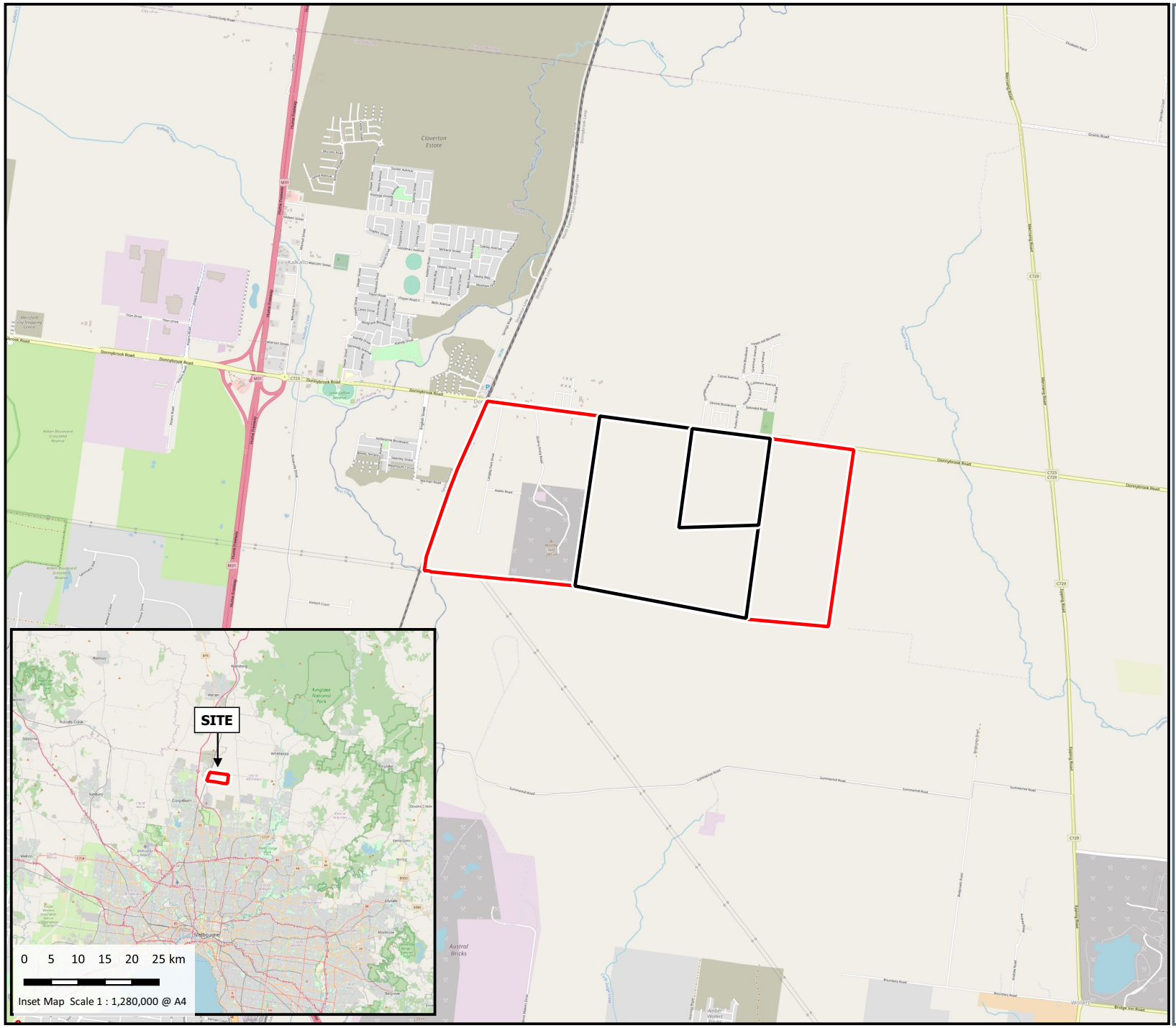


507 **Figure 16 Summary of Recommended Separation Distances against DJV Proposed Land Use**

508 Therefore, the land uses proposed by DJV in the figure, Post Exhibited PSP – FUSP Response, 26
509 October 2020 are compatible with the planned expansion of the Woody Hill Quarry under WA492 and
510 WA006437 and with the proposed development of the Phillips Quarry under WA006852.

511 In addition, the PSP should be amended to clearly show the extent of the proposed expansion of the
512 Woody Hill Quarry to the north as proposed under WA006437.

Figures



PETER J RAMSAY & ASSOCIATES

Legend

- Shenstone Park Precinct Structure Plan Boundary
- Site Boundary

Data Sources

OpenStreetMap Standard
Basemap: © 2019 OpenStreetMap contributors.
Property Lot Boundary: Source -Spatial Datamart Victoria, Department of Environment, Land, Water and Planning. Downloaded on 02/10/2020.
Precinct Structure Plan Area: Based on Amendment C241 to the Whittlesea Planning Scheme, Shenstone Park Precinct Structure Plan, revised marked up version, October 2020. Boundary digitized from Plan 3 "Future Urban Structure".

N

0 400 800 1,200 1,600 2,000 m

Main Map Scale 1 : 65,000 @ A4

LOCALITY MAP

Expert Buffer Assessment regarding Shenstone Park Precinct Structure Plan

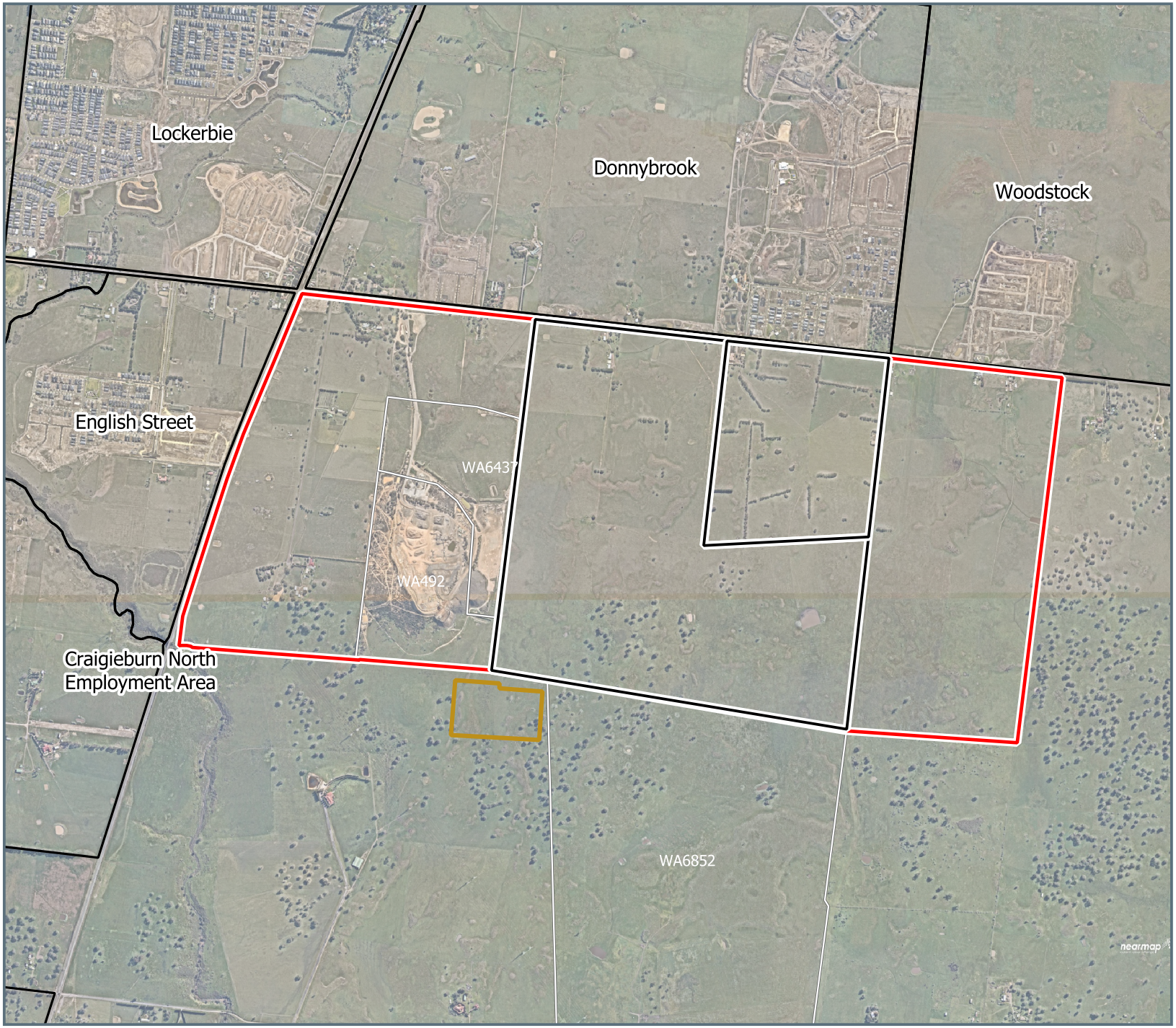
960 Doonnybrook Road, Donnybrook, VIC

Client: Donnybrook Joint Venture Pty Ltd

Project:	1032.1
Date:	29/10/2020
Revision:	Rev00
Designed:	AD
Drawn:	AD
Reviewed:	NW

Figure **F1**

File: P:\Projects\1032.1_Shenstone_Park_Donnybrook JV Pty Ltd\01\Maps\Working\F1_Locality.qgz



PETER J RAMSAY
& ASSOCIATES

Legend

- Shenstone Park Percinct Structure Plan Boundary
- Surrounding Precinct Structure Plans
- Site Boundary
- Work Authority Boundary
- Proposed Wastewater Treatment Plant

Data Sources

Source - Spatial Datamart Victoria, Department of Environment, Land, Water and Planning. Downloaded on 02/10/2020. https://services.land.vic.gov.au/SpatialDatamart

Aerial imagery: Source - Nearmap Ltd, photograph dated 07/09/2020

Precinct Structure Plan Area: Based on Amendment C241 to the Whittlesea Planning Scheme, Shenstone Park Precinct Structure Plan, revised marked up version, October 2020. Boundary digitized from Plan 3 "Future Urban Structure".

N

0 200 400 600 800 1,000 m

Main Map Scale 1 : 25,000 @ A4
Coordinate System: GDA94 / Zone 55

SITE PLAN

Expert Buffer Assessment regarding Shenstone Park Precinct Structure Plan

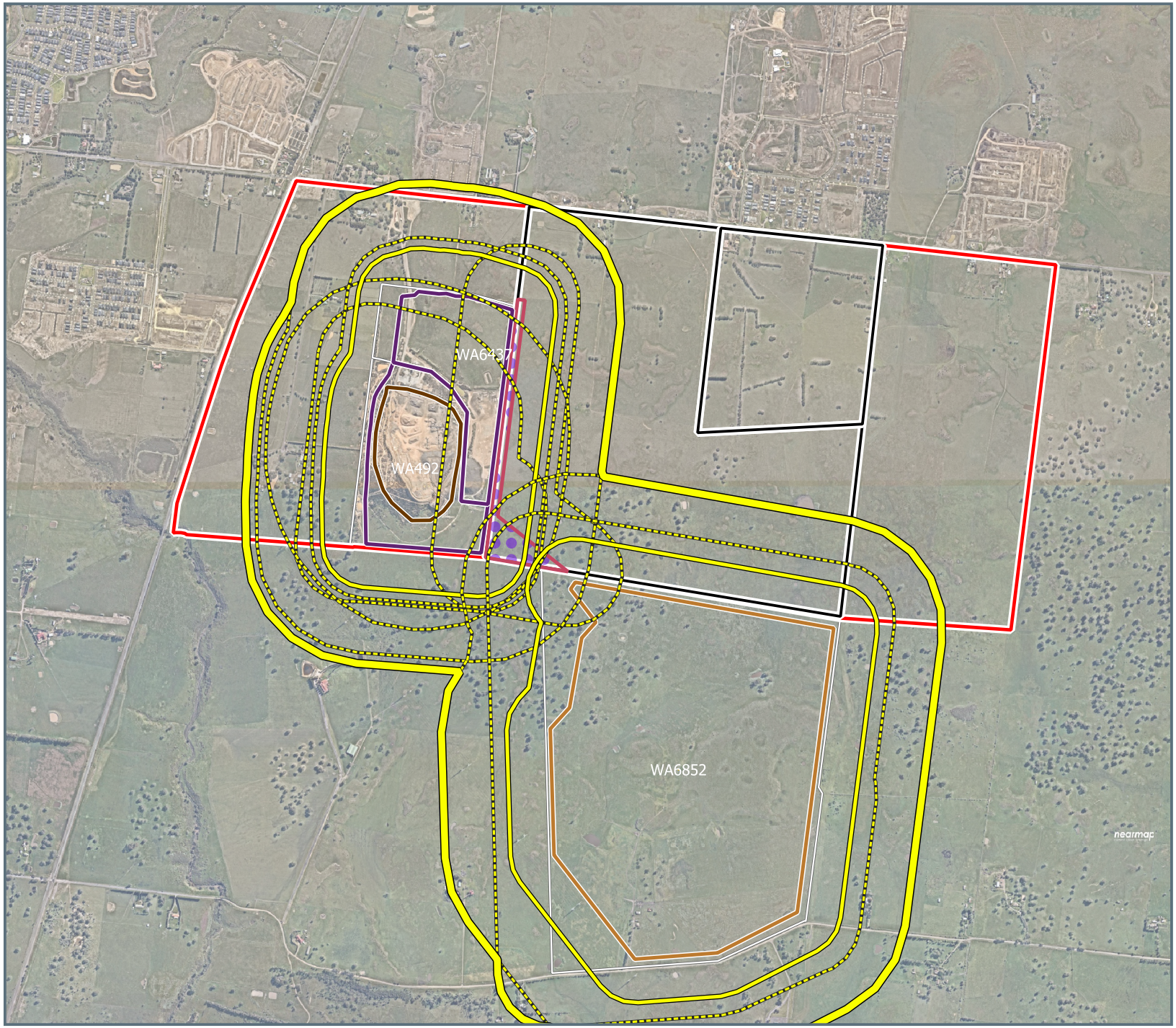
960 Donnybrook Road, Donnybrook, VIC

Client: Donnybrook Joint Venture Pty Ltd

Project:	1032.1
Date:	29/10/2020
Revision:	Rev00
Designed:	AD
Drawn:	AD
Reviewed:	NW

Figure
F2

File: P:\Projects\1032.1_Shenstone_Park_Donnybrook JV Pty Ltd\01\Maps\Working\Working_20201027.qgz



PETER J RAMSAY & ASSOCIATES

Legend

- Shenstone Park Percinct Structure Plan Boundary
- Site Boundary
- Work Authority Boundary
- Woody Hill Approved Extraction Boundary (under WA492)
- Woody Hill Proposed Extraction Boundary (under WA492 & WA6437)
- Phillips Proposed Extraction Boundary
- Proposed access Area
- PJRA Proposed Blast Generated Fly Rock Buffers (200 m)
- PJRA Proposed Blast and Noise Buffers (250m & 500m)
- PJRA Proposed Buffers - All Buffers

Data Sources

Aerial imagery: Source - Nearmap Ltd, photograph dated 07/09/2020

Precinct Structure Plan Area: Based on Amendment C241 to the Whittlesea Planning Scheme, Shenstone Park Precinct Structure Plan, September 2019. Boundary digitized from Plan 3 "Future Urban Structure".

N

0 200 400 600 800 1,000 m

Main Map Scale 1 : 25,000 @ A4
Coordinate System: GDA94 / Zone 55

PJRA PROPOSED BUFFERS

Expert Buffer Assessment regarding Shenstone Park Precinct Structure Plan

960 Donnybrook Road, Donnybrook, VIC

Client: Donnybrook Joint Venture Pty Ltd

Project:	1032.1
Date:	30/10/2020
Revision:	Rev00
Designed:	NW
Drawn:	AD
Reviewed:	NW

Figure **F3**

File: P:\Projects\1032.1_Shenstone_Park_Donnybrook JV Pty Ltd\01\Maps\Working\Working_20201027.qgz

Appendix A

Instructions to Expert Witness – Environmental & Buffers

DATE:	27 July 2020
TO:	Peter Ramsay – Peter J Ramsay & Associates
FROM:	Brihony Boan and Rachel Yard
FILE NO:	22005943
RE:	Shenstone Park PSP - Panel Hearing

1. Instructions

We act for Donnybrook JV Pty Ltd (**DJV**). Further to your discussions with DJV, we provide these formal instructions to provide expert planning evidence on behalf of DJV in relation to the proposed precinct structure plan for Shenstone Park including:

(a) reviewing these instructions and the documents annexed to this brief;

(b) preparing an expert evidence report in support of DJV's submissions; and

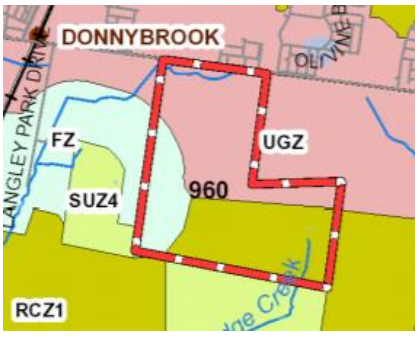
(c) appearing at the panel hearing to present evidence which is listed to be heard over 3 weeks commencing on Monday, 16 November 2020.

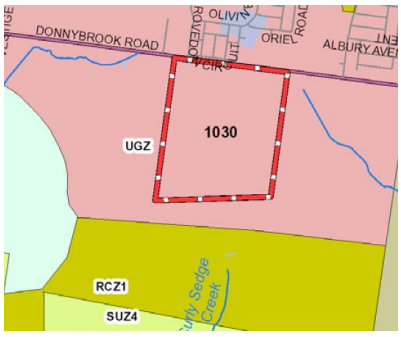
2. Background

DJV is the registered proprietor of:

(a) 960 Donnybrook Road, Donnybrook more particularly described as Lot 1 on TP374144X (contained in Certificate of Title Volume 11260 Folio 109) and Lot 1 on TP371225P (contained in Certificate of Title Volume 11260 Folio 110) (**960 Donnybrook**) and shown below; and

(b) 1030 Donnybrook Road, Donnybrook more particularly described as Lot 1 on TP380512K contained in Certificate of Title Volume 6229 Folio 723 (**1030 Donnybrook**) and shown below.





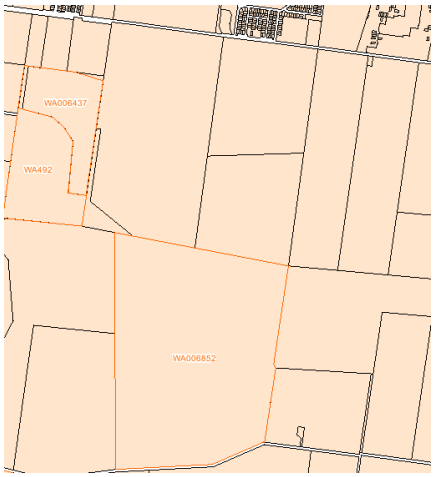
(collectively, the **Property**).

There are three (3) work authorities for quarries in close proximity to the Property, as follows (shown below):

(a) Work Authority 492 (approved): part of the Woody Hill quarry (an active sandstone / mudstone quarry) which adjoins the western boundary of the Property (**Woody Hill Quarry**);

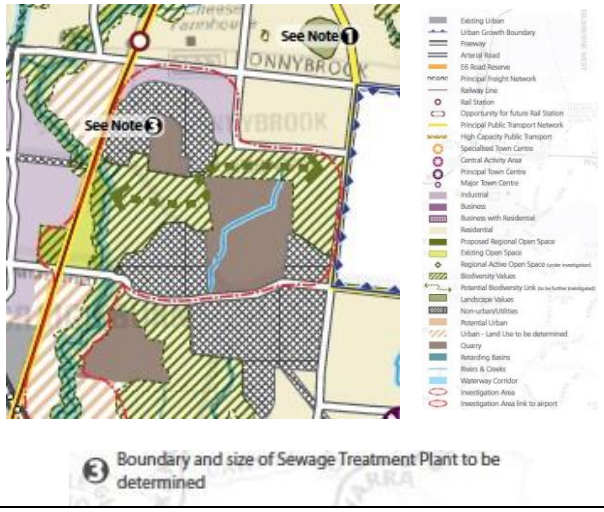
(b) Work Authority 6437 (approved): part of the Woody Hill Quarry; and

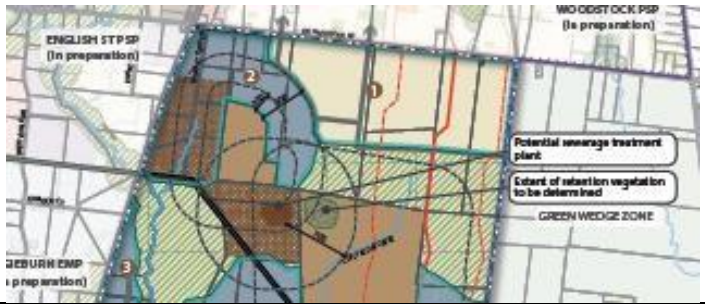
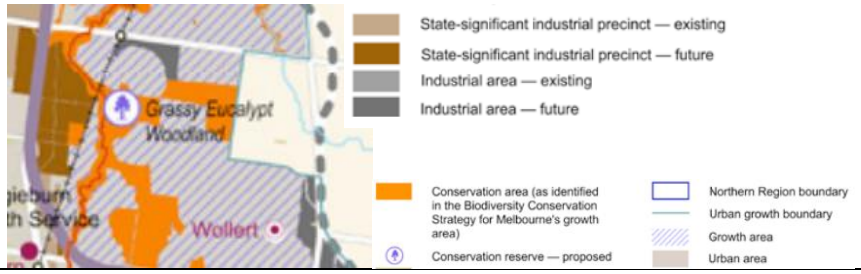
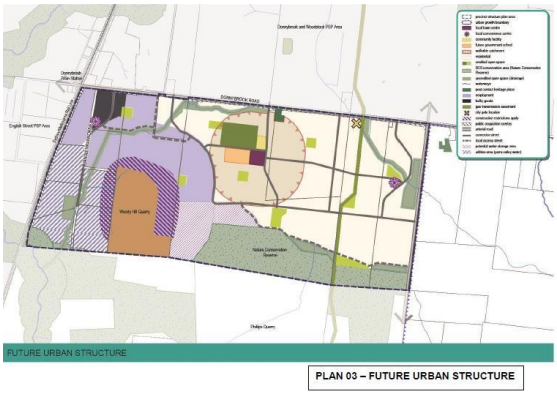
(c) Work Authority 6852 (proposed): the proposed Phillips quarry (an inactive basalt quarry) which will be located on land adjoining the south east boundary of the Property (**Phillips Quarry**).

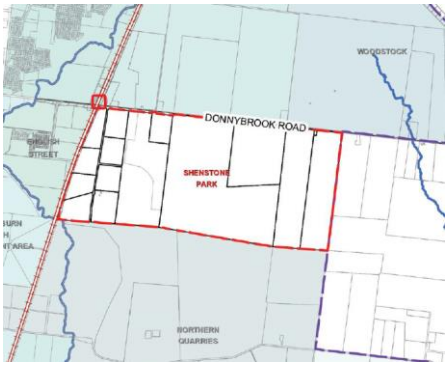


3. Planning History

A brief outline of the relevant planning history for this matter is as follows:

Date	Document
June 2012	North Growth Corridor Plan The North Growth Corridor Plan identifies the PSP Land as a combined residential and industrial precinct with a quarry and non-urban uses including biodiversity value land. The Property is identified as being a mix of industrial uses and residential uses. 
May 2014	Plan Melbourne Plan Melbourne shows the PSP Land as being located within the metropolitan region, with a future state-significant industrial precinct earmarked for area located the West of the Sydney-Melbourne railway line.

May 2015	<u>Northern Quarries Investigation Area - Draft Addendum to the Growth Corridor Plans: Managing Melbourne's Growth (**NQIA Draft Addendum**)</u> The NQIA Draft Addendum was released by VPA (formerly MPA) and designated part of the Property within the 600 metre quarry buffer as 'employment', with the balance of the Property designated as residential and conservation areas. 
2017	<u>Plan Melbourne's Five Year Implementation Plan</u> The purpose of the Five Year Implementation Plan is to give effect to the policies set out in Plan Melbourne. Clause 9.01 of the Whittlesea Planning Scheme requires planning and responsible authorities to consider and apply the strategy Plan Melbourne 2017-2050: Metropolitan Planning Strategy. The Five Year Implementation Plan identifies the PSP Land as including future industrial, urban area / growth area and conservation area, and being in close proximity to a future state significant industrial precinct. 
December 2017	<u>Draft Shenstone Park Precinct Structure Plan (**Draft PSP**)</u> The Draft PSP was consistent with the NQIA Draft Addendum and identified parts of the Property the subject of buffers as 'employment' or 'potential water storage', with the balance comprising residential, town centre, open space and conservation areas.  PLAN 03 – FUTURE URBAN STRUCTURE

July 2018	<u>Joint Ministerial Statement on Extractive Resources</u> Prepared by Tim Pallas MP (Minister for Resources) and Richard Wynne MP (Minister for Planning), the Joint Ministerial Statement sets out the criteria for identifying sites that contain significant accessible resources, and identifies Work Authority 492 as a 'hot list' quarry, being a site that contains significant accessible resources.
4 October 2019	<u>Final Shenstone Park Precinct Structure Plan (**Exhibited PSP**)</u> Exhibited as part of Amendment C241 to the Whittlesea Planning Scheme. A copy of the Future Urban Structure Plan contained in the Exhibited PSP is contained in Annexure A. The Exhibited PSP covers 628 ha in the City of Whittlesea bounded by Donnybrook Road to the north, the Sydney-Melbourne railway line to the West, the Wollert suburb boundary to the South and the Urban Growth Boundary to the east (shown below) (**PSP Land**). The Property comprises approximately 275 ha, or approximately 44%, of the PSP Land.  The Woody Hill Quarry is included within the PSP Land. Although it is proposed that the Phillips Quarry and the Wollert Sewage Treatment Plant will be located outside of the PSP Land, the Exhibited PSP has incorporated provisions (ie, zoning, buffers etc) in anticipation of their future operational impacts.

4. Relevant Submissions

Below is a summary of the submissions that will be relevant in preparing your advice:

(a) <u>Extent of Quarry Operations</u>

The Exhibited PSP sets aside 11.25 ha of 960 Donnybrook for 'future extractive industries' (shown in yellow below).

There are no approved work authorities over any part of the Property, and Barro Group Pty Ltd (**Barro**) which owns and operates the Woody Hill Quarry and Phillips Quarry, has informed VPA that there are no rights to carry out extractive operations over the above area, which forms part of the Property. As noted above, the boundaries of the existing work authorities for the Woody Hill Quarry and Phillips Quarry only extend to the boundaries of adjoining properties.

(b) Buffers

The Exhibited PSP includes eight (8) buffers, as shown on Plan 15 of the Exhibited PSP a copy of which is contained in Annexure B, including the:

(i) Woody Hill Sensitive Use Buffer – a 550 metre radial buffer from the boundaries of the 'Woody Hill possible extraction expansion' area; and

(ii) Sewage Treatment Plant Odour Buffer – a 613 metre directional buffer around the proposed location of the proposed Wollert Sewerage Treatment Plant.

In the Impact Assessment Report (December 2017) and Woody Hill Addendum (September 2019), both prepared by GHD, it is noted that specific information regarding the detailed operations at the Woody Hill Quarry and Phillips Quarry was not available at the times of the reports. In its submission to VPA concerning the Exhibited PSP, Barro Group noted that the '*assumptions and background research underpinning the GHD work do not accurately reflect the current and proposed operations on the Barro Group land and consequently does not accurately reflect potential off-site amenity impacts and associated buffer distances*'.

(c) Employment / Industrial Land Uses

The Exhibited PSP proposes setting aside a large portion of 960 Donnybrook for industry and light industry. In a report prepared by Urbis for DJV dated 11 November 2019, it is noted that:

(i) the Northern Region contains sufficient industrial land to meet at least 40 years' demand, even without the employment areas designated by the Shenstone Park PSP;

(ii) the background report for the Shenstone PSP contains no strategic justification for the amount and nature of industrial land to be set aside in the Exhibited PSP;

(iii) there is already a significant supply of industrial land at more superior locations in surrounding areas; and

(iv) the proposed industrial land would face significant competition from other planned industrial areas in the region with superior locational attributes.

5. Guide to Expert Evidence

As you would be aware, as an expert witness before the Panel, you will be required to be aware of the contents of the Guide to Expert Evidence issued by Planning Panels, a copy of which is included in your brief of documents.

6. Counsel / Experts

DJV has briefed or intends to brief the following Counsel and additional experts in this matter:

(a) Stuart Morris QC (Senior Counsel)

(b) Paul Chiappi (Junior Counsel)

(c) Rob Milner of Kinetica (Town Planning)

(d) Mark Sheppard of Kinetica (Urban Design)

(e) Rhys Quick of Urbis (Economic Impact / Employment Land Supply and Demand)

(f) David Maltby of Zone Environmental (Environmental / Quarry)

7. Next Steps

The key dates for the panel hearing are as follows:

(a) Directions hearing – Monday, 31 August 2020

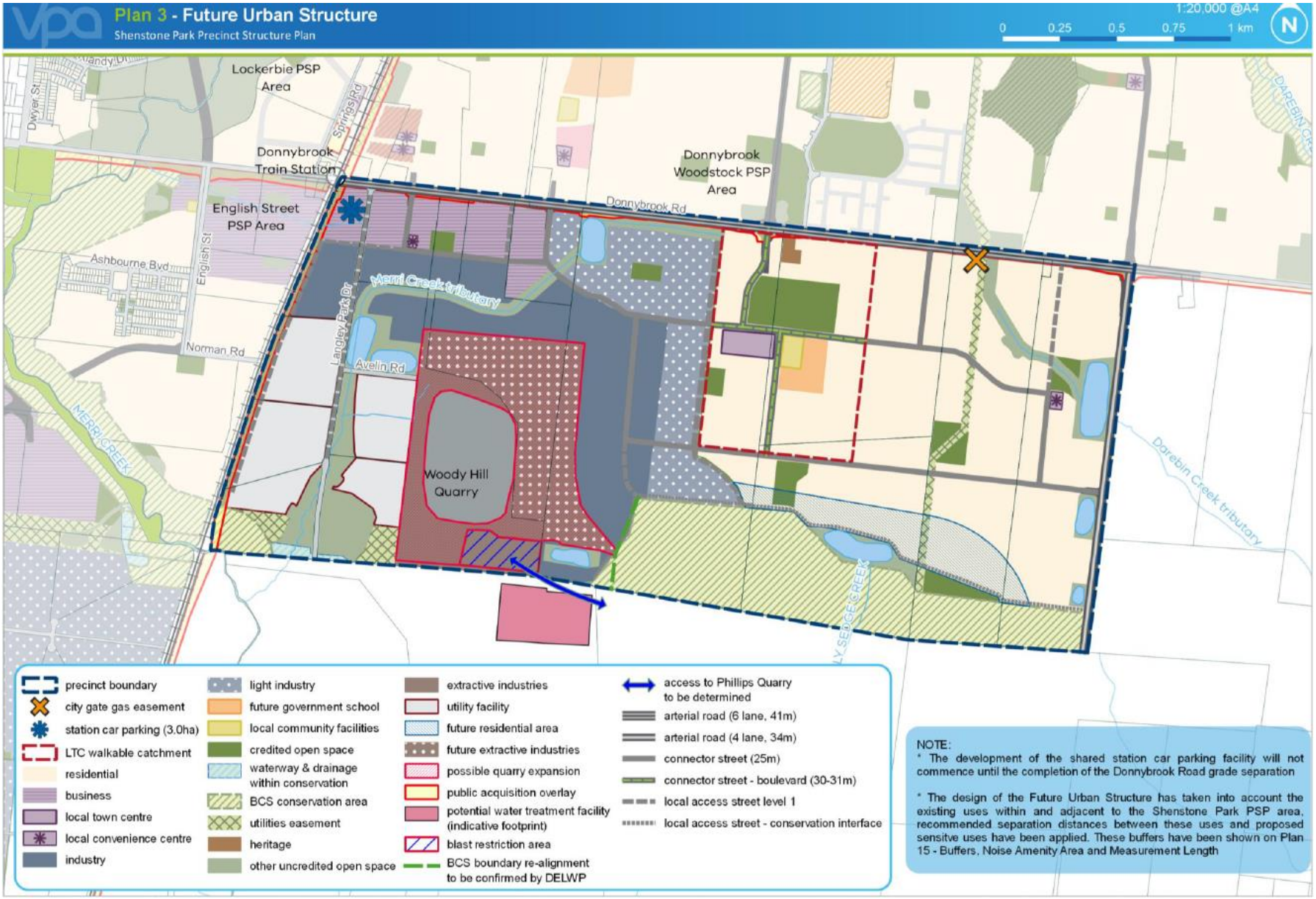
(b) Panel hearing – 3 consecutive weeks commencing Monday, 16 November 2020

We will provide you with an update on the timetable for the panel hearing following the directions hearing on 31 August 2020.

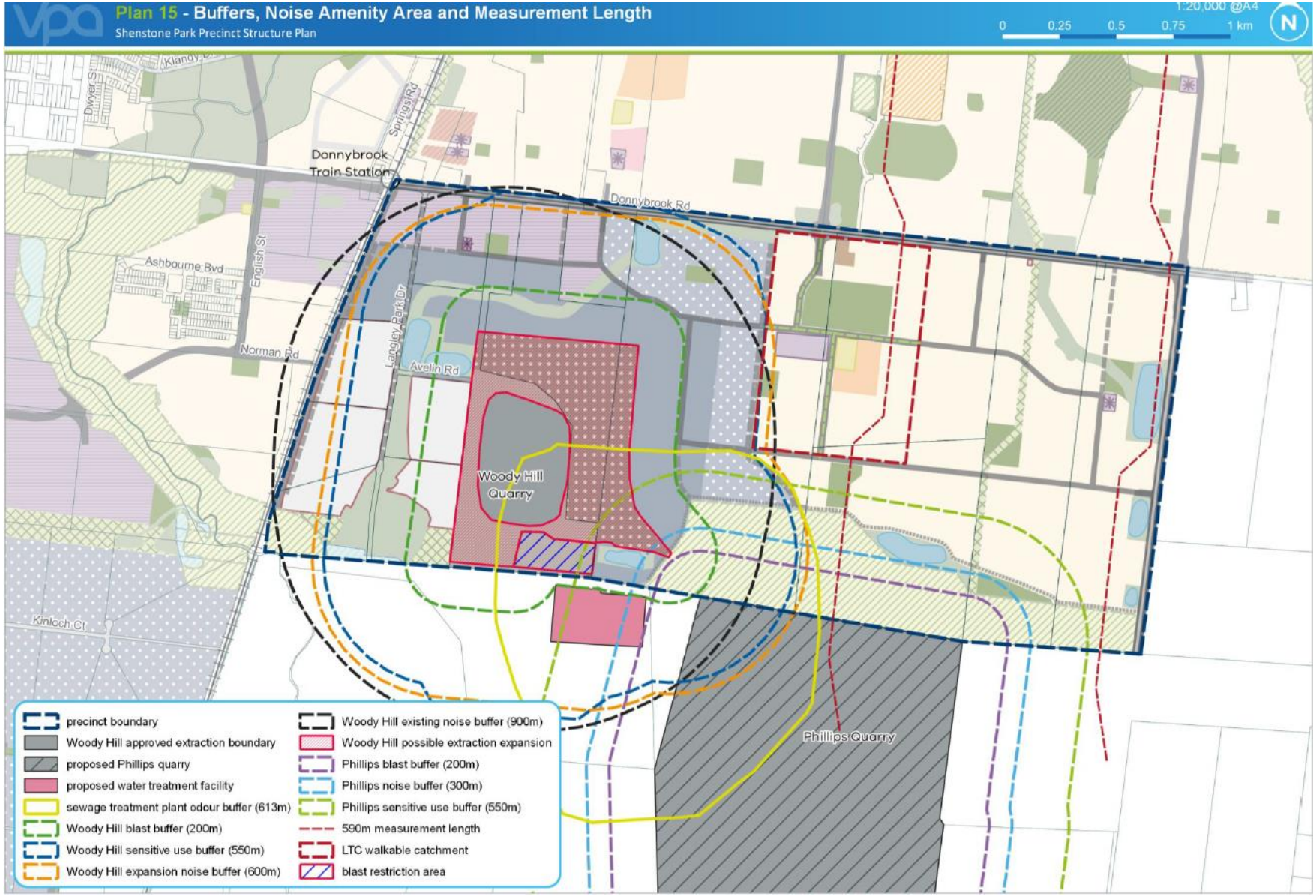
Please let us know if you require any further information, documentation or instructions to proceed with the above.

Brihony Boan
Partner
Gadens
E: brihony.boan@gadens.com
T: (03) 9252 7726

Annexure A - Exhibited PSP Future Urban Structure Plan



Annexure B – Exhibited Buffer Zone Plan



Appendix B

PETER J RAMSAY & ASSOCIATES

Peter J Ramsay
Managing Director

Fields of Competence

- Lead environmental auditing of landfills and industrial facilities
- Separation distances for industrial facilities and landfills
- Contaminated site assessment and remediation
- Environmental improvement plans and pollution reduction programs
- Environmental impact assessment
- Cleaner production and waste minimisation
- Air quality management
- EHS management

Experience Summary

Peter has been Managing Director and Principal Consultant of Peter J Ramsay & Associates Pty Ltd since February 1988. He has over 30 years' experience in pollution control, cleaner production, due diligence audits, environmental auditing, environmental management systems and environmental assessment. Peter is a Chartered Professional Engineer and a Fellow of the Institution of Engineers Australia. He is appointed as an Environmental Auditor under the Victorian *Environment Protection Act 1970* for both contaminated land and industrial facilities. He is also accredited as a Site Auditor under the New South Wales *Contaminated Land Management Act 1997* and is a registered professional engineer in Queensland.

Education

Diploma of Chemical Engineering, RMIT, 1970.

Graduate Diploma of Management, RMIT, 1973.

Master of Environmental Science, Monash University, 1978.

Language Proficiency

(None, Fair, Moderate, Excellent, Native)

- English: Speak/Read/Write - Native/Native/Native

Professional Affiliations and Registrations

- Fellow of the Institution of Engineers Australia (FIEAust).
- Fellow of The Australian Institute of Company Directors.
- Past Chairman of the Environmental Branch, Victorian Division, Engineers Australia, 1987/88.
- Member of Clean Air Society of Australia and New Zealand.
- Member of Australian Water and Wastewater Association.
- Member of Air and Waste Management Association (USA).
- Australian Environment Business Network
- Australian Sustainable Business Group

Key Projects

Lead auditor for environmental audits of Alcoa aluminium smelters, BHP steel mills and manufacturing facilities.

Management of due diligence audits for mergers and acquisitions for major real estate transactions.

Management of Phase I and II environmental assessments of soil and groundwater at large scale industrial facilities.

Management of remedial projects throughout Australia.

Statutory environmental audits of land under Australian legislation of contaminated sites, landfills and a range of industrial facilities.

Statutory environmental audits of risk to the environment from landfill operations throughout Victoria.

Statutory environmental audits of risk to the environment from the construction of landfill liners throughout Victoria.

Statutory environmental audits of risk of harm to groundwaters at landfills throughout Victoria.

Expert evidence on separation distance for landfills and industrial facilities.

Auditor verification of monitoring programs and cell design at landfills throughout Victoria.

Cleaner production and waste minimisation strategies for industries.

Air quality management and assessment for industry.

PETER J RAMSAY & ASSOCIATES

Peter J Ramsay
Managing Director

Odour control and impact assessment for industrial facilities ranging from poultry farms to manufacturing facilities.

Waste to energy projects and carbon management.

Regulatory permitting for new and existing industrial facilities.

Audits of wastewater treatment facilities and water reuse strategies.

Environmental impact assessment for new facilities.

Environmental Health and Safety (EHS) policies and procedures. Preparing and documenting sound EHS management systems.

Hazard and Operability Studies (HAZOPS) to determine regulatory compliance.

Environmental risk assessment to determine regulatory compliance.

Publications

- Ramsay, P.J. *Sustainable Challenges Facing Business*, Paper presented at the Environment Essentials Conference, Australian Environment Business Network (AEBN), Parkville, 16 September 2004.
- Ramsay, P.J. Property Council of Australia *Guide to Due Diligence*, author of Environmental section of the 2003 (current) edition, Brisbane 2003.
- Ramsay, P.J. Property Council of Australia Publication *Guide to Due Diligence*, Author of Environmental section, Brisbane, 1998.
- Ramsay, P.J. and Van Schoten, M.W. *The Critical Need for Quality Assurance in Contaminated Site Assessment*, Paper presented at the 3rd National Hazardous Solid Waste Convention, Darling Harbour, Sydney, 26-30 May 1996.
- Ramsay, P.J. and Thiele, G.A., *Assessment of Odour Buffer Zones for Wastewater Treatment Plants*, Clean Air, Vol. 29, No. 2, pp. 48-52, 1995.
- Ramsay, P.J. and Wareham, A.E. *The Role of Buffer Zones in Environmental Management*, Symposium on Siting, Engineering and Management of Hazardous Industries, Institution of Engineers Australia, Melbourne, Australia, 13 and 14 April 1983.
- Ramsay, P.J. *Report on Study: Fluoride Levels in Vegetation and Ambient Air in the Portland Area*, Environment Protection Authority, Publication 148, Melbourne, Australia, 1982.
- Ramsay, P.J. *Stationary Source Control in Victoria: The benefits of Licensing and Monitoring*, 50th Annual Conference of Australian Institute of Health Surveyors, Victoria Division, Moonee Valley, Melbourne, Australia, 22 May 1981.
- Ramsay, P.J. *Air Pollution Control of Aluminium Smelters in North America. A Review of Emission Limits and Control Strategies for Aluminium Smelters in North America with implications for Victoria*, Environment Protection Authority, Publication 114, Melbourne, Australia, 1980.
- Hulme, J. and Ramsay, P. *Industrial Pollution and Community Attitudes*, Monash University. Victoria, Australia, 1978.

Appendix C

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INSTRUCTIONS TO EXPERT WITNESS

INDEX

Background Information		**Prepared by**	**Date**
A.	Planning Property Reports and Scheme Extracts		15 July 2020
B.	North Growth Corridor Plan	Growth Areas Authority	June 2012
C.	Plan Melbourne - Metropolitan Planning Strategy		May 2014
D.	Northern Quarries Investigation Area – Draft Addendum to the Growth Corridor Plans: Managing Melbourne's Growth	VPA (formerly MPA)	May 2015
E.	Plan Melbourne - Five Year Implementation Plan	DELWP	2017
F.	Draft Shenstone Park Precinct Structure Plan	VPA and City of Whittlesea	December 2017
G.	Draft Retail and Employment Needs Economic Assessment	Essential Economics	December 2017
H.	Joint Ministerial Statement on Extractive Resources	Tim Pallas MP and Richard Wynne MP	July 2018
I.	Shenstone Park Precinct Structure Plan Economic Assessment – Summary of Key Findings	Urbis	11 November 2019
J.	Letter to VPA from Barro Group Pty Ltd regarding quarrying activities over 960 Donnybrook Road	Contour Town Planners	19 June 2020
K.	Guide to Expert Evidence	Planning Panels Victoria	April 2019
Relevant Exhibited Documents		**Prepared By**	**Date**
1.	Shenstone Park Precinct Structure Plan	VPA	September 2019
2.	Background Report	VPA	September 2019
3.	Proposed Planning Scheme Amendments – C241wsea • Explanatory Report • Clause 37.01 • clause 37.07 • Clause 43.01 • Clause 43.03 • Clause 52.17 • Clause 52.33		

	• Clause 66.04 • Clause 66.06 • Clause 72.04		
4.	Economic Assessment	Ethos Urban	September 2019
5.	Quarry Impact Assessment	GHD	December 2017
6.	Quarry Impact Assessment – Addendum	GHD	September 2019
Relevant Submissions		**Prepared By**	**Date**
7.	Submission 17 (DELWP)	DELWP	15 November 2019
8.	Submission 23 (Donnybrook Joint Venture Pty Ltd)	Donnybrook Joint Venture Pty Ltd	15 November 2019
9.	Submission 24 (Barro Group Pty Ltd)	Contour Town Planners	15 November 2019
10.	Submission 32 (City of Whittlesea)	City of Whittlesea	


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