

MACKA'S SAND PTY LTD

**ROAD SAFETY AUDIT STAGE 2
PRELIMINARY DESIGN OF CHANNELISED
INTERSECTION OF ACCESS ROAD TO
TO PROPOSED
SAND MINING DEVELOPMENT AT
LOT 218, D.P. 1044608, WILLIAMTOWN
AND NELSON BAY ROAD.**

PREPARED JOINTLY BY ACCREDITED ROAD SAFETY AUDITORS FROM:

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CONTENTS

1.0 INTRODUCTION

- 1.1 Audit Team**
- 1.2 Description of the Project**
- 1.3 Documents Reviewed**
- 1.4 Initial Consultation**

2.0 ROUTE INSPECTION AND FINDINGS AND SUGGESTED TREATMENTS

3.0 COMPLETION MEETING

4.0 CONCLUDING STATEMENT

1.0 INTRODUCTION

1.1 Audit Team

Lyle Marshall and Associates Pty Ltd and McLaren Traffic Engineering were commissioned by Macka's Sand Pty Ltd to conduct a Preliminary Design Stage 2 Audit of the proposed intersection of the access driveway to a proposed sand mining development at No. 2354 Nelson Bay Road, Williamtown with Nelson Bay Road (**MR 108**).

The team comprised the following personnel:-

Lyle Marshall, BE, M.Eng. Sc, Dip Env Stud, F.I.H. & T., C.P. Eng., NPER(Civil) M.I.E. Aust., M.A.I.T.P.M.

Lyle Marshall is the principal of Lyle Marshall and Associates, has undertaken the IPWEA training programme for Road Safety Auditors and is an accredited Level 2 auditor, has completed the NSW Transport Training Course Programme "Road Safety Auditing for Leaders" September 2013 and has many years experience in road design for urban and rural projects, traffic engineering transportation planning, accident investigation and road safety audits. He is the Lead Auditor for this study.

Craig McLaren, BE Civil, Grad Dip. Traffic Eng. M.A.I.T.P.M.

Nominated Road Safety Auditor who has undertaken IMEA Road Safety Accreditation course and is an accredited Level 3 auditor. Director of McLaren Traffic Engineering with over 25 years experience as a senior traffic engineer. Experience in traffic impact assessment, local area traffic management studies, parking studies, road safety audits, accident analysis and geometric design.

The accreditations of both Principals and their relevant experience were emailed to Mr. Robert Mackenzie, Director Macka's Sand Pty, Ltd.

1.2 Description of the Project

The proposed *access driveway location* in Nelson Bay Road is approximately **1.5km.** west of the Richardson Road roundabout and is located on Google **Aerial photograph 3 of 4.** The proposed intersection has been designed for **left in / left out** movements only for a **B Double** design vehicle. The *left in movement* is via a *deceleration lane* **133 metres long** (Austroads AUL) and the *left out movement* is via an *acceleration lane* **260 metres long** (**Austroad Figure 6.48a**).

The preliminary design is shown on **Sheet C05** of Drawing No. **0000.000.R.C.0000** prepared by Valley Civil Pty Ltd.

1.2 (Continued)

The horizontal road alignment of Nelson Bay Road on the westbound approach from Nelsons Bay comprises a horizontal curve to the right followed by a straight from the centerline of the proposed access road junction to Samson Road and then a horizontal curve to the left. The vertical alignment is a flat downgrade of about 0.18 percent from the centerline of the proposed access road. The road alignment is shown in **Figure 1** and **Google Map 3 of 4**.

The intersection has been designed in accordance with Austroads Guide to Road Design Part 3 Geometric Design and relevant RMS Technical Directions and Australian Standards. The intersection includes a raised concrete median island to physically prevent right in right out movements.

The preliminary design drawing does not show the signage, line marking types, raised pavement markers, all pavement arrows, advance direction signs, painted kerb faces and signs and pavement markings for the cycle lane located in the outer shoulder of the auxiliary lanes. These design features will be the subject of a detailed design stage audit.

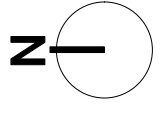
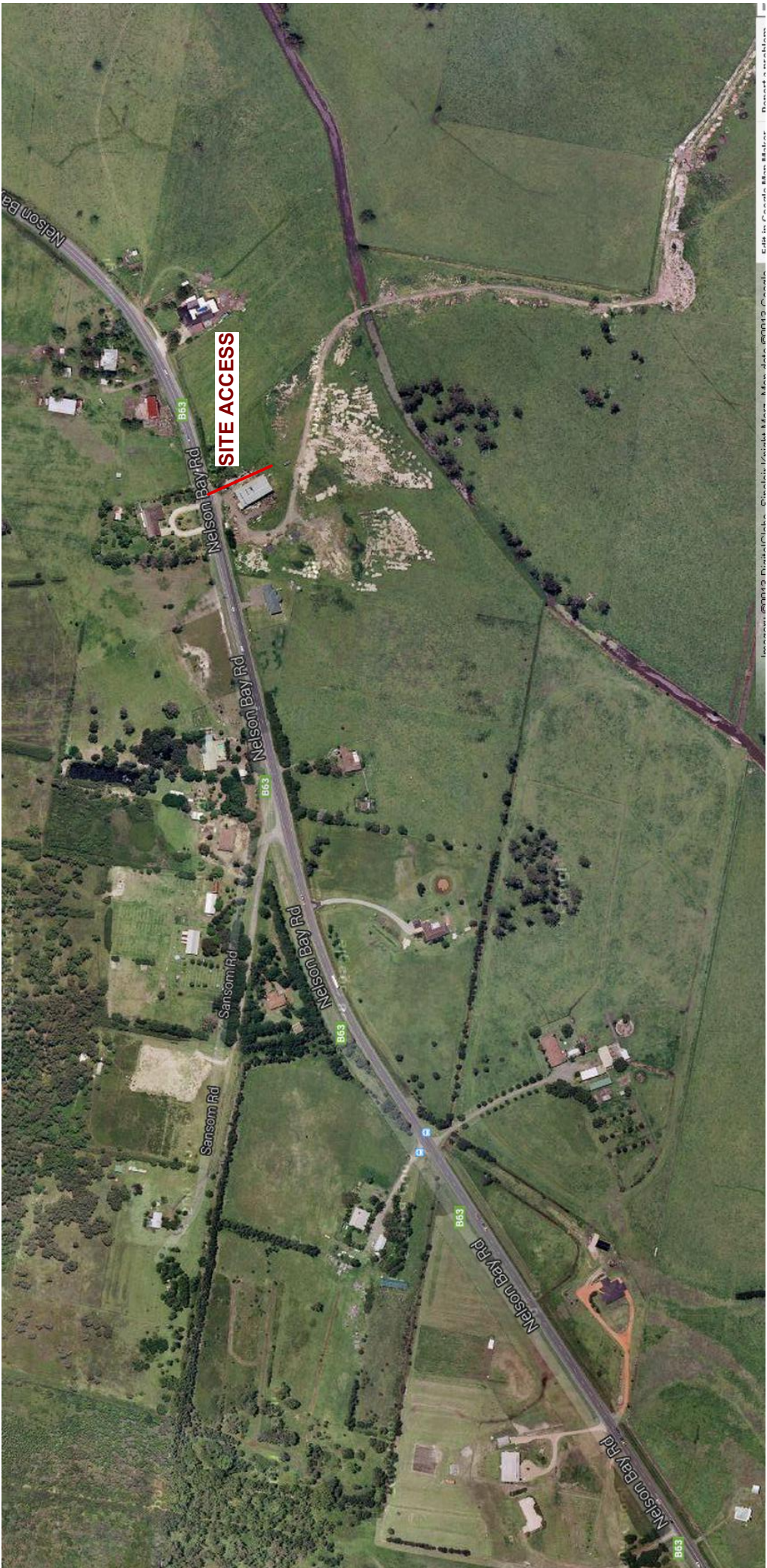
1.3 Documents Reviewed

The following documents have been reviewed for the preparation of this road safety audit.

1. Preliminary design drawings Sheet No. C05 for the proposed L1/L0 intersection.
2. Proposed L1/L0 Intersection. Pavement type and typical section Sheet C06.
3. Index Drawing Sheet C01.
4. Figure 1. Noise receiver locations.
5. Google Earth aerial photos of Nelson Bay Road from Medowie Road roundabout to Richardson Road roundabout.
6. Traffic Report for Proposed Sand Mining Development by TPK & Associates Pty Ltd, October 2012.
7. Supplementary Traffic Report for Proposed Haulage Road by TPK and Associates Pty Ltd, February 2013.
8. Letter dated 30/9/13 "Determination of Modification Application Mackas Sand Project – Access Road and Extraction Depth Modification 1 from the NSW Planning Assessment Commission.
9. Condition 31A of the Consent Alternative Access Road to Lot 218. A copy of each of the above documents is included in the Appendix to this report.

Austroads / NSW Transport / Australian Standards Reference Documents

10. AS1742.2-2009 Manual of Uniform Traffic Control Devices
Part 2 : Traffic Control devices for general use.
11. NSW Transport Roads and Traffic Authority Guidelines for Road Safety Audit Practices – 2011.



1.3 (Continued)

12. Austroads Guide to Road Safety Part 6 : Road Safety Audit.
13. Austroads Guide to Engineering Practice – Part 5 : Intersections at Grade.
14. Austroads Guide to Road Design Part 3 : Geometric Design.
15. NSW Transport Roads and Maritime Services Traffic and Transport Technical Direction Documents.

1.4 Initial Consultation

The initial consultation consisted of a site inspection of the route and briefing by Mr Robert Mackenzie, Director, Macka's Sands Pty Ltd from 11.30am to 1.00pm on Tuesday 15th October 2013. The purpose of the audit was to prepare a written report which clearly documented all the road safety deficiencies identified during the road safety audit from the perspective of all road users and provide suggested treatments to reduce the risk and severity of road crashes.

2.0 ROUTE INSPECTION AND FINDINGS AND SUGGESTED TREATMENTS

The route inspection commenced at 12.00 noon on Tuesday 15/10/13 with a drive along Nelson Bay Road from Richardson Road to the proposed access road to No. 2354 and thence to Sansom Road Junction and return to the proposed access road followed by detailed inspections on foot, photographing areas of concern such as driveways, road shoulders, pavement delineation and observations of vehicles such as truck and dog trailers, articulated vehicles and other trucks travelling in both directions.

2.1 Access to Residential Dwellings and Farm Properties

Nelson Bay Road is a 2 lane, single carriageway with sealed shoulders 1.5 to 2 metres wide with an 80 km/hr sign posted speed limit and carried 2 way traffic volumes of 973 in the am peak hour and 948 in the pm peak hour. The percentage of trucks is 5% (Reference 6). The centre line is marked with BB barrier lines to prevent overtaking manoeuvres. Vehicles turning right into driveways have to stop and give way to approaching traffic in the opposing lane whilst causing vehicles including heavy trucks to slow down and possibly stop in the lane from which the right turn is made.

Finding

The hazard is a rear end collision or run off the road crash. There are 9 residential dwellings with one and two driveways to Nelson Bay Road in 500 metres of road east of Sansom Road. Refer aerial **Photograph 3 of 4** and **Photographs P1, P6, P10, P12**. Based upon the **Risk Tables (Reference 15)** the frequency of a rear end crash is occasional, serious consequences, high level of risk and should be corrected or the risk significantly reduced.

Suggested Treatments

There are some 50 driveways in the 2 lane section of Nelson Bay Road from Medowie Road to the start of the duplication (divided carriageway) 400 metres west of Richardson Road roundabout. Refer **Aerial Photographs Sheets 1, 2, 3 and 4**. The suggested treatments are:

- 1) Lowering the sign posted speed limit to 70 km/hr.
- 2) Duplication of Nelson Bay Road.

Responsible Authority

NSW Transport Roads & Maritime Services, Newcastle.

2.2 Tee Intersection of Sansom Road and Nelson Bay Road

The visibility of this intersection is poor when approaching from the east and west. The sign post is difficult to see. There are no centre line markings in Sansom Road at the tee intersection and no hold line Give Way sign and street lighting. The sealed road pavement in Nelson Bay Road is wide enough to include a short right turn bay.



PHOTO P1 View West Along Nelson Bay Road Towards Driveway to Residence East of Start of Deceleration Lane.



PHOTO P2 View East Along Nelson Bay Road from Centreline of Proposed Access Road to Mackas Sand & Soil.



PHOTO P3 View South Along Centreline of Proposed Access Road to Mackas Sand and Soil.



PHOTO P4 View West Along Nelson Bay Road from Centreline of Proposed Access Road to Mackas Sand and Soil Access to Dwelling on Lot 1392 west of Sign.



PHOTO P5 View East Along Nelson Bay Road from Western End of Proposed Island at Intersection of Access Road to Mackas Sand and Soil.



PHOTO P6 View North Across Nelson Bay Road To Power Pole And Driveway To Dwelling House On Lot 1.



PHOTO P7 Proposed New Driveway to No. 2331 Nelson Bay Road from Sansom Road.



PHOTO P8 View of Middle Section of new driveway to No. 2331 from Sansom Road.



PHOTO P9 View of End of New Driveway to Garage at No. 2331



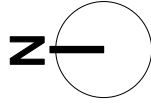
PHOTO P10 View South Across Nelson Bay Road From Driveway to No. 2331.

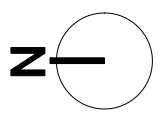
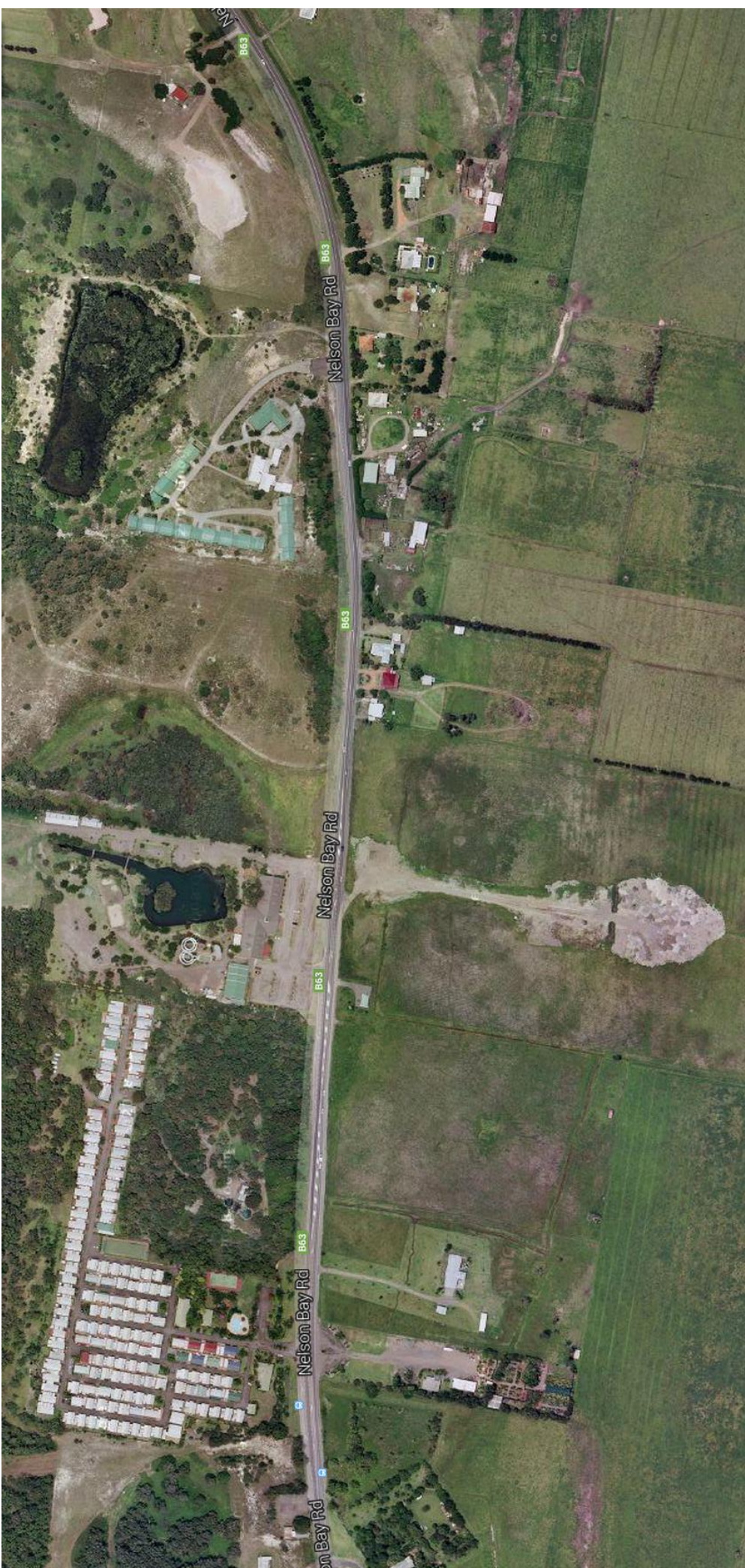


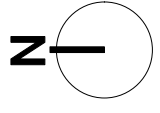
PHOTO P11 View West Along Nelson Bay Road from Driveway to No. 2331. Sansom Road Junction on Right Near Sign.

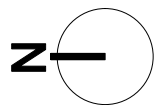
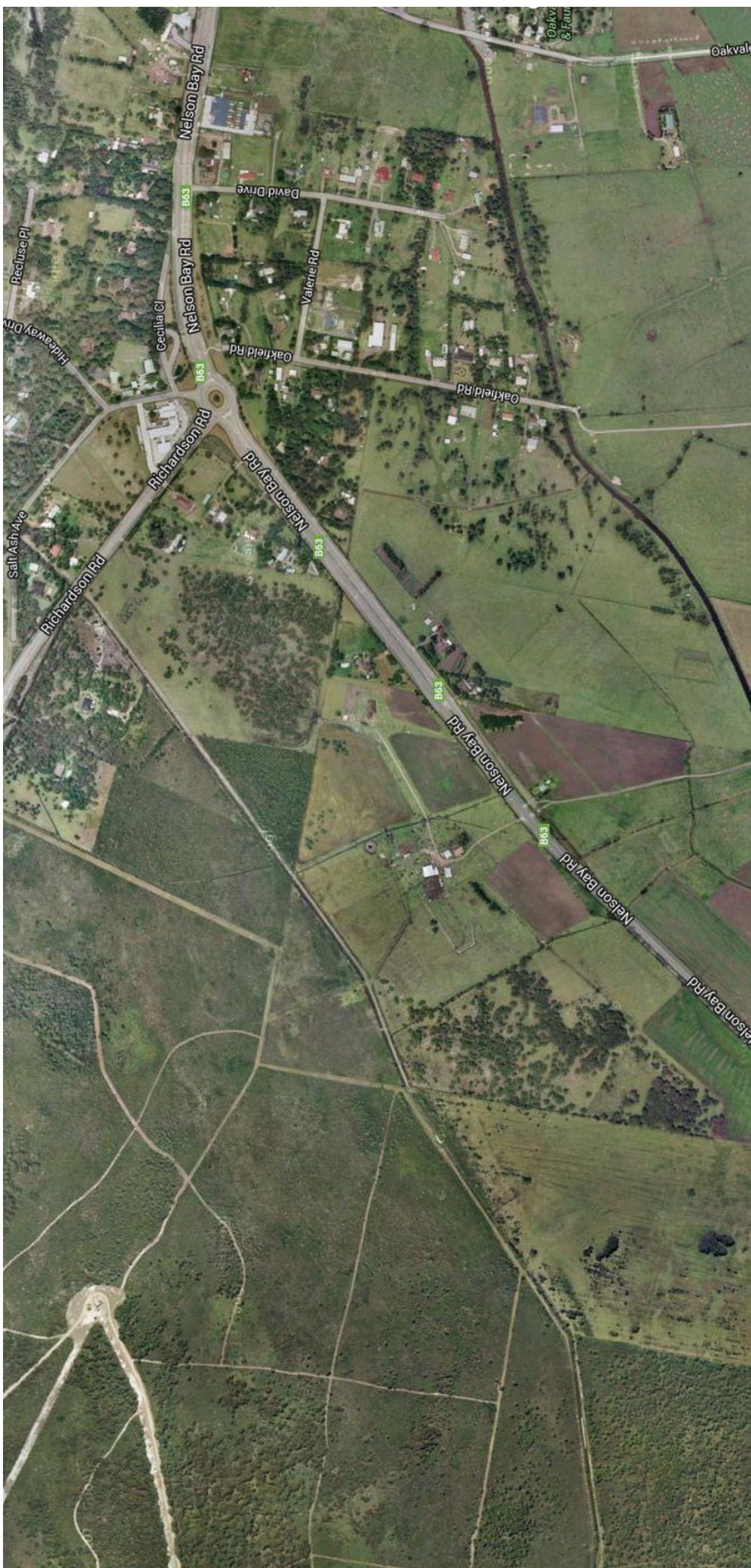


PHOTO P12 View East along Nelson Bay Road from Western End of Merging Taper of Proposed Acceleration Lane.









2.2 (Continued)

Findings

Vehicles turning right into Sansom Road from Nelson Bay Road are subject to rear end collisions with trucks and other vehicles travelling in the same lane. Because Sansom Road is a public road, drivers unfamiliar with the intersection may slow down unexpectedly increasing the frequency of a collision.

Suggested Treatments

1. Line mark Sansom Road and install RRPM's in accordance with RMS Guidelines and install a GIVE WAY sign in Sansom Road.
2. Re line mark the road pavement in Nelson Bay Road to include a short (20 metres long) right turn bay.
3. Install advance directions signs to advise drivers of the location of Sansom Road.
4. Install street lighting at the intersection.

The suggested 70 km/hr speed restriction in Nelson Bay Road will lessen the severity of a rear end crash. The risk of a rear end crash is high and Treatments 1 to 4 should be considered.

Responsible Authority

Treatments 1 and 3 – Port Stephens Shire Council.

Treatment 2 – NSW Transport Roads and Maritime Services.

Treatment 4 – Port Stephens Shire Council / RMS ?

2.3 Bus Stops

Nelson Bay Road is the route for bus services between Nelson Bay and Newcastle. There are bus stops in the vicinity of the proposed deceleration and acceleration lanes for the proposed access road to No. 2354 (Lot 218 DP1044608).

The bus stops are not signposted, there are no properly designed indented bus bays to keep buses clear of the through traffic lane. Bus drivers make unscheduled stops.

Findings

Buses stopping at regular and unscheduled bus stop locations are a hazard to other drivers and bus passengers. The suggested lowering of the speed limit to 70 km/hr will improve road safety.

2.3 (Continued)

Suggested Treatments

1. Locate bus stops where drivers can pull out of the through traffic lane.
2. Provide proper signposting of bus stops.
3. Eliminate unscheduled stops.
4. Construct indented bus bays.

Responsible Authority

Treatments 1 and 2 – Bus company in consultation with RMS.

Treatment 3 – Bus company to induct drivers.

Treatment 4 – Bus company

2.4 Pedestrians Crossing Nelson Bay Road and Cyclists

Findings

The volume, speed and composition of traffic in Nelson Bay Road provide unsafe conditions for children, elderly adults and persons with a disability in crossing the road to and from bus stops.

The speed of traffic and air turbulence caused by truck and dog trailers and articulated vehicles are a hazard to cyclists riding on road shoulders.

Suggested Treatments

1. Install signs at bus stops to alert drivers to pedestrians.
2. Install appropriate signage and pavement markings on the road shoulders for cycle lanes and to alert drivers to the presence of cyclists.

Responsible Authority

Treatment 1 – Bus Company in Consultation with RMS.

Treatment 2 – RMS and Port Stephens Shire Council.

2.5 Proposed L1 L0 Intersection and Auxiliary Lanes for Access Road to Macka's Sand Mining Site.

2.5.1 Approach

The proposed intersection design with the deceleration lane and acceleration lane will have the appearance of a major intersection.

Deficiency

Drivers may not be aware that this is the access road to a sand mining operation and turn off Nelson Bay Road. Truck drivers wishing to enter the sand mining site to pick up a load may not be able to see the start of the deceleration lane at night and in fogs.

2.5 (Continued)

Suggested Treatment

An advance warning sign with distance plate should be erected prior to the start of the deceleration lane.

Responsible Authority

Macka's Sand Pty Ltd, the road designer in consultation with RMS.

2.5.2 Delineation of Deceleration Lane, Raised Median and Acceleration Lane.

Deficiencies

The signage, pavement markings and RRPM's, cycle lane signage and pavement markings are not shown on the preliminary design drawing C05. Based upon the minimum 25 metre radius of the compound curve at the end of the deceleration lane and at the commencement of the acceleration lane the appropriate safe turning speed should be signposted.

Suggested Treatments

That the above deficiencies be attended to in the detailed design.

Responsible Authority

Macka's Sand Pty Ltd, road designer in consultation with RMS.

2.5.3 Cyclists

Deficiencies

Appropriate signage in the cycle lane on the outside of both auxiliary lanes and in the crossing through the raised median to alert truck drivers to the presence of cyclists.

Suggested Treatments

1. Street lighting of the intersection.
2. Kerb faces to be painted white.
3. Install RRPMS around the edges of the raised median.

Responsible Authority

Macka's Sand Pty Ltd, road designer in consultation with RMS.

2.5 (Continued)

2.5.4 Length of Acceleration Lane

The existing lane is 260 metres long to permit truck drivers to merge at 80% of the signposted speed limit. The end of the merging taper is marked on **Figure 1** and is 33 metres from the entrance driveways to residential dwellings on both sides of Nelson Bay Road and a bus stop on the southern side.

2.5.4.1 Findings

A truck driver seeking a gap in the westbound traffic stream may not be looking ahead and could be forced to brake suddenly if a driver is turning right into No. 2331 or left into the driveway opposite.

2.5.4.1 Suggested Treatments

Lowering of the speed limit to 70 km/hr as suggested in Treatment 2.1 will provide the designer with the opportunity of reducing the length of the acceleration lane by 60 metres or so. This treatment will allow the merging manoeuvre to end much further from the driveway crossing and eliminate any additional risk.

Responsible Authority

Macka's Sand Pty Ltd, road designer in consultation with RMS.

2.5.4.2 Access to Lot 1392 (South Side of Nelson Bay Road)

Additional Safety Hazard

A vehicle exiting from this dwelling will have to cross the acceleration lane to turn right into Nelson Bay Road or alternatively could turn left into the acceleration lane, turn right into Sansom Road, make a U turn and turn left into Nelson Bay Road.

2.5.4.2 Suggested Treatment

Appropriate signposting and/or other measures to be determined by the designer.

Responsible Authority

Macka's Sand Pty Ltd, road designer in consultation with RMS.

2.5.4.3 Alternative Access to No. 2331

With the current proposal there is an increased risk of a rear end crash to a driver turning right into the existing driveway. The suggested lowering of the speed limit to 70 km/hr in Nelson Bay Road with the option of reducing the length of the acceleration lane by some 60 metres should in my opinion make it safer to turn into the existing driveway.

The suggested treatments at Sansom Road intersection will provide an opportunity for vehicles travelling west in Nelson Bay Road and turning right into No. 2331 to turn right into Sansom Road, make a U turn and then turn left into the driveway.

2.5.4.3 Additional Treatment

There is an option that was discussed on site with Mr. and Mrs. Bumann to provide driveway access to No. 2331 from Sansom Road along a route shown in **photographs 7, 8 and 9** subject to detailed design and approval from Port Stephens Shire Council.

However, if the speed limit is reduced to **70km/hr** in Nelson Bay Road and the suggested treatments at Sansom Road intersection are implemented then this option is not required.

Responsible Authority

Macka's Sand Pty Ltd, Port Stephens Shire Council and the road designer.

2.5.4.4 Sealing and Splaying Driveways to Dwellings

The existing driveways are narrow and have a loose gravel surface. Vehicles have to turn in and out at a slower speed and are exposed to traffic conflicts for a longer period.

2.5.4.4 Suggested Treatment

Splay driveways from road boundary to edge of shoulder, compact pavement, trim and seal with a prime and single coat seal.

Responsible Authority

Macka's Sand Pty Ltd and road designer in consultation with RMS.

The Audit findings deficiencies, suggested treatments, responsible authorities and level of risk are summarized in **Table 2**.

TABLE 2 AUDIT FINDINGS, SUGGESTED TREATMENTS LEVEL OF RISK AND REPSONSIBLE AUTHORITIES

ITEM NO.	DESCRIPTION	DEFICIENCY	SUGGESTED TREATMENT(S)	RESPONSIBLE AUTHORITY	LEVEL OF RISK	ACCEPT YES / NO
2.1	Access to Residential Dwellings and Farms from Nelson Bay Road	No opportunity to pass vehicle turning right in 80K zone, heavy traffic	1. Lower signposted speed limit to 70K 2. Duplication of Nelson Bay Road (MR108) subject to funding . High cost.	Roads & Maritime Services Roads & Maritime Services	High High	
2.2	Tee junction Sansom Road and Nelson Bay Road	Poor approach visibility. No line marking, no give way sign. No right turn bay. No direction signage.	1. Line mark Sansom Road and install RRPm's and give way sign. 2. Re line mark road pavement in Nelson Bay Road to include a short (20m) right turn bay. 3. Install Advance Direction Signs for Sansom Road. 4. Install street light a intersection.	Port Stephens Shire Council Roads & Maritime Services Port Stephens Shire Council/ RMS Port Stephens Shire Council / RMS	High High High Medium	
2.3	Bus Stops	No indented bus bays. No sign posting, Unscheduled stops	1. Locate bus stops where drivers can pull out of through traffic lane. 2. Provide proper signposting of bus stops. 3. Eliminate unscheduled stops. 4. Construct proper sealed indented bus bays. Higher cost. Longer Term	Bus company in consultation with RMS. As above Bus Company to induct drivers. As for 1. above	High High High High	
2.4	Pedestrians & cyclists crossing Nelson Bay Road	Speed and heavy traffic volumes	1. Install signs at bus stops to alert drivers to pedestrians. 2. Install signage and pavement markings in shoulder cycle lane.	Bus Company in consultation with RMS. RMS and Port Stephens Shire Council	High High	
2.5	Proposed L1L0 Intersection and Auxiliary Lanes to No. 2354					
2.5.1	Approach	No Advance Direction Signs	1. Install Direction Signs	Macka's Sand Pty Ltd in consultation with RMS	High	
2.5.2	Delineation of Deceleration lane, raised median, acceleration lane, cycle lane	No Advance Direction Signs No signage, pavement markings and RRPm's shown on C05.	1. Install Direction Signs 2. Include in Detailed Design	Macka's Sand Pty Ltd in consultation with RMS Road Designer in consultation with RMS	High	
2.5.3	Cyclists	Signage, delineation, lighting	1. Street lighting at intersection 2. Kerb faces to be painted white. 3. Install RRPm's around edges of raised median islands	1) Macka's Sand Pty Ltd 2) Road Designer in 3) consultation with RMS.	High High High	
2.5.4	Deceleration Lane	Length increases hazard to drivers entering driveways	1. Lowering of speed limit to 70k will permit length of lane to be reduced (possibly by 60m)	1. Macka's Sand Pty Ltd. road designer in consultation with RMS.	High	

TABLE 2 AUDIT FINDINGS, SUGGESTED TREATMENTS LEVEL OF RISK AND REPSONSIBLE AUTHORITIES (Cont.)

ITEM NO.	DESCRIPTION	DEFICIENCY	SUGGESTED TREATMENT(S)	RESPONSIBLE AUTHORITY	LEVEL OF RISK	ACCEPT YES / NO
2.5.4.2	Access to Lot 1392 (south side of Nelson Bay Road	To turn right driver has to cross the acceleration lane.	1. Speed reduction to 70k in Nelson Bay Road (Item 2.1) 2. Appropriate sign posting and traffic management	Road Designer in Consultation with RMS. Macka's Sand Pty Ltd	High	
2.5.4.3	Alternative Access to No. 2331	Entry and exit conflicts with through traffic in Nelson Bay Road	Treatments 2.1 and 2.2 will largely reduce hazard. Additional treatment is a new driveway from Sansom Road.	Macka's Sand P/L, Road Designer & Port Stephens Shire Council.	Low if treatment 2.1 & 2.2 are accepted.	
2.5.4.4	Sealing and Splaying Driveways to 8 dwellings	Driveways narrow, loose gravel low entry / exit speeds	Splay and seal driveways to road boundary.	Macka's Sand P/L, road designer in consultation with RMS.	Low	

Note 1. The level of risk has been assessed in accordance with Tables 4.1, 4.2 4.3 and 4.4 in Austroads Guide to Road Safety Part 6 Road Safety Audit.

3.0 COMPLETION MEETING

A completion meeting by telephone was held with Mr Robert Mackenzie on Wednesday 16/10/13 to discuss the findings and the suggested treatments.

4.0 CONCLUDING STATEMENT

We have examined the plans and documents included in the Appendix (of this study). Mr Marshall has inspected the site. The audit has been carried out with the purpose of identifying any features of the existing road and the preliminary design of the proposed intersection to the sand mining operation which could be altered or removed to improve the safety of Nelson Bay Road and the proposed intersection. The accompanying findings and suggested treatments are put forward for consideration by Macka's Sand Pty Ltd, Roads and Maritime Services and Port Stephens Shire Council and implementation.



.....
Lyle Marshall
Lead Auditor



.....
Craig McLaren
Auditor

APPENDIX

30 September 2013

**DETERMINATION OF MODIFICATION APPLICATION MACKAS SAND PROJECT – ACCESS
ROAD AND EXTRACTION DEPTH MODIFICATION 1
(MP08_0142 MOD 1)**

1. DELEGATION TO THE COMMISSION

The above modification application lodged by Mackas Sand Pty Ltd (the Proponent) has been referred to the Planning Assessment Commission (the Commission) for determination under Ministerial delegation dated 14 September 2011, as more than 25 submissions in the nature of objections were received.

The Commission constituted to determine the applications consists of Mr Garry Payne AM (chair) and Mr Joe Woodward PSM.

2. BACKGROUND

On 20 September 2009 project approval was granted by the then Minister for Planning. The current approval allows for the extraction of up to 1 million tonnes of sand per year from each of Lot 218 and Lot 220 for 20 years, processing of the sand on-site and transportation of the processed sand to the market via road. The approved access route to Lot 218 is along Lavis Lane and is currently not in operation. The approval also included a number of environmental requirements.

The modification was declared a controlled action on 23 November 2012 under the *Environment Protection and Biodiversity and Conservation Act 1999 (EPBC Act)*. The modification requires approval from the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities.

3. MODIFICATION APPLICATION

The modification application seeks to modify the project approval by constructing and operating an alternate access road from Lot 218, increasing the approved hours of transportation from lot 218, increasing the depth of extraction from 1m to 0.7m above the maximum predicted groundwater for Lot 218 and Lot 220 and updating the surveying requirements. All other operating parameters would remain unchanged.

4. THE ASSESSMENT REPORT

The Department's Assessment Report identified the following key issues:

- Traffic and Transport;
- Noise;
- Biodiversity;
- Aboriginal Culture Heritage;
- Groundwater; and
- Need for alternate access road to Lot 218.

The Department concluded that operation of the alternate access road would not significantly impact existing traffic flows on Nelson Bay Road or Richardson Road roundabout, noise impacts would remain within acceptable limits, cultural heritage values of Worimi Conservation Lands would not be significantly impacted, the proposed increase in extraction depth would not have significant impact on groundwater and biodiversity impacts would be compensated through a biodiversity offset strategy. The Department is satisfied with the rationale for the alternate access route and that the modification should be approved subject to conditions.

5. MEETING WITH STAKEHOLDERS

On 19 September 2013, the Commission visited the site with the Proponent and held a public meeting. A brief summary of the issues raised at these meetings are discussed below, further detail regarding these meetings can be found in attachment 1. During the site visit traffic was observed, including heavy vehicle traffic. Following the public meeting the Commission members visited the site at night time. Port Stephens Council declined the Commission's invitation to discuss the modification and stated that there were no additional merit issues relating to the modification that they wished to discuss.

5.1 Proponent

The Commission met with the Proponent on site. Key issues discussed included the following:

- Sand movements;
- Impacts to sensitive receivers;
- Traffic, Transport and Safety;
- Worimi Aboriginal Land Council stated they were in agreement with the proposed alternate access route; and
- Aboriginal Heritage.

5.2 Public Meeting

On Thursday 19 September 2013 the Commission held a public meeting at the Pacific Dunes Golf Club, Medowie to hear the community's comments on the assessment and recommended conditions. Fifteen people spoke at the meeting; including representatives of a number of special interest groups (see attachment 2).

Key issues raised at the public meeting included:

- Traffic and transport in particular safety was a major concern to the community;
- Safety of undesignated bus stops;
- Noise Impacts;
- Aboriginal Heritage; and
- Agreement issues regarding the approved access route along Lavis Lane.

6. COMMISSION'S CONSIDERATION

The Commission has reviewed the Department's assessment report and associated documents, including submissions from Roads and Maritime Services (RMS), other agencies and the public. It has also considered the views expressed by the presenters who spoke at the Commission meeting and the written submissions received at the meeting. The key issues that emerged are discussed in further detail below. The Commission also considered other issues including groundwater, ecology, noise and dust impacts and believe these issues have been adequately addressed in the Department's Assessment Report. The Commission is satisfied that residual impacts and issues can be managed by the implementation of the recommended conditions.

6.1 Traffic

The community raised concerns that the alternate access route will result in traffic and safety impacts including congestion, accidents and time delays along Nelson Bay Road and the Richardson Road roundabout. The Commission considers that the proposed acceleration lane has the potential to impact adversely on one additional residence on the western side of the road towards the end of the acceleration lane. Subsequently, the Commission sought further advice from RMS regarding the proposed acceleration lane and nearby residence, to ensure that traffic impacts would be minimised. Following further advice from the RMS, the Commission has included a condition which requires a independent road safety audit to be undertaken prior to construction and to the satisfaction of RMS to assist in determining the final design of the proposed intersection and acceleration lane to ensure safer access for the affected resident.

channelisation

The Commission supports the construction of the intersection medium at the entry/exit point of the proposed alternate access road and Nelson Bay Road. The intersection medium would

right turn entry

reduce safety impacts by preventing quarry trucks heading west along Nelson Bay Road and turning right across oncoming traffic. The Commission notes that the final design of this intersection would require approval from RMS. The Commission also agrees with the Department's recommendation to install warning signage on approach to the intersection.

Whilst there are no designated bus stops in the vicinity of the proposed intersection the Commission notes that buses may make unspecified stops on Nelson Bay Road. The Commission concurs with the recommendations made by the Department regarding the safety of buses stopping at undesignated bus stops. Furthermore, the Commission suggests that RMS should monitor the proposed acceleration and deceleration lanes and if necessary 'no stopping' signs should be installed to prevent buses from stopping in and adjacent to these lanes.

The Commission has carefully considered all the traffic issues that were raised in the submissions and the public meeting and the proposed measures to address any impacts and accepts the advice from the RMS and the Department that these measures together with the proposed additional conditions will satisfactorily address these issues.

The Commission notes that proposed modification does not seek to increase the approved production or transportation limits for the project.

6.2 Increased Transportation Hours

The modification seeks to increase its approved transportation hours for Lot 218 as detailed in the Department's Assessment Report. The Commission agrees with the Department that the extended hours of transportation may only be approved once Mackas Sand has reached agreement with the closest residents on Nelson Bay Road that are likely to be impacted by operational noise.

6.3 Other Issues

The Commission noted submissions from the Towers site residents and the Proponent regarding an access agreement for the site. This is a commercial issue between those parties and not an issue for determination by the Commission.

The Commission agrees with the Environment Protection Authority (EPA) that a groundwater sampling program should be undertaken prior to the commencement of extraction at Lot 218.

7. Commission's Determination

The Commission has carefully considered the information available including the assessment report, Council and public submissions, views expressed by residents at the public meeting, the Commission's visit to the site and surrounds. The Commission accepts the assessment report has adequately addressed the issues raised in public submissions, and where required, recommends conditions of consent to mitigate potential impacts.

Having regard to the relevant issues the Commission finds the proposed modification should be approved subject to the Department's recommended conditions of consent and the further inclusion of an independent road safety audit.



Garry Payne AM
Commission Member



Joe Woodward PSM
Commission Member

Attachment 1: Meetings with Stakeholders

On 19 September 2013, the Commission visited the site with the Proponent and held a public meeting. The issues raised at these meetings are discussed below.

Proponent

The Commission met with the Proponent on site on Thursday 19 September 2013. The Issues discussed included the following:

- Windblown sand movements;
- Land purchased by Mackas Sand along the alternate access road;
- The approved route along Lavis Lane is not currently in operation;
- Traffic impacts on Nelson Bay Road;
- Turning pad area at proposed alternate access road;
- Truck movements per hour;
- Adjacent landowner agreements;
- Safety of buses stopping along the proposed acceleration and deceleration lane along Nelson Bay Road;
- Safety issues associated with Lavis Lane and beach access;
- Aboriginal cultural heritage and sand dune use;
- Worimi Aboriginal Land Council are in agreement with the alternate access route;
- Protection of potential aboriginal heritage items - Mackas Sand modified the proposed alternate access route to avoid a Potential Archaeological Deposit (PADs). PADs will not be impacted by the proposed alternate route; and
- Mitigation measures for dust.

Public Meeting

On Thursday 19 September 2013 the Commission held a public meeting at the Pacific Dunes Golf Club, Medowie to hear the community's comments on the assessment and recommended conditions. Fifteen people spoke at the meeting; including representatives of a number of special interest groups (see attachment 2). The Issues raised at the public meeting included:

Traffic and Transport

- Additional traffic and risks to public safety in particular along Nelson Bay Road and Richardson Road roundabout;
- Concerned that traffic accidents and fatalities will increase;
- Traffic volume impacts including congestion and increase in traffic delays along Nelson Bay Road and Richardson Road roundabout;
- Cumulative impacts on road users;
- Limited consultation with emergency services;
- Impacts on residents as they enter/exit their driveways along the proposed acceleration and deceleration lane along Nelson Bay Road;
- Child safety including buses that stop at non designated bus stops and safety of children crossing the road; — No stopping
- Safety of tourists who are inexperienced driving on roads with trucks; — MR & B Double route.
- Concern regarding safety of service persons such as mail delivery and garbage drivers;
- The area experiences fog in winter, the additional trucks will be a safety hazard;
- Compliance of truck movements needs to be monitored;
- Traffic study is inadequate in particular traffic impacts during school holidays and on the weekend have not been adequately assessed;
- Lavis Lane already approved and should be used. The approved access route along Lavis Lane is a safer option;
- Street lighting should be considered;
- Safety issues associated with the approved access route along Lavis Lane and McDonalds; and
- Trucks currently exceeding the speed limit.

Aboriginal Cultural Heritage and Ecology

- The approved access route along Lavis Lane has no impact on aboriginal heritage items, will not disturb virgin lands and no further ecological or archaeological studies are required for this route;
- Concerned aboriginal heritage items will be lost along the proposed alternate access route;
- Proposed alternate access route will destroy aboriginal heritage and ecology; and
- Worimi Local Aboriginal Land Council has a responsibility to protect the Worimi Conservation Lands and provide safe access to the conservation lands. The alternate access road will be managed to protect aboriginal heritage, there is a cultural heritage management plan. The proposed alternate access route avoids PADs.

Noise

- Operational noise impacts to residents associated with truck movements; and
- Noise barriers should be constructed to minimise impacts to residents.

Other Issues

- Agreement issues with the approved access route – existing legal argument regarding the validity of the agreement for the approved access route.
- Towers site residents are willing to give access along the approved access route;
- Devaluation of properties;
- Less residents would be affected by the approved access route along Lavis Lane; and
- Impacts to the quality of life on the local community.

Attachment 2: List of Registered Speakers

Mackas Sand Modification 1

Date & Time: Thursday 19 September 2013, 4pm

Place: Pacific Dunes Golf Club, Championship Drive, Medowie

1. Mr Nigel Waters - Tomaree Rate Payers and Residents Association Incorporated
2. Mr Rob Mallik - Mallik Rees Lawyers
3. Mr Andrew Smith - Worimi Aboriginal Land Council
4. Ms Patricia Ann
5. Mr Brian Crooks
6. Mr Leonard James Anderson OAM
7. Ms Sarah Buman // 0421- 045 494
8. Mr Heath Buman
9. Ms Kate Washington
10. Mr William Stanton
11. Ms Dot Harland
12. Mr Tony Fidler
13. Mr Andrew Rankmore
14. Ms Julie Bailey
15. Ms Kim Mitchell

Lyle Marshall

From: Robert - Mackas [robert@mackas.com.au]
Sent: Monday, 14 October 2013 5:33 PM
To: lylemarshall@ozemail.com.au
Subject: FW: 1646A-Traffic Safety Audit

Robert,

I have just had a discussion with Mark Waugh of Better Transport Futures (ph - 4900025) in regard to the Road Safety Audit. He is a Level 3 Auditor and is well qualified to do the audit. Cardno has apparently already contacted him in regard to the audit. The consent requires:

Alternate Access Road to Lot 218

31A. If the Proponent intends to use the Alternate access road, the Proponent shall:

- (a) arrange for an independent Road Safety Audit to be undertaken based on the existing concept design plan for the intersection on Nelson Bay Road and the proposed alternate access road. The Road Safety audit should assess the impact of construction of the proposed acceleration lane and the safety of vehicles turning into the existing driveways of the properties located on the northern side of Nelson Bay Road and into Sanson Road/Nelson Bay Road. The Road Safety Audit should also identify appropriate safety measures to make right turn manoeuvres from Nelson Bay Road safer. The Road Safety Audit is to be conducted prior to construction and to the satisfaction of RMS.

regards
Peter Jamieson
Director

Umwelt (Australia) Pty Limited
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Teralba, NSW 2284

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Mobile: 0417 675 377

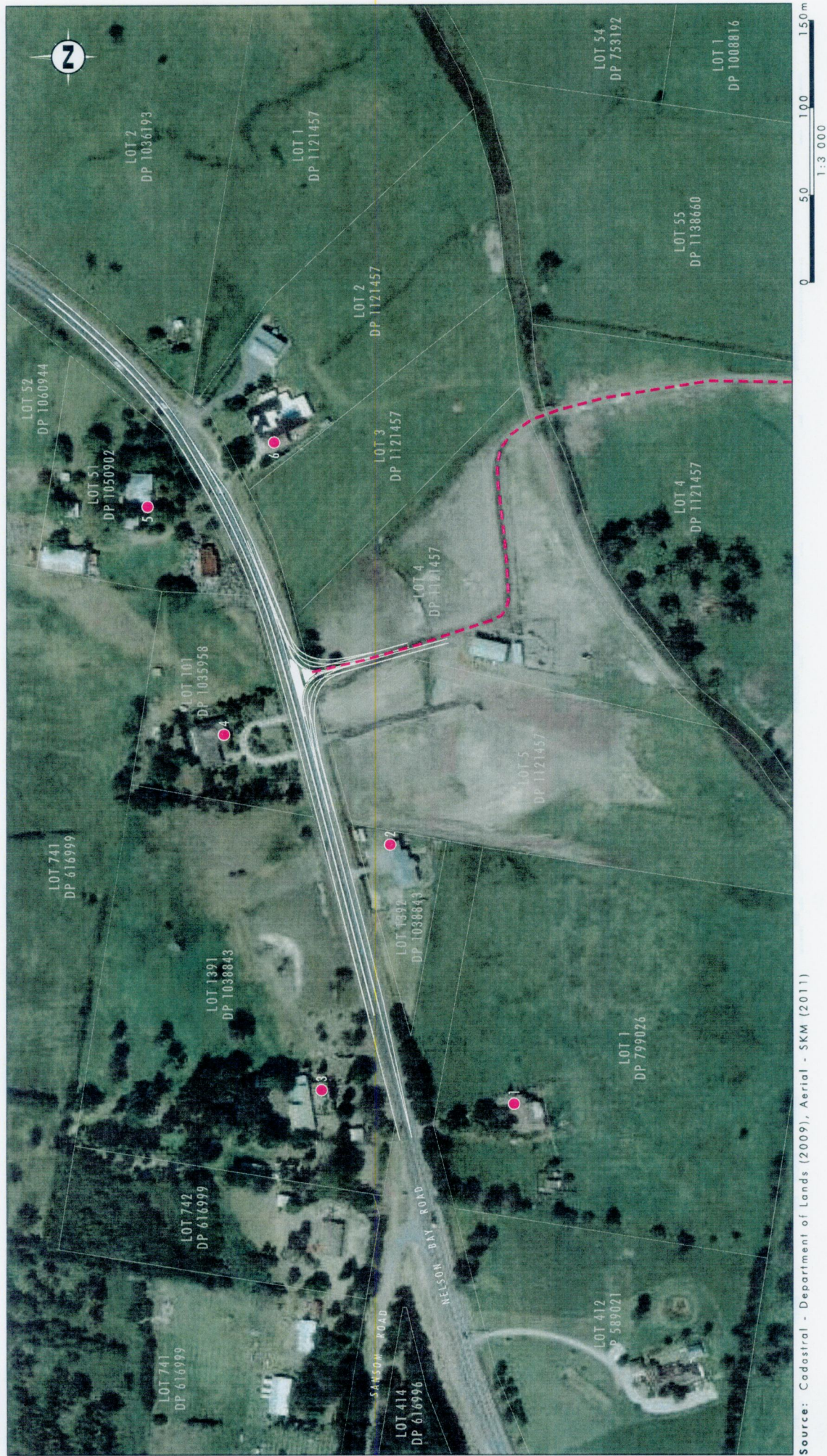
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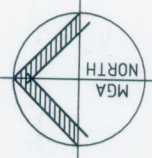


Legend

- Proposed Alternate Haul Route
- Proposed Intersection Design
- Noise Receiver Location

FIGURE 1

Noise Receiver Locations



PROPOSED 133 m LONG
DECELERATION LANE

PROPOSED 260 m LONG
ACCELERATION LANE

RAISED ISLAND

UNFORMED
ROAD

LOT 100
DP 1035598

LOT 2
DP 1035593

LOT 1
DP 1121457

LOT 2
DP 1121457

LOT 3
DP 1121457

LOT 101
DP 1035598

LOT 8
DP 1121457

LOT 1381
DP 1035843

LOT 1382
DP 1035843

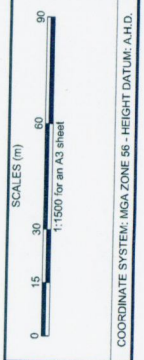
LOT 1
DP 759026

C04

C03

C02

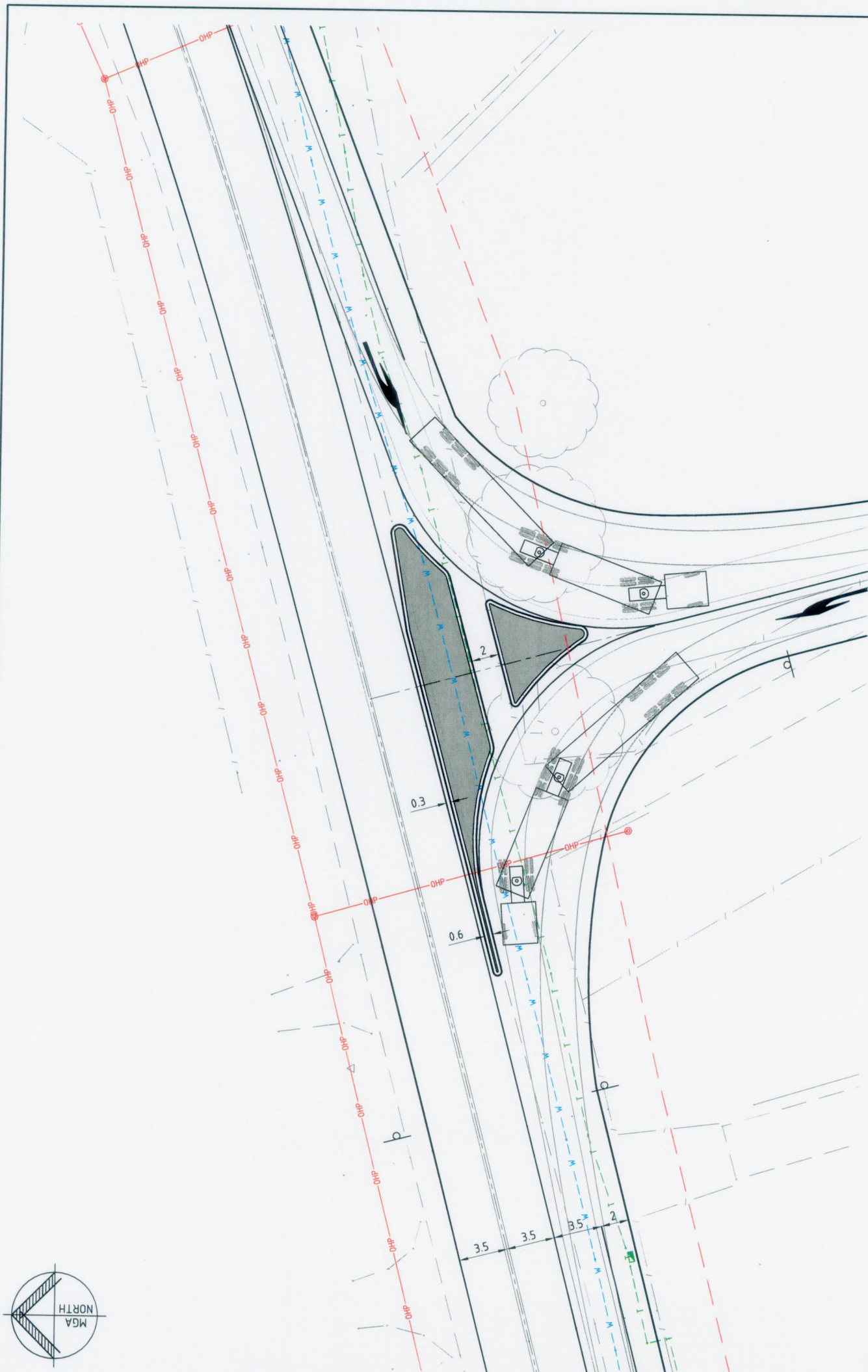
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