

DESKTOP NOISE IMPACT REPORT

**PROPOSED REZONING OF
LOT 4 DP 825704 &
LOT 2 DP 601094
11 – 33 MUMFORD STREET,
PORT MACQUARIE**



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SERVICES***

This report has been prepared by David Pensini – Building Certification and Environmental Services with all reasonable skill, care and diligence for East Coast Screw Piers.

The information contained in this report has been gathered from discussions with representatives of East Coast Screw Piers, a review of the plans provided on behalf of East Coast Screw Piers and experience.

No inspection or assessment has been undertaken on other aspects of the proposed development outside the scope of this report.

This report does not imply, nor should it be implied, that the proposed development will comply fully with relevant legislation.

The report shall not be construed as relieving any other party of their responsibilities or obligations.

David Pensini – Building Certification and Environmental Services disclaims any responsibility East Coast Screw Piers and others in respect of any matters outside the scope of this report.

The report is confidential and the writer accepts no responsibility of whatsoever nature, to third parties who use this report, or part thereof is made known. Any such party relies on this report at their own risk.

For and on behalf of David Pensini – Building Certification and Environmental Services.

Prepared by: David Pensini

Signed:



Dated: 14th December 2017



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APPENDIX 1 – Proposed Development Concept

PREFACE

The land which comprises the subject site is known as Lot 4 DP 825704 and Lot 2 DP 601094, 11 – 33 Mumford Street, Port Macquarie.

It is proposed to rezone portion of the subject site in order to support the ongoing development of the general area.

The proposed rezoning reflects the continued development of the existing school development on the subject site whilst the existing church use of the subject site is to be converted to a commercial/business/light industrial use with an expansion of the development footprint associated with the proposed commercial/business/light industrial use.

The purpose of this report is to assess the potential noise impacts associated with any future development of the subject site as a consequence of the rezoning of the subject site.

1. INTRODUCTION

1.1 Background

The subject site is known as Lot 4 DP 825704 and Lot 2 DP 601094, 11 – 33 Mumford Street, Port Macquarie and is situated within the Port Macquarie-Hastings local government area. With a population of approximately 45,000 Port Macquarie serves as the regional centre for the Port Macquarie-Hastings local government area.

This Noise Impact Report has been prepared to accompany an application to Port Macquarie Hastings Council which seeks to have portion of the subject site rezoned in order to support the ongoing development of the general area.

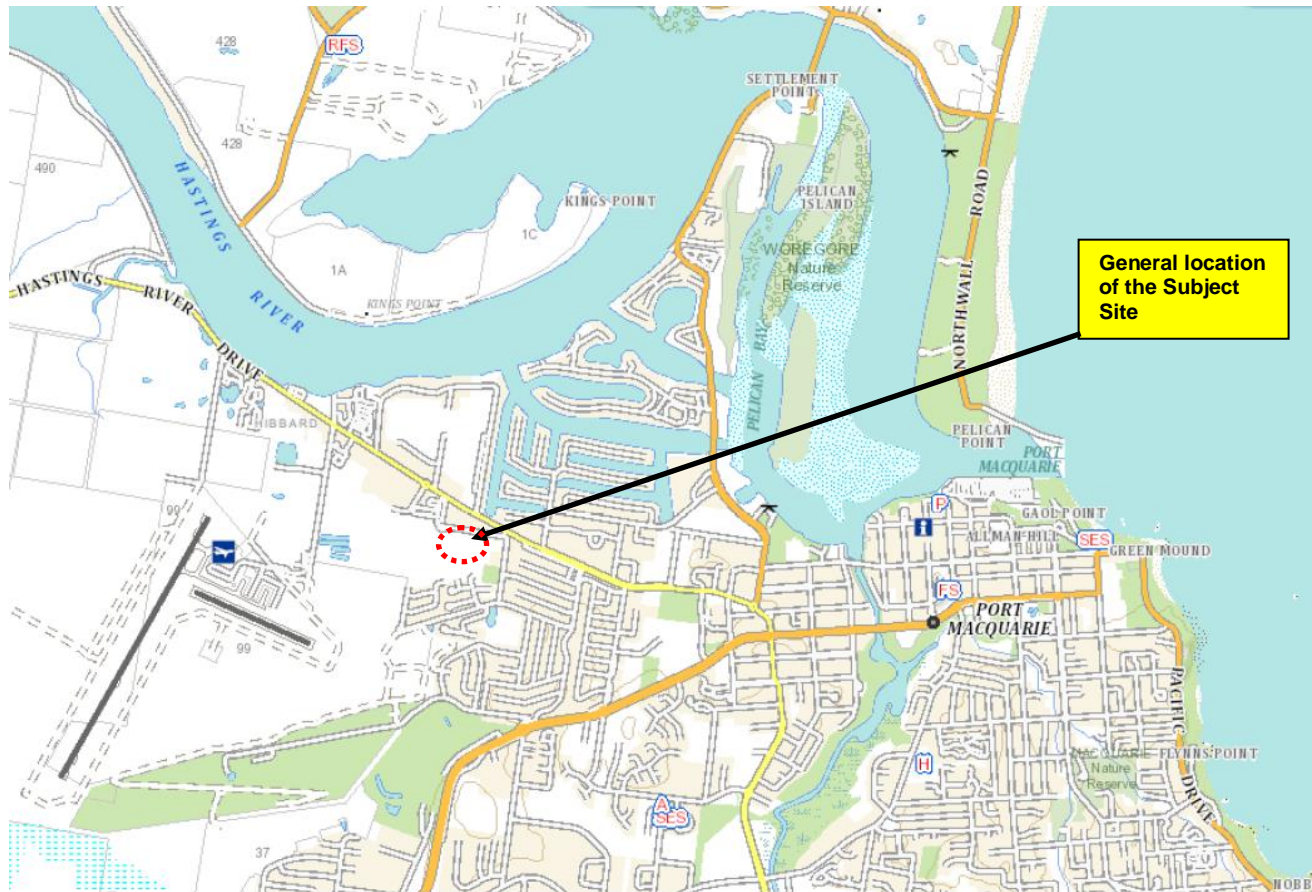
The proposed rezoning reflects the continued development of the existing school development on the subject site whilst the existing church use of the subject site is to be converted to a commercial/business/light industrial use with an expansion of the development footprint associated with the proposed commercial/business/light industrial use.

1.2 Site Location

The subject site is located approximately 2.2km west of the Port Macquarie CBD, within a geographic area known as Hibbard which is a historical urban area on the western fringes of the developed areas of Port Macquarie. Being located in a historical area land use in the locality is a mixture of residential, larger vegetated bushland lots and a mix of commercial and business and recreational uses.

It is noted that the subject site comprises two (2) separate Torrens Title allotments which share a common east/west property boundary; refer **Figure 1** below.

Figure 1 - Site Location

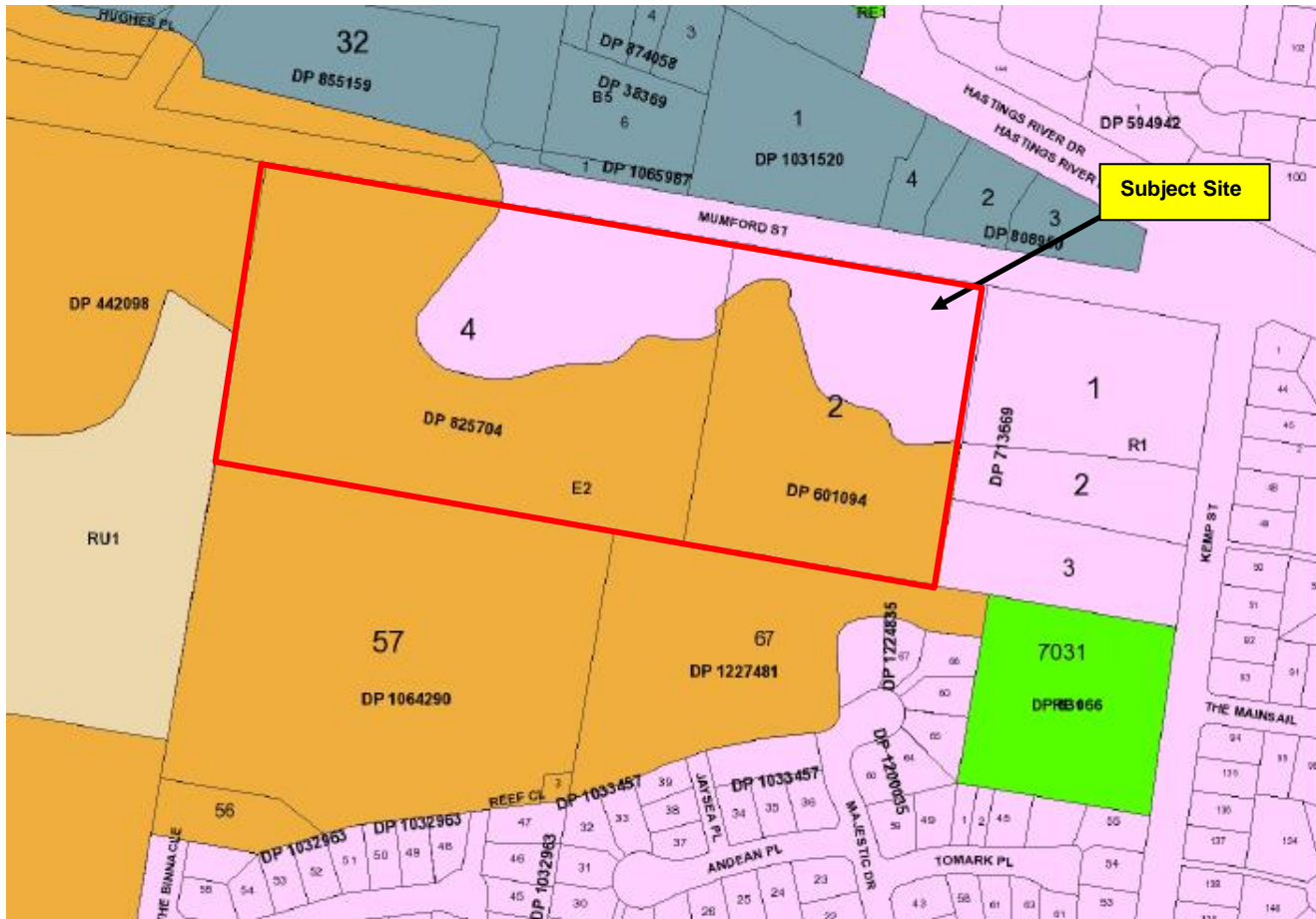


The subject site is positioned on the western fringe of the urbanized area of Port Macquarie in an area which is known locally as Hibbard. Being a historical area of Port Macquarie land use within the immediate area has not changed considerably although it is noted that some urban expansion has occurred on land to the south of the subject site whereby residential subdivision has occurred on what was historically rural land.

The character of the locality is that of a business fringe area with a mixture of residential, commercial, light industrial, educational and open space areas of land. The subject site forms part of a historical subdivision with the majority of lots having been developed as part of the urban expansion of Port Macquarie. It is however noted that large undeveloped areas of land are present to the south and west of the subject site. A mixture of commercial, , light industrial, residential and recreational development is present to the north and east of the subject site.

The subject site is rectangular in shape and in accordance with Port Macquarie Hastings Local Environmental Plan 2011 has a mixed land use zoning comprising Residential (R1) along the northern central and eastern portions of the subject with an Environmental Conservation (E2) land use zoning applying to the remainder of the subject site. Business (B5) and Residential (R1) land use zonings apply to adjoining and adjacent land to the north and east respectively whilst an Environmental Conservation (E2) land use zoning is present to the south and northwest of

Figure 2 – Landuse Zoning



It is proposed to rezone portion of the subject site in order to support the ongoing development of the general area. The proposed rezoning reflects the continued development of the existing school development on the subject site whilst the existing church use of the subject site is to be converted to a commercial/business/light industrial use with an expansion of the development footprint associated with the proposed commercial/business/ light industrial use. In this regard a development concept for the subject site is provided for in **Appendix 1**.

Access to subject site will continue to be via the existing Mumford Street road reserve which adjoins the subject site to the north.

In this regard the rezoning of the land is required to demonstrate that the future development of the land can be undertaken without negative impacts on the acoustic environment of the locality.

This report will focus upon identifying the acoustic management requirements which will be applicable to any future development, (using the development concept in **Appendix 1** for context), so as to allow for an assessment of the subject sites suitability for rezoning.

2. PURPOSE OF REPORT

The purpose of this report is to:

- Determine the potential noise impacts associated with the future development of the subject site and its impact on sensitive residential receivers in the area.

It should however be noted that the this report is reliant upon typical noise level information which would be applicable for the site and surrounding areas with no site specific sound pressure level determination or assessment undertaken.

Accordingly this report is to be viewed as providing for a qualitative assessment.

3. EXISTING ACOUSTIC ENVIRONMENT

As indicated in Section 1 above the subject site is located within a commercial/business/light industrial fringe area with a mixture of residential, commercial, light industrial, educational and open space areas of land. It is however noted that large undeveloped areas of land are present to the south and west of the subject site. A mixture of commercial, light industrial, residential and recreational developments are present to the north and east of the subject site and influence the existing acoustic environment. Given the mixture of land use and associated activities within the locality, the acoustic characteristics of the area are not considered to be typical of residential areas with a more commercial/light industrial environment influencing the setting.

The subject site currently supports the operation of the Port Macquarie Heritage Christian School and a church. These existing uses also influence the acoustic environment of the subject site and locality.



**Heritage
Christian
School on 33
Mumford
Street, Port
Macquarie**



**Church
building on 11
Mumford
Street, Port
Macquarie**

Mumford Street and Hastings River Drive are located within 200m to the north of the subject site with traffic movements on the road infrastructure likely to influence the existing acoustic environment in particular Hastings River Drive which is a major connecting road within the western portion of Port Macquarie.

Having regards to the above the acoustic environment in the locality is not typical of urban residential areas and reflects the mixture of land uses and associated activities which is present in the area.

Whilst no specific quantitative noise level information is available for the subject site and surrounds it is likely that a conservative daytime background noise level in the locality is in the order of 45dB(A). Information available for other mixed use commercial/business/light industrial fringe localities suggests a daytime background noise level range of 42 – 47dB(A).

Nighttime background noise levels in the locality are likely to be in the order of 35 - 40dB(A). These noise levels reflect the nature of activities on the subject site and the presence of a mixture of land uses on adjoining and adjacent land.

4. ACOUSTIC QUALITY OBJECTIVES

Noise from educational and commercial/business/light industrial activity sources is assessed using the DECC's Noise Policy for Industrial, 2017 (NPI). However local Councils may also apply the criteria for land use planning, compliance and complaints management.

The NPI specifies two separate criteria designed to ensure existing and future developments meet environmental noise objectives. The first criteria limits intrusive noise to 5dB(A) above background noise level whilst the other criteria applies to the protection of amenity of particular land uses based on the existing (L_{eq}) noise level from industrial noise sources. Project specific noise levels are established for new developments by applying both criteria to the situation and adopting the more stringent of the two.

When land uses in an area are undergoing significant change the background noise levels would be expected to change, sometimes significantly. The impact of noise associated with a proposed new development should be made using the recommended amenity noise level for the residential land use, not the project intrusiveness noise level. It is however noted that the proposed rezoning of the subject site and the proposed future development concept would not be expected to represent a significant change to background noise levels beyond that which currently exists by virtue of;

- The future development of the subject site is consistent with an expansion of the existing uses of the subject site and the land uses within the immediate locality; and
- The spatial and barrier separation which is available between the areas of the subject site which would be subject to future development and adjacent residential receivers.

The following table specifies the applicable base objectives in relation to providing an acoustic environment for the occupants of residential dwellings which are present within the locality which would not give rise to justifiable complaint or land use conflict in relation to existing and future land uses of the subject site.

Table 1 - Base Noise Level Objectives

PERIOD	INTRUSIVENESS CRITERION (based upon Table 2.3 of the NPI plus 5 dB(A))	AMENITY CRITERION
Day (7am – 6pm)	50 _{Leq,15 minutes}	60 _{Leq,11hr}
Evening (6pm – 10pm)	45 _{Leq,15 minutes}	50 _{Leq,4hr}
Night (10pm – 7am)	35 _{Leq,15 minutes}	45 _{Leq,9h}

Having regard to the above as the intrusiveness criteria is more stringent then these values should be used as the acoustic impact assessment objective.

5. NOISE LEVELS FROM FUTURE LANDUSES

It is noted that the future development concept for the subject site provides for an expansion of school building infrastructure and the change of use of eastern portion of the subject site so as to support commercial/business activities. This includes the provision of additional onsite vehicle access and parking infrastructure. Support infrastructure such as storm water management infrastructure is also proposed.

Some changes in the local acoustic environment which may result as a consequence of the proposed rezoning are;

- An increase in vehicle movements to and from the subject site; and
- Increased noise generation associated with commercial/business/light industrial activities on the subject site; and
- Increased occupant numbers associated with future new building infrastructure on the subject site.

6. POTENTIAL NOISE IMPACTS

6.1 General

In providing information regarding the potential noise impacts associated with the future development of the subject site it is important to note that the responsibility for ensuring that noise impacts are acceptable in relation to surrounding land uses rests with the noise generator and not the noise receiver. In this regard burdening noise receivers with the responsibility for noise mitigation and management does not provide for the equitable utilization of land and is not consistent with the 'polluter pays' or responsible environmental management principles which underpin environmental protection legislation.

It is however acknowledged that local government has a role in ensuring that land use conflict does not occur as a result of inappropriate strategic and development control planning.

Accordingly the assessment of potential noise impacts associated with the proposed rezoning of the portion of the subject site and the potential future development of school and commercial/business activities on the subject land is focused upon demonstrating that any change in land use is able to mitigate any land use conflict which is relevant to noise and that acceptable strategic and development control outcomes can be achieved.

6.2 Proposed Rezoning

Having regards to the above it is considered that the proposed rezoning of portion of the subject site and its future development will not result in significant change in the acoustic environment and will not result in any unacceptable strategic and development control outcomes for the subject site and locality. This is based upon the following considerations;

- The mixture of uses within the general area of the subject site provides for an acoustic environment which is typical of commercial/business fringe areas with the existing acoustic environment reflecting a range of commercial, business and light industrial uses. The existing acoustic environment of the locality is also impacted upon by significant traffic movements associated with existing public road infrastructure. Accordingly the future development of the subject site is unlikely to have impacts upon the existing acoustic environment beyond that which currently exists; and
- The proposed development concept provides for a continuation of existing land with the nature of activities associated with the future development of the subject site remaining consistent with that which currently exist within the locality. In this regard the nature and characteristics of noise generation will remain relatively consistent despite any future development of the subject site; and
- The development concept continues to provide for significant separation between residential receivers and areas of the subject site where noise generating activities occur. The maintenance of separation between residential and non-residential activities provides for significant distance attenuation which would offset any minor increase in noise generation associated with the future development of that part of the subject site which is the subject of the rezoning proposal.

In this regard worst case distances between proposed future commercial/business/light industrial developments and existing residential receivers, (adjoining land to the east of the subject site), could provide for up to a 36dB(A) attenuation in noise. Consequently noise levels of up to 86dB(A) could be generated by future commercial/business developments and meet the relevant daytime intrusiveness criteria, (refer to Section 4 above). This attenuation prediction does not consider barrier and climatic effects).

Noise levels exceeding 86dB(A) would not typically be associated with commercial/business land uses and associated activities; and

- The nature of the existing and future development of the subject site provides for activities which do not generate significant noise. The continued operation of the school and the proposed commercial/business use together with associated activities such as vehicle movements do not in themselves generate high levels of noise.

The barrier attenuation which can be provided through the design and construction of future buildings and associated infrastructure together with the low vehicle movement speeds associated with the use of future access and parking infrastructure, (by predominately passenger vehicles), can ensure that noise levels associated with the future development of the subject site will remain consistent with that which currently exists. In this regard the use of best practice noise management practices in combination with the available distance attenuation provided for above can ensure that the relevant intrusiveness criteria, (refer to Section 4 above) is achieved in relation to any future development of the subject site; and

- The nature of the existing and future use of the subject site provides for the use of infrastructure predominately during daylight hours and accordingly noise impacts during the more sensitive evening and nighttime periods would be negligible. Any evening uses of future building and access and parking infrastructure would be expected to be infrequent and for short duration and accordingly acoustic impacts would be expected to be negligible.

Notwithstanding the above based upon the nature and scale of the proposed development it is possible for the future development of the subject site to be undertaken so as to not result in unacceptable noise impacts which could not be mitigated through the adoption of best practice noise management principles.

7. CONCLUSION

A conservative assessment of the impacts of existing and future uses of the land which is known as Lot 4 DP 825704 and Lot 2 DP 601094, 11 – 33 Mumford Street, Port Macquarie indicates that the rezoning of portion of the subject site to support its continued use for educational and proposed new commercial/business/light industrial use purposes can be undertaken so as to not adversely impact upon the local acoustic environment.

It is possible for the future development of the subject site to be undertaken so as to not result in noise related land use conflicts which could not be mitigated through the adoption of best practice noise management principles.

In this regard the acoustic impacts associated with any future development of the subject site should be the subject of development specific noise impact assessment.

Based upon the information contained within this report there are no noise related constraints to the proposed rezoning of portion of the subject site.

8.0 REFERENCES

NSW Environment Protection Authority, *Noise Policy for Industry*, October 2017

9. TERMS AND CONDITIONS

Background Noise Level Noise level determined for planning purposes as the one tenth percentile of the ambient LA90 noise levels.

dB(A) Unit of sound pressure level, modified by the A-weighting network to represent the sensitivity of the human ear.

Leq Equivalent continuous noise level averaged over time on an equivalent energy basis.

L1 Average Peak Noise Level in a measurement period.

L10 Average Maximum Noise Level in a measurement period.

L90 Average Minimum Noise Level in a measurement period.

Lmax Maximum Noise Level in a measurement period.

SPL Sound Pressure Level (SPL), the incremental variation of sound pressure from the reference pressure level, 20 μ Pa, expressed in decibels.

Disclaimer

The findings referred to in this report are those which, in the opinion of the author, are required to meet the requirements for Noise Impact management. It should be noted that the Local Authority having jurisdiction for the area in which the property is located may, within their statutory powers, require different, additional or alternative works/requirements to be carried out other than those referred to in this report.

This report has been prepared partially on information provided by the client. Information provided by the client in respect of details of construction.

The author denies any legal liability for action taken as a consequence of the following:

- The Local Authority requiring alternative or additional requirements to those proposed or recommended in this report.
- Incorrect information, or mis-information, provided by the client with regard the proposed development which is in good faith included in the strategies proposed in this report and later found to be false.

APPENDIX 1 PROPOSED DEVELOPMENT CONCEPT

