Muswellbrook Shire Council

ORDINARY COUNCIL MEETING

BUSINESS PAPER

TUESDAY 27 FEBRUARY 2024

MUSWELLBROOK SHIRE COUNCIL

P.O Box 122
MUSWELLBROOK
21 February 2024

Councillors,

You are hereby requested to attend the Ordinary Council Meeting to be held in the Training Room, Level 2, University of Newcastle - Upper Hunter Campus, 87 Hill Street, Muswellbrook, NSW 2333 Australia on **Tuesday 27 February 2024** commencing at 6:00 pm.

Derek Finnigan
GENERAL MANAGER

Council Meetings

Meeting Principles

Council and committee meetings should be:

Transparent: Decisions are made in a way that is open and accountable.

Informed: Decisions are made based on relevant, quality information.

Inclusive: Decisions respect the diverse needs and interests of the local community.

Principled: Decisions are informed by the principles prescribed under Chapter 3 of the Act.

Trusted: The community has confidence that councillors and staff act ethically and make decisions in the interests of the whole community.

Respectful: Councillors, staff and meeting attendees treat each other with respect.

Effective: Meetings are well organised, effectively run and skilfully chaired.

Orderly: Councillors, staff and meeting attendees behave in a way that contributes to the orderly conduct of the meeting.

Public Forums

The council may hold a public forum prior to each ordinary meeting of the council for the purpose of hearing oral submissions from members of the public on items of business to be considered at the meeting. Public forums may also be held prior to extraordinary council meetings and meetings of committees of the council.

To speak at a public forum, a person must first make an application to the council in the approved form. Applications to speak at the public forum must be received by no later than 9.00 am two (2) days prior to the day of the meeting before the date on which the public forum is to be held, and must identify the item of business on the agenda of the council meeting the person wishes to speak on, and whether they wish to speak ‘for’ or ‘against’ the item.

Approved speakers at the public forum are to register with the council any written, visual or audio material to be presented in support of their address to the council at the public forum, and to identify any equipment needs no more than 3 days before the public forum. The general manager or their delegate may refuse to allow such material to be presented.

Each speaker will be allowed 2 minutes to address the council. This time is to be strictly enforced by the chairperson.

Declarations of Interest

Statement of Ethical Obligations

Councillors are reminded of their oath or affirmation of office, made under section 233A of the NSW Local Government Act 1993, to undertake the duties of the office of Councillor in the best interests of the people of Muswellbrook Shire and Muswellbrook Shire Council and to faithfully and impartially carry out the functions, powers, authorities and discretions vested in them, under the Local Government Act 1993 or any other Act, to the best of their ability and judgment. Pursuant to the provisions of the Muswellbrook Shire Council Code of Meeting Practice and the Muswellbrook Shire Council Code of Conduct, Councillors are reminded of their obligations to disclose and appropriately manage conflicts of interest.

Section 451 of the Local Government Act requires that if a Councillor or Member of a Council or committee has a pecuniary interest in any matter before the Council or Committee, he/she must disclose the nature of the interest to the meeting as soon as practicable and must not be present at, or in sight of, the meeting, when the matter is being discussed, considered or voted on.

A pecuniary interest is an interest that a person has in a matter because of a reasonable likelihood or expectation of financial gain or loss (see sections 442 and 443 of the Local Government Act).

A non-pecuniary interest can arise as a result of a private or personal interest which does not involve a financial gain or loss to the councillor or staff member (eg friendship, membership of an association, or involvement or interest in an activity). A Councillor must disclose the nature of the interest to the meeting as soon as practicable.

Council's Model Code of Conduct now recognises two forms of non-pecuniary conflict of interests:

- Significant
- Less than significant

A Councillor must make an assessment of the circumstances and determine if the conflict is significant.

If a Councillor determines that a non-pecuniary conflict of interests is less than significant and does not require further action, they must provide an explanation of why it is considered that the conflict does not require further action in the circumstances.

If the Councillor has disclosed the existence of a significant non-pecuniary conflict of interests at a meeting they must not be present at, or in sight of, the meeting, when the matter is being discussed, considered or voted on.

Order of Business

1. Applications for Attendance via Audio Visual Link

2. Acknowledgement of Country

3. Civic Prayer

4. Apologies and Applications for a Leave of Absence

5. Confirmation of Minutes

Ordinary Council Meeting held in 23 January 2024

RECOMMENDATION

The Minutes of the Ordinary Council Meeting held on **23 January 2024**, a copy of which has been distributed to all members, be taken as read and confirmed as a true record.

Moved: _____ Seconded: _____

MINUTES OF THE ORDINARY COUNCIL MEETING OF THE MUSWELLBROOK SHIRE COUNCIL HELD IN THE TRAINING ROOM, UNIVERSITY OF NEWCASTLE - UPPER HUNTER CAMPUS, LEVEL1, TEC1 BUILDING, 87 LOWER HILL STREET, MUSWELLBROOK ON TUESDAY 23 JANUARY 2024 COMMENCING AT 6.00PM.

PRESENT: Cr G.T. McNeill (Deputy Mayor) (Chair), Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton (VC), Cr L. Dunn, Cr J.A. Lecky, Cr R. Mahajan, Cr D.E. Marshall Cr R. Scholes and Cr B.N. Woodruff.

IN ATTENDANCE: Mr D. Finnigan (General Manager), Ms S. Pope (Director – Planning & Environment),Ms S. Welchman (Director - Community & Economy), Mr M. Lysaught (Director – Property & Place), Ms E. Lane (Manager – Governance & Risk), Mr J. Hogan (Acting Chief Financial Officer) (VC), Mrs C. Middleton (Communications Co-Ordinator), Mrs M. Sandell-Hay (Governance Officer), Ms K. Hamm (Executive Assistant) and 1 person in the public gallery.

1. Applications for Attendance via Audio Visual Link

254 RESOLVED on the motion of Cr B. Woodruff and Cr D. Marshall that:

Authority be given for Cr J. Drayton to attend the Council Meeting via video link.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

2. Acknowledgement of Country

The Acknowledgement of Country was read by Cr M. Bowditch.

3. Civic Prayer

The Civic Prayer was read by Cr L. Dunn.

4. Apologies and Applications for a Leave of Absence

255 RESOLVED on the motion of Cr R. Mahajan and Cr D. Marshall that:

The apologies for inability to attend the meeting submitted by Cr S. Reynolds be ACCEPTED and the necessary Leave of Absence be GRANTED.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

5. Confirmation of Minutes

Ordinary Council Meeting held in 19 December, 2023

256 RESOLVED on the motion of Cr D. Douglas and Cr J. Lecky that:

The Minutes of the Ordinary Council Meeting held on 19 December 2023, a copy of which has been distributed to all members, be taken as read and confirmed as a true record.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

6. Disclosure of any Pecuniary or Non-Pecuniary Interests

Cr A. Barry - Declared a non-pecuniary interest in Item 10.1.1. Cr Barry advised Council that she works for AGL who are an energy supplier and retailer.

Cr A. Barry - Declared a pecuniary interest in Item 17.2. Cr Barry advised Council that she is employed by AGL who are mentioned in the report.

Cr D. Douglas - Declared a non-pecuniary interest in Item 17.2. Cr Douglas advised that AGL supply grant funding to Wanaruah Local Land Council in which she is the CEO.

Cr G. McNeill - Declared a non-pecuniary interest in Item 10.1.1. Cr McNeill advised Council that he works for AGL who are an energy supplier and retailer.

Cr G. McNeill - Declared a pecuniary interest in Item 17.2. Cr McNeill advised Council that he is employed by AGL who are mentioned in the report.

7. Mayoral Minute

Nil

8. Public Participation

Nil

9. Business Arising (From Previous Meetings)

9.1. Question With Notice - Rubbish on Footpaths

257 RESOLVED on the motion of Cr R. Scholes and Cr J. Lecky that:

Council NOTES the information contained in the report.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

9.2. Question With Notice - Inquiry on FOGO

258 RESOLVED on the motion of Cr D. Douglas and Cr A. Barry that:

Council NOTES the information contained in the report.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

10. Business (Specific Reports)

10.1. Planning and Environment

10.1.1. Submission on draft NSW Energy Policy Framework

Disclosure of Interest

Cr A. Barry declared a non-pecuniary interest in this item. Cr Barry advised Council that she works for AGL who are an energy supplier and retailer.

Cr G. McNeill declared a non-pecuniary interest in this item. Cr McNeill advised Council that he works for AGL who are an energy supplier and retailer.

259 RESOLVED on the motion of Cr B. Woodruff and Cr M. Bowditch that:

Council resolves that Staff arrange for Council's submission on the draft Energy Policy Framework, including amendments, to be provided to the Department of Planning, Housing and Infrastructure.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

10.1.2. Road Naming Application

260 RESOLVED on the motion of Cr D. Marshall and Cr J. Lecky that:

Council:

1. Approves the proposed street names for exhibition and notification to the Geographical Names Board:
    - Red Gum Parade
    - Jasmine Close
    - Honeysuckle Place
2. Delegates to the General Manager determination of the road naming application following the conclusion of the advertising and notification period.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

10.2. Community Infrastructure

10.2.1. Classification of Shire Local Roads

261 RESOLVED on the motion of Cr R. Scholes and Cr D. Marshall that:

Council:

1. APPROVES staff commencing negotiations with TfNSW regarding the reclassification and upgrading of identified local roads to support the transport of renewable energy project components; and
2. Requests further reports be provided to Council prior to selection of a preferred approach to the classification and upgrading of the identified local roads.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

10.3. Property and Place

10.3.1. Major Projects Status Report

262 RESOLVED on the motion of Cr B. Woodruff and Cr L. Dunn that:

Council NOTES the information contained in the report.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

10.4. Corporate Services

10.4.1. Monthly Financial Report - December 2023

263 RESOLVED on the motion of Cr R. Mahajan and Cr B. Woodruff that:

Council NOTES the Financial Reports for the month ending 31 December 2023.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

10.4.2. Report on Investments held as at 31 December 2023

264 RESOLVED on the motion of Cr R. Scholes and Cr J. Lecky that:

Council NOTES Council's Investments as at 31 December 2023.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

10.4.3. Section 355 Committee Guidelines MSC22E for ADOPTION

265 RESOLVED on the motion of Cr M. Bowditch and Cr D. Marshall that:

Council ADOPTS the *Section 355 Committee Guidelines.*

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

10.5. Community and Economy

10.5.1. Regional Development Roadmap Submission

266 RESOLVED on the motion of Cr J. Lecky and Cr R. Scholes that:

Council ENDORSES the attached draft submission to the State Government on the review of the Regional Development Act 2004 provided in Attachment B of the report.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

11. Minutes of Committee Meetings

11.1. Olympic Park Precinct Development Advisory Committee - 21 November 2023 and 12 December 2023

267 RESOLVED on the motion of Cr A. Barry and Cr D. Marshall that:

The Minutes for the Olympic Park Precinct Development Advisory Committee meeting held on 21 November and 12 December 2023 be ADOPTED.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

Cr Drayton left the meeting at 6:24pm due to technical issues.

11.2. Sports and Recreation Committee - 22 November 2023

268 RESOLVED on the motion of Cr D. Marshall and Cr A. Barry that:

The minutes for the Sports and Recreation Committee meeting held on 22 November 2023 be NOTED.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall and Cr B. Woodruff.

Against: Cr R. Scholes.

12. Notices of Motion

Nil

13. Councillors Reports

Nil

14. Written Questions

Nil

15. Questions for Next Meeting

Cr B. Woodruff - Can Council investigate moving the Councillor Briefing Session to the Monday prior to Tuesday's Meeting to allow for further in-depth discussion?

The General Manager advised that a trial of Councillor Woodruff's proposal will be conducted prior to the February Ordinary Council Meeting.

Cr J. Drayton returned to the meeting at 6:36pm.

Cr M Bowditch - Can you please advise if there are any details on timeframes and/or funding on the blackspot at Kerrabee?

The General Manager advised staff are liaising with Transport NSW as it is a Regional Road and that this will be will taken on notice.

16. Adjournment into Closed Council

269 RESOLVED on the motion of Cr R. Scholes and Cr D. Marshall that:

Council adjourn into Closed Session and members of the press and public be excluded from the meeting of the Closed Session, and access to the correspondence and reports relating to the items considered during the course of the Closed Session be withheld unless declassified by separate resolution. This action is taken in accordance with Section 10A(2) of the Local Government Act, 1993 as the items listed come within the provisions outlined in Section 17 below.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

Members of the Public left the meeting at this stage.

Ms Pope left the meeting at 6.41pm

17. Closed Council

17.1. Muswellbrook Shire Council Voluntary Planning Agreement Allocation 2023/2024 and 2024/2025

270 RESOLVED on the motion of Cr D. Douglas and Cr D. Marshall that:

Council endorses:

1. The proposed allocation of funds received through voluntary planning agreements as detailed in this report for the 2023/2024 financial year;
2. The proposed allocation of funds received through voluntary planning agreements for the 2024/2025 financial to inform the 2024/2025 budget preparation process; and
3. Approves consultation being carried out with the relevant Muswellbrook Shire mining companies to progress VPA funding allocations as detailed in the report.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

17.2. Approval of Price Variation 2021-2022-0538 Solar PV Array at RWTW

Disclosure of Interest

Cr A. Barry declared a pecuniary interest in this item. Cr Barry advised Council that she is employed by AGL who are mentioned in the report.

Cr D. Douglas declared a non-pecuniary interest in this item. Cr Douglas advised that AGL supply grant funding to Wanaruah Local Land Council in which she is the CEO.

Cr G. McNeill declared a pecuniary interest in this item. Cr McNeill advised Council that he is employed by AGL who are mentioned in the report.

At 6:44 pm Cr A. Barry, Cr D. Douglas and Cr G. McNeill left the Council Chambers and therefore took no part in discussion or voting on this item.

Cr B. Woodruff assumed the role of Chair for conduct of this item.

271 RESOLVED on the motion of Cr R. Scholes and Cr D. Marshall that:

Council:

1. APPROVES the capacity change of the Solar PV array from 400kW to 396kW;
2. ACCEPTS the price variation submitted by Sustainable Business Energy Solutions (AGL) for contract 2021-2022-0538 from $580,733, exclusive of GST, to $612,165, exclusive of GST;
3. APPROVES the total project budget to be adjusted to $700,000, through the December 2023 Budget Review process; and
4. AUTHORISES the General Manager to enter into a Contract with Sustainable Business Energy Solutions for the Design and Construction of the Solar PV Array at the revised price.

In Favour: Cr J. Lecky, Cr M. Bowditch, Cr J. Drayton, Cr L. Dunn, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

At 6:47 pm Cr A. Barry, Cr D. Douglas and Cr G. McNeill returned to Council Chambers and resumed their chairs at the meeting table.

Cr G. McNeill resumed the role of Chair for the remainder of the meeting.

17.3. Animal Care and Sustainability Hub - Fencing Layout and Contribution

272 RESOLVED on the motion of Cr B. Woodruff and Cr D. Marshall that:

Council APPROVES contributing equally to the fencing that will follow the property boundary and will be set back from the shared road.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

17.4. Class 1 Appeal

273 RESOLVED on the motion of Cr M. Bowditch and Cr A. Barry that:

Council delegates to the Director – Environment and Planning authority to reach agreement with the Applicant and settle the Class 1 proceedings in the Land and Environment Court being Case Number 2022/00325617.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

18. Resumption of Open Council

274 RESOLVED on the motion of Cr M. Bowditch and Cr D. Marshall that:

The meeting return to Open Council.

In Favour: Cr J. Lecky, Cr A. Barry, Cr M. Bowditch, Cr D. Douglas, Cr J. Drayton, Cr L. Dunn, Cr G. McNeill, Cr R. Mahajan, Cr D. Marshall, Cr R. Scholes and Cr B. Woodruff.

Against: Nil.

Public were invited to return to the meeting.

The Chair read out the resolutions of Closed Council.

19. Closure

The meeting was declared closed at 6.55pm.

THE MINUTES OF THE MEETING (PAGES 1 to 12) WERE CONFIRMED AT THE ORDINARY COUNCIL MEETING OF THE MUSWELLBROOK SHIRE COUNCIL HELD ON 27 FEBRUARY 2024 AND ARE A FULL AND ACCURATE RECORD OF PROCEEDINGS OF THE MEETING HELD ON 23 JANUARY 2024.

.....	.....
Mr D. Finnigan	Cr G. McNeill
General Manager	**Chairperson**

6. Disclosure of any Pecuniary or Non-Pecuniary Interests

7. Mayoral Minute

Nil

8. Public Participation

9. Business Arising (From Previous Meetings)

Nil

10. Business (Specific Reports)

10.1. Planning and Environment

10.1.1. DA 2022-124 - Community Facility Shed - 17-19 Maitland Street

Attachments:	1. Attachment A - Section 4.15 Assessment Report [**10.1.1.1** - 18 pages] 2. Attachment B - recommended conditions of consent [**10.1.1.2** - 8 pages] 3. Attachment C - Proposed Site Plan [**10.1.1.3** - 1 page] 4. Attachment D - Proposed Shed Plans [**10.1.1.4** - 4 pages] 5. Attachment E - Flood Report - RHM Engineering [**10.1.1.5** - 18 pages]
Responsible Officer:	Sharon Pope - Director - Planning & Environment
Author:	Hamish McTaggart (Development Co-Ordinator)
Community Plan Issue:	*Not Applicable*
Community Plan Goal:	*Not Applicable*
Community Plan Strategy:	*Not Applicable*
	Not applicable

PURPOSE

This report has been prepared to assist Council in the Determination of DA 2022/124 for the construction of a shed for a community facility at 17-19 Maitland Street, Wanaruah Local Aboriginal Land Council (Lot 11 DP 552780).

While not strictly required by Council's Conflict of Interest Management Policy a Councillor is involved with the development, and the development doesn't fully comply with Muswellbrook Development Control Plan 2009.

OFFICER'S RECOMMENDATION

Council APPROVES Development Application DA 2022/124 for the construction of a shed for a community facility at 17-19 Maitland Street, Muswellbrook, Wanaruah Local Aboriginal Land Council (Lot 11 DP 552780), subject to the recommended conditions of consent included in Attachment B.

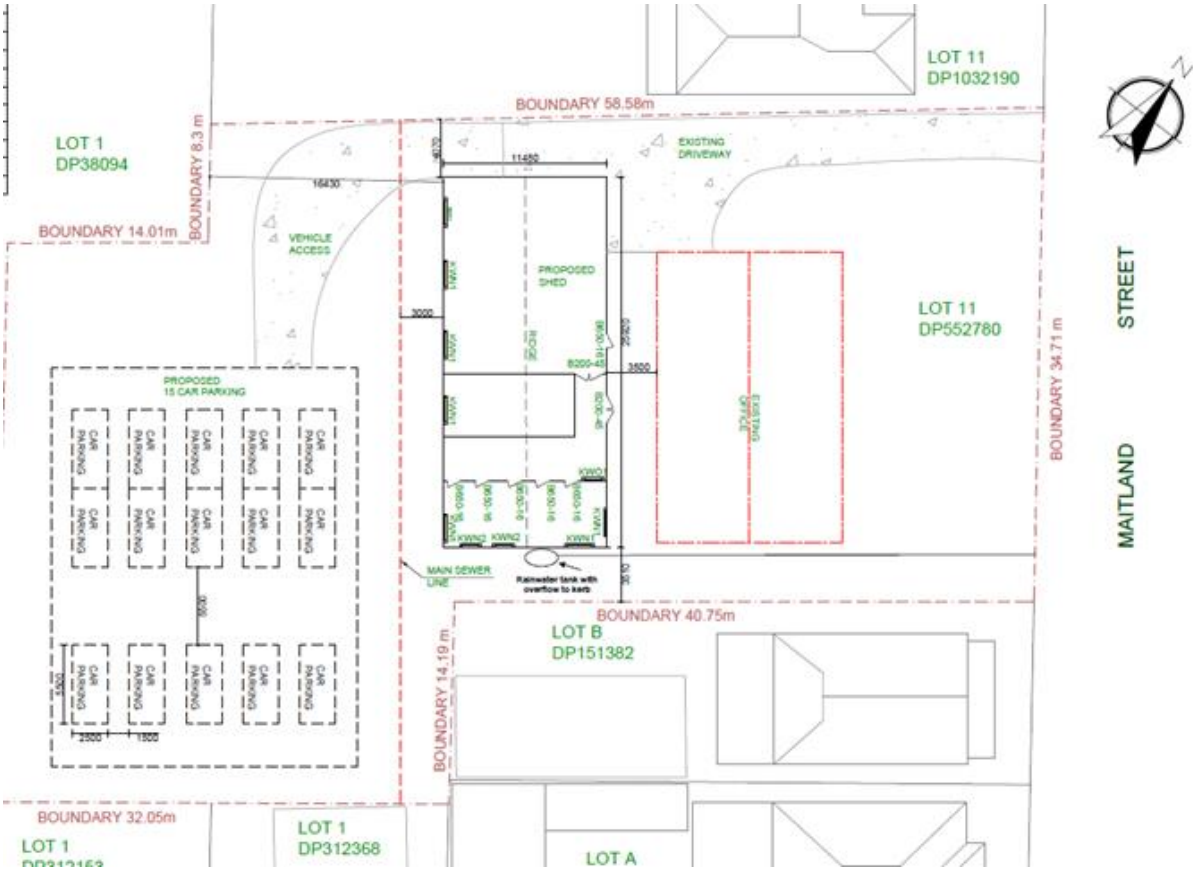
Moved: _____ Seconded: _____

DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed development involves the construction of a new Colourbond shed to be used for cultural development activities run at the site as part of the Wanaruah Local Aboriginal Land Council community engagement and cultural development initiatives.

A site plan has been included below (and Attachment C) which illustrates the shed size and

location at the proposed site.



The site plan includes a general car parking arrangement. The applicant has not proposed to construct this car parking area as a formal car parking area in accordance with the Australian Standard and Muswellbrook DCP 2009 requirements, and requests that Council considers approval of an informal gravel base parking area instead.

ASSESSMENT SUMMARY

Council Officers have assessed the proposal under Section 4.15 of the Environmental Planning and Assessment Act 1979 (see Attachment A). Key section 4.15 assessment issues and findings are:

- The proposed development is permissible with consent under the provisions of the Muswellbrook LEP 2009 as alterations and additions to a community facility and compatible with all other relevant assessment provisions of the Muswellbrook LEP 2009.
- The proposed development is compatible with the requirements of relevant State Environmental Planning Policies.
- The proposed development was referred to Council Community Infrastructure Engineers and Building Surveyors. Their comments and requirements have informed the recommended conditions of consent.
- The subject site is identified as flood liable and is affected by the 1% AEP Flood. A Flood Impact Assessment has been prepared in relation to the development. The Flood Impact Assessment has been reviewed by Council Officers in context with the flood planning sections of the Muswellbrook LEP 2009 and DCP and are satisfied that the proposal would comply with these requirements, provided it is carried out in accordance with that document and the recommended conditions of consent.

- The development application requests a variation to off-street car parking requirements. The Development Control Plan requires fifteen (15) fully constructed and formed off-street car parking spaces. The applicant has demonstrated that there is efficient space on the site for the informal parking of over 15 vehicles and has requested that the application be permitted with a semi-formal gravel parking area. Council Officers have recommended that the variation of the Development Control Plan be supported.
- The rear of the site subject to this development application is intersected by an open top stormwater drainage channel which forms part of Council's urban stormwater drainage system. Section 25 of Council's Development Control Plan and the Rivers and Stormwater Drainage Policy requires conditions related to the registration of easements over Council stormwater drainage assets. Related conditions have been included in the recommended conditions of consent.
- The proposed development would be in accordance with all other relevant requirements of the Muswellbrook Development Control Plan.
- The proposed development is considered unlikely to have a significant adverse environmental impact.

COMMUNITY CONSULTATION

The proposed development was publicly notified on two occasions. The initial notification was completed between 21 November 2022 and 8 December 2022. No submissions were received.

Following the receipt of revised plans the proposed development was re-notified between 10 November 2023 to 30 November 2023. No submissions were received.

OPTIONS

Council may:

A. Approve the proposed development subject to the recommended conditions of consent.

B. Approve the proposed development subject to amended conditions of consent.

C. Refuse the proposed development and, in doing so, provide reasons for refusal.

CONCLUSION

DA 2022-124 has been reported to Council for determination as a Councillor Related Development under the Council Conflict of Interest Management Policy, and the application seeks a variation to Muswellbrook Development Control Plan 2009.

The proposed development was assessed against the provisions of Section 4.15 of the Environmental Planning and Assessment Act 1979. Council staff recommend that the development be approved subject to the recommended conditions outlined in Attachment B.

LEGAL IMPLICATIONS

Where the applicant is dissatisfied with the determination of the development application, they have an opportunity, under the provisions of the Environmental Planning and Assessment Act 1979, to appeal that determination at the Land and Environment Court.

DEVELOPMENT ASSESSMENT REPORT

ADDRESS:	LOT: 11 DP: 552780 17-19 Maitland Street MUSWELLBROOK
APPLICATION No:	2022/124
PROPOSAL:	Shed for Community Facility
OWNER:	Wanaruah Local Aboriginal Land Council
APPLICANT:	Hunter Valley Sheds N More Pty Ltd Unit 4 1 Shipley Drive RUTHERFORD NSW 2320
AUTHOR:	Hamish McTaggart
DATE LODGED:	10/11/2022
DATE OF REPORT:	14/02/2024

1. RECOMMENDATION

It is recommended that development consent be granted to DA 2022/124 for a Shed to be used as a Community Facility, subject to the recommended conditions of consent.

2. SITE LOCALITY AND DESCRIPTION

The proposed development relates to 17-19 Maitland Street Muswellbrook (Lot 11 DP 552780).

The site subject to this development application is:

- zoned E3 productivity support under the Muswellbrook LEP 2009 (MLEP 2009)
- Adjoins land also zoned E3 Productivity support to the north-west, north-east and south-east.
- Adjoins land zoned R1 General Residential to the south-west fronting Jordon Street.
- Has frontage and vehicle access via Maitland. Maitland Street is part of the New England Highway which is a classified State Road.
- The land is identified as flood liable and impacted by the 1% AEP flood event by the Muswellbrook Floor Risk Management Study and Plan 2018.
- The south-eastern part of the site includes a drainage area which coveys water from properties and road areas south of the site toward a discharge point into the Hunter River. The drainage channel at the site is not piped and is an open channel and includes overgrown vegetation and debris at locations. The Assessing Officer does not have any information related to Council's maintenance of the channel. The drainage area is identified as a stormwater line on Council's GIS mapping system and is not identified as a waterway on the NSW State Government waterways mapping.
- A sewer main intersects the subject site. The proposed development is clear of this infrastructure.
- The site is currently being used by the Wanaruah Local Aboriginal Council as offices and a community facility.
- A search of Council's electronic record keeping system did not identify a development application related to the establishment of this use of the site. A search of electronic property ownership records indicated that the property had been purchased by its current owners in 1992.
- Teh use is permitted in the zone.

An aerial image identifying the subject site has been included below

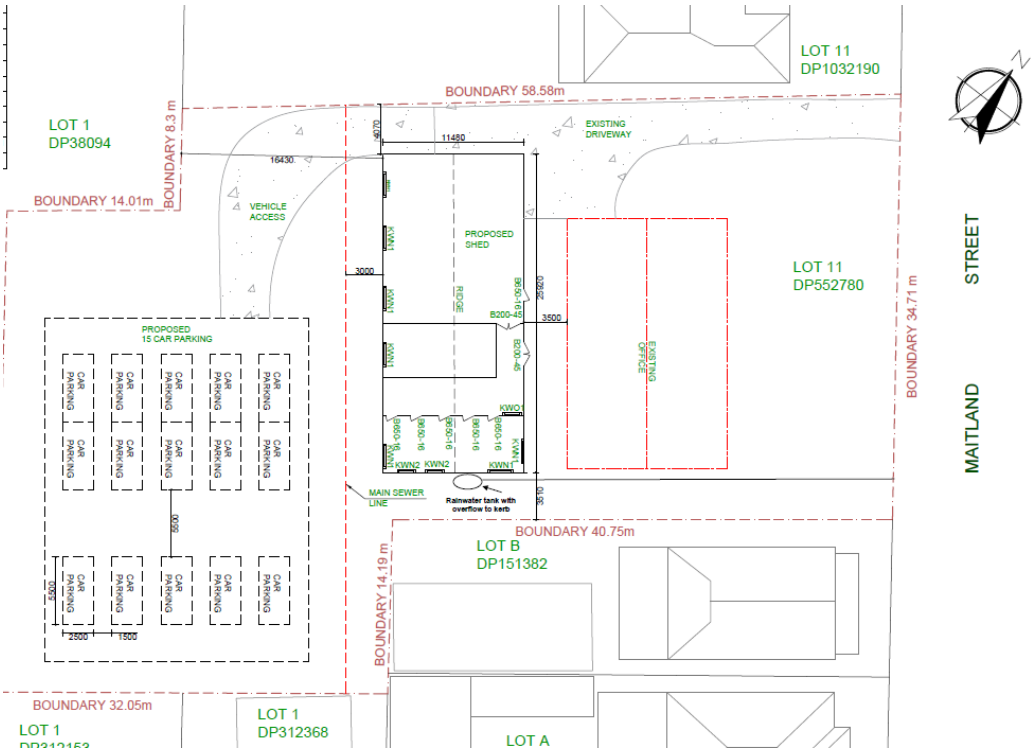
3. DESCRIPTION OF PROPOSAL

The proposal seeks consent for the construction of a new colorbond shed to be used for cultural development activities run at the site as part of the Wanaruah Local Aboriginal Land Council community engagement and cultural development initiatives.

The Statement of Environmental Effects has provided the following comments related to the type of activities that will be carried out at the premises

> *The premises will be owned and controlled by the Wanaruah Local Aboriginal Land Council which is part of the NSW Aboriginal Land Council (NSWALC). .... The premises will be used for the cultural development and welfare of the community with a variety of cultural programs to be run from the premises. The building will also be used to store local Aboriginal artifacts.*

The image below details the shed footprint and proposed location at the site alongside an indicative car parking map.



The details of shed and parking spacing proposed include:

- Shed width 11.48m, shed length 25.92m, total area = 297.56m2 (the total area of the site is 2,806.785m2).
- The proposed shed would have a 3m eave height and 5.090m apex.
- The proposed shed would be located behind the building line of the Wanaruah Local Land Council building and setback 3.5m from this structure.
- The proposed shed would have a 3m setback from the Council sewer main that intersects the site.
- The proposed shed would be setback 3.51m and 4.07m from the side boundaries and 16.43m from the nearest point of the rear boundary.
- The proposed plans have identified an indicative parking area to accommodate up to 15 vehicles. The applicant has not proposed the construction of a formal car parking area in accordance with the Australian Standard and MDCP 2009 requirements, but requests that Council permit the establishment of an informal gravel base parking area. This would be a variation to MDCP 2009 requirements and is discussed under the Section 16 car parking and access heading of this report.

4. REFERRAL COMMENTS

External Referrals

The proposed development did not require any referrals to external Government Agencies to inform this assessment.

Internal Referrals

CI – Roads and Drainage

- Stormwater/drainage - It was requested that conditions be imposed to require an easement to be obtained per provisions within Council's Stormwater and Drainage DCP Section and Rivers and Drainage Policy. Council Engineers advised that it would be acceptable for an Occupation Certificate to be issued at the time that the applicant had commenced the process of registering an easement given the anticipated administrative timeframe for processing any easement.
- Parking – Engineers are supportive of the variation of Council's parking DCP to not require a fully sealed car park in line with relevant Australian Standards. A more detailed merit consideration of this DCP variation has been included under the DCP section of this report. A gravel-based parking area is to be constructed at the rear of the site as an alternative.
- The flood impact assessment submitted was compatible with DCP requirements. Advice was provided to ensure the structure remained in accordance with construction requirements for structures on flood liable land.

CI – Water and Waste

The initial location of the shed was rejected as the structure was over a Council sewerage main which intersects the property.

The location of the proposed shed was moved 3m clear of the sewerage main. Council Water and Waste Engineers raise no objection to the proposal, although it is noted that the shed location conflicts with the internal sewer inspection shaft. Council Officers and the related Australian standard require all private sewer connections to be installed with an inspection shaft to inspect sewer blockages and determine whether a blockage is within the Council or private sewerage pipework.

A condition is recommended to require the location of the inspection shaft to be relocated outside of the shed footprint and remain accessible.

Building Surveyor

Council's Building Surveyor recommended conditions of consent related to demonstrating compliance with fire safety setbacks and accessibility requirements at the time a Construction Certificate is applied for.

These requirements have been incorporated into the recommended conditions of consent.

5. ASSESSMENT - Section 4.15 Matters for Consideration

This report provides an assessment of the material presented in the Application against the relevant State and local planning legislation and policy.

Section 4.15(1)(a)(i) The provisions of any Environmental Planning Instrument (EPI)

A. Muswellbrook Local Environmental Plan 2009 (MLEP 2009)

Relevant Clauses applicable under the Muswellbrook Local Environmental Plan 2009 are:

Part 2 Permitted or prohibited development

Land use Zone	E3 Productivity Support
Proposed Use	Community facility
Permissibility	**Permitted with Consent**
Zone Objective	**Complies with Objective**

The objectives under the E3 Productivity Support Zone are as follows:

- *To provide a range of facilities and services, light industries, warehouses and offices.*
- *To provide for land uses that are compatible with, but do not compete with, land uses in surrounding local and commercial centres.*
- *To maintain the economic viability of local and commercial centres by limiting certain retail and commercial activity.*
- *To provide for land uses that meet the needs of the community, businesses and industries but that are not suited to locations in other employment zones.*
- *To provide opportunities for new and emerging light industries.*
- *To enable other land uses that provide facilities and services to meet the day to day needs of workers, to sell goods of a large size, weight or quantity or to sell goods manufactured on-site.*
- *To ensure that development is arranged and carried out in a way that does not intrude on the amenity of adjoining residential areas.*

The proposed development is generally in accordance with the land use zone objectives as it would support the carrying out the continued administrative, cultural and educational operations of the Wanaruah Local Aboriginal Land Council at the site.

Part 4 Principal Development Standards

Relevant Clause	Control	Proposed	Compliance
4.1 Minimum subdivision lot size		The proposal does not involve the subdivision of land.	☐ Yes ☐ No ☒ NA
4.3 Height of buildings	13m	5.09m	☒ Yes ☐ No ☐ NA
4.4 Floor space ratio	2:1	The site area 2,806m2 the floor area of the proposed shed is 297m2. The proposed shed and existing building located on the site comply with the maximum FSR for the site.	☒ Yes ☐ No ☐ NA
4.6 Exception to Development Standards		The proposal does not involve a variation to a development standard.	☐ Yes ☐ No ☒ NA

Part 5 Miscellaneous Provisions

Relevant Clause	Compliance
5.21 Flood planning	☒ Yes ☐ No ☐ NA The site subject to this development application is identified as flood liable by the Muswellbrook Flood Risk Management Plan and Study 2018 and is impacted by the 1% AEP event. This Clause applies to the determination of development on flood liable land. Prior to determining a development application to which this clause applies a consent authority is to be satisfied that the development - (a) *is compatible with the flood function and behaviour on the land, and* *(b) will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and* *(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and* *(d) incorporates appropriate measures to manage risk to life in the event of a flood, and*

	(e) will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses. Council Officers have had regard to the above assessment criteria when assessing the proposed development in context with the more detailed flood impact assessment provisions established through Section 13 of the Muswellbrook DCP. A Flood Impact Assessment prepared by an engineer was lodged with the application. This assessment sets out structural design measures to be adhered to through the construction of the development to ensure the structure is structurally adequate to withstand flood loads and recommends the preparation of a Flood Evacuation Plan for the site. Council Officers are satisfied that the proposed development would be in accordance with the relevant flood risk management requirements where the recommendations of this assessment are adhered to through the carrying out of the development.

Part 6 Urban Release Area

NA

Part 7 Additional Local Provisions

Relevant Clause	Compliance
7.1 Terrestrial biodiversity	The land subject to this development application is not identified as 'biodiversity' by the relevant map. Accordingly, the provisions of this part do not require further consideration in relation to the development application. **Not Relevant**
7.6 Earthworks	The proposed development would involve the carrying out of earthworks and accordingly, this Clause is a relevant consideration. Council Officers are satisfied that the proposed development would be compatible with the requirements of this Clause where earthworks are carried out in accordance with the recommended conditions of consent. **Complies**

B. State Environmental Planning Policies Relevant to Muswellbrook Shire

SEPP (Biodiversity and Conservation) 2021
Satisfactory: ☒ Yes ☐ No ☐ NA <u>Chapter 2 Vegetation in non-rural areas</u> The provisions of this Chapter do not impose requirements relevant to the assessment of this development application. Council has not adopted a Development Control Plan which would require a person to obtain a permit to clear native vegetation. Accordingly, no permit under the related provisions is required in relation to the proposed development.

Furthermore, the proposal would not involve disturbance of any significant area of native vegetation.
Complies

Chapter 3 Koala habitat protection 2020

This Chapter applies in the Muswellbrook Shire Council local government area. This environmental planning instrument encourages the conservation and management of natural vegetation areas that provide habitat for koalas, that are zoned:

(a) Zone RU1 Primary Production,
(b) Zone RU2 Rural Landscape,
(c) Zone RU3 Forestry.

The proposed development is located on land zoned E3 Productivity Support. As the proposed development is not located within the above zones, the provisions of this Chapter related to koala habitat protection do not require further consideration.
Complies

Chapter 4 Koala habitat protection 2021

The provisions of this Chapter apply to land that is subject to an approved koala plan of management. The site is not subject to such a plan of management. Accordingly the provisions of this Chapter do not apply to the proposed development.

Complies

SEPP (Resilience and Hazards (2021)

Chapter 4 Remediation of Land

This chapter under the SEPP requires that a consent authority must not consent to the carrying out of any development on land unless:

(a) It has considered whether the land is contaminated, and
(b) If the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and
(c) If the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

Council Officers are satisfied that the subject site is unlikely to have historically been used for activities that may have potentially caused the site to be subject to contamination requiring remediation as part of this development.

In forming this view Council Officers have:
- Recognised that the site has most recently been used by the Wanaruah Land Council as an administration, cultural and educational centre for a number of years. This type of use of the site is unlikely to have involved any activity with the potential to cause site contamination.
- The site would continue to be used for this purpose as part of the proposed development.
- When inspecting the site Council Officers did not observe any visual evidence which suggested the site may have been impacted by contamination.

In view of the above Council Officers are satisfied that the proposed development may proceed without the need for further assessment of the SEPP provisions.

Complies

SEPP (Transport and Infrastructure) 2021

The subject site fronts a classified State Road.

Clause 2.119 includes provisions that require consideration by a consent authority prior to granting development consent to development with frontage to a classified State Road. These provisions are referenced below.

(a) where practicable and safe, vehicular access to the land is provided by a road other than the classified road, and
(b) the safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development as a result of—
(i) the design of the vehicular access to the land, or
(ii) the emission of smoke or dust from the development, or
(iii) the nature, volume or frequency of vehicles using the classified road to gain access to the land, and
(c) the development is of a type that is not sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicle emissions within the site of the development arising from the adjacent classified road.

In relation to these assessment provisions Council have noted the following:

- the site has an existing access to the New England Highway classified state road.
- The proposed development does not involve a new connection to the classified State Road which would require referral to Transport for NSW for concurrence through the Roads Act 1993
- Council Engineers have reviewed the proposed development and the existing access arrangement and made recommendations related to ensuring the maintenance of the site access.
- The proposed development would not be sensitive to road noise or vehicle emissions.
- The proposed development is not traffic generating development within the meaning of Clause 2.122 which would require concurrence from transport for NSW.

In view of the above considerations Council Officers are satisfied that the proposed development is in accordance with the relevant SEPP requirements.

Complies

Section 4.15(1)(a)(ii) the provisions of any draft EPI.

There are no draft EPIs relevant to the Development Application.

Section 4.15(1)(a)(iii) the provisions of any development control plan

Muswellbrook DCP 2009

Section 3 – Site Analysis
This Section of the DCP puts forward matters to be considered by a proponent through the design of a development application and the preparation of accompanying documentation.

Council Officers are satisfied that the proponent has adequately considered the provisions of this Section and prepared the documentation accompanying the development application in accordance with the requirements of this Section.

Section 9 – Local Centre Development

This Section of the DCP relates to development in the former Local Centre land use zone – this land use zone has been transitioned into the new commercial land use zones which include the E3 Productivity Support zone and is thereby relevant to the proposed development.

The table below examines the provisions of this Section of the DCP in context with the proposed development.

MUSWELLBROOK SHIRE COUNCIL DCP SECTION 9 LOCAL CENTRE DEVELOPMENT		
DCP REQUIREMENTS	COMPLIES	PLANNING COMMENT
9.1.1 Built Form (i) The design of new buildings should reflect and enhance the existing character of local centres. (refer to section 15 of this DCP for further guidance on development in the Bridge Street area) (ii) Building design should relate to its retail/commercial/office function. (iii) Building materials should be of high quality and harmonise with surrounding development. The use of reflective materials is discouraged. Materials and colours should not dominate the streetscape. (iv) Awnings should be designed to integrate with the architecture of the building façade and provide for continuous shelter for pedestrians. Awnings should follow consistent heights above the footpath with a minimum height to the underside of the awning of 3.2 metres (v) Building facades should relate to the context of buildings in the area to achieve continuity and harmony. The continuity of commercial frontages should not be broken by parking areas, service and delivery areas etc. (vi) Buildings should provide for 'activated street frontages' by incorporating active uses at street level including cafes and other retail activities. (vii) Blank building facades to streets or public places are to be avoided. (viii) The placement of windows should provide visual interest and variation to the building façade and relate to those of adjacent buildings. (ix) Building designs should allow for passive surveillance of public places and streets. (ix) Building entrances should be well defined and well lit. (x) New residential development shall be located above street level. (xi) Incorporate areas for future signage into the building design.	**Yes**	The proposed development is compatible with the requirements of this Section of the Muswellbrook DCP. This view has been formed based on the following considerations: ➢ The proposed development would be setback behind the building line of the existing Wannaruah Local Aboriginal Land Council administration building. This building would obscure the balance of the structure when viewed from the streetscape. Council Officers are satisfied that the proposed development would not have any substantive impact on the streetscape. ➢ The proposed colorbond shed would not utilise highly reflective materials. The shed profile and building materials used would be comparable to a modern residential shed. ➢ An active street frontage would be maintained at the existing administration building as part of this development application.
9.1.2 Height of Buildings (i) Building heights comply with the building height limits prescribed by Muswellbrook LEP 2009. (ii) The height of buildings should be consistent with the character of the area, and include roof parapets where that is a	**Yes**	The proposed development would comply with the requirements of this section of the DCP. This view has been formed based on the observations below: ➢ The height of the proposed development would not exceed the

characteristic in the surrounding streetscape. (iii) The height of buildings should not result in unreasonable overshadowing or compromise the privacy of adjoining properties.		maximum building height for the land specified by the Muswellbrook LEP 2009. ➢ When considered in context with the bulk height and scale of commercial buildings in the E3 Productivity Support locality the height and scale would be generally compatible with the scale of commercial development in that locality. The automotive retail and mechanical sheds north of the site at 5-11 Maitland St, the retail premises at 27-29 Maitland Street and the service stations located in the general area are similar in scale and height.
9.1.3 Setbacks (i) The front of buildings should be aligned to provide a continuous street frontage. (ii) In some cases, front setbacks should allow for street landscaping and footpath widening where necessary. (iii) New development should respect the setbacks of other buildings along the streetscape. (iv) Separation fencing is provided between development land and any rail corridor. (v) (Not included Relates to Rail Corridor Development)	**Yes**	The proposed structure would be located behind the building line of the existing community facility premises. Accordingly, the proposal would not alter the existing front setback or the way the site related to this DCP control.
9.1.4 Accessibility This Section of the DCP requires new commercial developments to be designed and constructed in a manner which comply with the relevant accessibility standard.	**Yes**	The proposed development would be required to comply with the requirements of this Section. Conditions of consent related to achieving compliance with the Building Code of Australia and accessibility requirements are recommended.
9.2.1 Urban Landscaping (i) Where appropriate, landscaping should be incorporated into building design to enhance the character of the streetscape and the amenity of buildings and public places. (ii) Landscaping should reflect the size and height of buildings and should be consistent with the character of the area. (iii) Landscaping should be used to soften the impact of hard surfaces where necessary. (iv) Where landscaping is proposed to be incorporated into a new development, a landscape plan detailing hard and soft landscaping works should be submitted with the development application	**Yes**	The proposed development would be located behind the building line of the existing commercial premised. The proposal would not alter landscaping adjacent the streetscape. A landscape plan has therefore not been required under this Section of the DCP.

9.2.2 Car Parking	**See Commentary under Section 16 DCP heading**	The DCP requires the provision of sealed vehicle car parking and accessible parking. The applicant has requested a variation of this requirement as part of the proposed development. This is discussed under the Section 16 Parking and Access of the DCP. The assessment is supportive of the variation of the DCP and views that the proposal would remain consistent with the related DCP objectives.
9.2.3 Outdoor Eating Areas	**NA**	
9.2.4 Signage and Advertising	**NA**	

Section 13 Floodplain Management

Relevant section 13.6 provisions related to the carrying out of development have been considered and commented on below.

MUSWELLBROOK SHIRE COUNCIL DCP SECTION 9 LOCAL CENTRE DEVELOPMENT		
DCP REQUIREMENTS	COMPLIES	PLANNING COMMENT
13.6.1 compliance with floodplain manual	**Yes**	A development which addresses relevant DCP and LEP provisions would be in accordance with the flood plain manual requirements.
13.6.2 fences Fences to be designed to not entrap debris	**NA**	The proposed development does not involve any new fences.
13.6.3 Fill	**NA**	This section requires applications involving fill within the floodplain to be accompanied by a flood impact assessment. The proposed development does not involve any substantive fill or earthworks. Accordingly, the provisions of this control do not impact the assessment of the development application. The above notwithstanding a flood impact assessment has been prepared in relation to the proposed development. This report is supportive of the proposal.
13.6.4 flood planning levels for new development - Brownfield commercial development to be constructed at 1% AEP flood level unless demonstrated that it would be impractical.	**Yes**	The flood DCP does not include provisions specific floor height provisions for community facility development. Reviewing the types of activities referenced in the section flood controls related to commercial brownfield development were viewed to have the most relevance to the proposed development. The floor level of this proposed development has not been designed to achieve the 1% AEP flood level. Council Officers have accepted that

Unsealed electrical installations to be located above 1% AEP flood level.		it would be impractical to site the structure above the 1% AEP Flood level. as: - The proposed development is an addition to an existing premises. - Significant earthworks or building alterations would be required to increase the floor height which may have additional environmental impacts. - The proposed use of the structure means it is unlikely to be permanently occupied. - A flood impact assessment has been prepared in relation to the proposal which is supportive of the proposed floor height. While the site has an existing power board and electrical connection. A condition would be included in the recommended consent to ensure any new electrical infrastructure is located above the flood level.
13.6.5 floor heights for dwelling alterations	**NA**	
13.6.6 construction methods for development below flood height	**Yes**	The proposed structure would be designed to withstand flood forces in accordance with the requirements of this Section of the DCP and in line with the recommendations of the Flood Impact Assessment.
13.6.7 and 13.6.8 Evacuation Planning	**Yes**	The Flood Impact Assessment has put forward recommendations related to a flood evacuation plan. The preparation of a plan in line with those recommendations and the provisions of this Section of the DCP would be required as a condition of consent.

Section 16 Car Parking and Access

This section sets the minimum standards for off-street car parking and the rate which parking is to be provided to certain types of development.

Off-street car parking required for community facility developments:

1 space per 20m^2 of floor area.

This Section of the DCP would require the construction of a fully sealed and line marked 15 space off-street car park to service the proposed 297.56m2 shed.

In the Statement of Environmental Effects accompanying the development application the applicant has requested that Council consider varying this car parking control.

The applicant has put forward this request for reasoning related to:

- The proposal relates to an existing facility and would not significantly alter the use or demand for parking. The facility currently has no constructed off-street parking.
- The premises has limited patronage and the number of parking spaces required to comply with the DCP exceeds expected parking demand related to the facility and proposed addition.

- The applicant has provided plans to demonstrate that an area capable of accommodating up to 15 vehicles is available at the site in an informal parking arrangement. The applicant has indicated that they would accept a requirement to provide a gravel base course area in this area to provide a space more suited to use for informal parking.
- A number of patrons who attend the facility and cultural groups to be run from the shed would likely walk to the site or in the case of children be dropped at the premises to attend.

The applicant also advises:

- On occasion the premises would host school holiday programmes for students. The typical arrival for these programmes is expected to be parent drop of and collection at the start and end, Meaning long term parking for participants is not required. On street drop off and temporary parking is available and within the proposed unformalised off-street parking.
- Adult orientated events are anticipated to attract up to a maximum of ten (10) participants. The proposed plans have demonstrated that an informal area capable of accommodating up to fifteen (15) vehicles is available on-site.

In determining a development application which seeks the variation of a DCP control Council is required to have regard to the DCP objectives that relate to that Plan.

DCP objectives related to parking rates are:

a) To ensure adequate provision of off-street parking to maintain the existing levels of service and safety of the road network.
b) To ensure a consistent and equitable basis for the assessment of parking provisions.

Objectives related to parking design are:

a) To ensure that the design of on site car parking is provided to an acceptable standard.
b) To ensure the convenient use and operation of car parking facilities.

Council Officers have completed a merit assessment of the requested DCP variation in context with the DCP objective and recorded key assessment findings below:

- The proposed development relates to an existing community facility. The existing facility does not include any formalised off-street car parking.

- Council Officers are not aware of any parking issues related to the existing facility.

- The purpose of the proposed development is to establish a space that would allow the existing facility to hold cultural and educational programmes. The use of the structure will generate event/class specific traffic and would have limited everyday traffic.

- The proposal involves an addition to a community facility. The operation of this facility has positive community outcomes.

- Council Officers consider that the DCP provision of one (1) vehicle parking space per 20m2 floor area to be a DCP control more closely related to regular staff and customer parking rather than an event orientated development.

- In their submission the applicant has proposed providing a level and gravel sealed informal parking area at the rear of the development with an area adequate to provide informal parking for up to fifteen (15) vehicles.

- Council Officers have inspected the site and are satisfied that there is a suitable space at the rear of the site to accommodate this number of off-street parking spaces.

Council Officers consider that the provision of an area to accommodate fifteen (15) informal off-street car parking would provide a space sufficient to accommodate the typical parking demands associated with events held at the proposed facility.

The standard requirement for car parking areas is for the car park to be fully constructed, sealed and line marked in accordance with AS 1742. In this instance, Council Officers view that it may be viewed favourably given:

  - There are a number of community or event orientated facilities in the Shire supported by informal parking arrangements that do not strictly comply with the DCP. Examples include the Muswellbrook Showground, Racecourse and modest community support services approved at sites with limited off-street parking.
  - The parking area available would achieve car parking rate requirements set under the DCP and exceed typical programme anticipated demand.
  - While anticipated parking demand would be catered for – the informal parking would enable additional informal parking on adjoining grassed areas within the site.
  - The parking and any additional overflow parking would not have an adverse visual impact.
  - The establishment of a gravel parking area would be an improvement to the overall available parking at the site..
  - As a consequence of the sites long driveway access it is unlikely that vehicle movements would cause gravel from the parking area to be transported onto the New England Highway.

- To comply with minimum Accessibility requirements of the DCP and Building Code of Australia an accessible car parking space would be required as a condition of consent. The applicant has acknowledged this in their submission.

Having had regard to the DCP objectives and the findings above Council Officers are satisfied that the variation of Council's DCP related to the standard design and construction of the off-street car park may be varied subject to conditions related to:

- The provision of an accessible parking space and accessible path of travel to the building.
- Establishment of gravel hardstand informal parking space with an area of 200m2. It was viewed that the 200m2 informal parking area.

Section 20 Erosion and Sediment Control

The disturbance area of the proposed development exceeds the minimum area for which an erosion and sediment control plan would be required under the DCP. A recommended condition of consent has been put forward to require the preparation of to an erosion and sediment control plan prior to the issue of a Construction Certificate.

Section 25 Stormwater Management

Stormwater runoff related to the roofed area of the proposed development would be collected and managed via a water tank with overflow connected to the street.

Section 25.2.2 of the DCP requires development sites which include stormwater infrastructure that forms part of Council's urban drainage system to register an easement in favour of Council over the drainage infrastructure.

The site subject to this development application includes a drainage channel that is part of Council's stormwater network. A condition of consent is proposed in line with the requirements of the DCP and Stormwater Drainage Policy.

Section 4.15(1)(a)(iiia) the provisions of any planning agreement

There are no planning agreements relevant to the subject Application.

Section 4.15(1)(a)(iv) the provisions of the regulations

Division 8A of the Environmental Planning and Assessment Regulation 2000 applies to the development.

Development Contributions

The cost of works for the proposed development is $182,720.00. A developer contribution of *0.5% of the total development const will apply to the proposed development. The total value of this contribution would be* ***$913.60.***

Section 4.15(1)(a)(v) the provisions of any coastal zone management plan

Not applicable - The Application does not relate to a coastal area.

Section 4.15(1)(b) the likely impacts of that development

Context and Setting
The proposed development would be located behind the building line of the existing community facility administration building. The height of this building and its gable ended roof would obscure the structure when viewed from the streetscape. Furthermore, the height bulk and scale of the proposed shed is not considered to be out of context with the scale of other structures in the general locality and within the E3 Productivity Support land use zone.

Council Officers are satisfied that the proposed development would not have a significant adverse impact on the local context and setting.

Access, Transport and Traffic
Traffic, parking and access considerations have been discussed through this report and in particular under the DCP Parking and Access heading.

Utilities
The proposed development would not have a significant impact on utility services.

The proposed shed would be sited clear of Council's sewer main. The installation of the shed over internal sewer pipework does not present a problem for Council provided the boundary shaft is sited outside of the shed's footprint a recommended condition of consent has been put forward to require the applicant to demonstrate that the boundary shaft is locate outside the shed footprint or would be relocated prior to the issue of a Construction Certificate.

Existing utility services provided to the premises would be extended to service the proposed shed.

Natural and Technological Hazards

The subject site is identified as flood liable. A flood impact assessment has been prepared in relation to the proposed development by a suitably qualified engineer. Council Officers are satisfied that where the proposed shed is constructed in accordance with the recommendations of this report the structure and land use would not be incompatible with risks associated with this site hazard.

With the exception of the flood hazard commented on above the site is not impacted by any other natural or technological hazards that may affect the carrying out of the development.

Social and Economic Impact on the Locality
The proposed development would have a positive social and economic impact. It would expand the range of cultural and educational activities that may be offered at the Wanaruah Local Aboriginal Land Council. This would in turn have a positive social and economic impact for patrons of the facility and events offered, the community generally and service providers that provide or support the cultural and educational programmes offered.

Section 4.15(1)(c) the suitability of the site for the development

The proposed development is compatible with surrounding land uses and site characteristics, subject to consent conditions.

Section 4.15(1)(d) any submissions made

The Application was notified to adjoining owners from 21 November 2022 to 8 December 2022. A notice was placed on Council's website and via its social media platform. No submissions were received during the notification period.

The development application was renotified following the receipt of amended plans and information between the 10 November 2023 and the 30 November 2023. No submissions were received during this notification period.

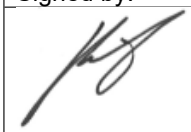
Section 4.15(1)(e) the public interest.

The proposed development is a type of development permissible with consent and which would conform with the provisions of the Muswellbrook LEP 2009. The proposal would be inconsistent with Muswellbrook DCP provisions related to the provision of off-street car parking. However, after a merit based assessment Council Officers are satisfied that the proposal remains consistent with related DCP objectives and may be accepted as a variation to the off-street car parking requirements. The proposal would be compatible with other DCP provisions, The proposal would not have any significant adverse environmental impact.

In view of the above considerations Council Officers are satisfied that the proposed development would be compatible with the public interest.

6. CONCLUSION

It is recommended the application be approved subject to conditions of consent.

Signed by:	Reviewed by:
 Hamish McTaggart	
Development Coordinator	
Date: 9/02/2024	

IDENTIFICATION OF APPROVED PLANS

1) Approved Plans and Supporting Documents

Development must be carried out in accordance with the following approved plans and supporting documentation (stamped by Council), except where the conditions of this consent expressly require otherwise.

Pln. No.	Rev. No.	Plan Title.	Drawn by.	Dated.
NA	4	Site Plan S1	Hunter Valley Sheds 'n' more	03/04/2023
NA	4	Site Plan S2	Hunter Valley Sheds 'n' more	03/04/2023
MUBRK1-17317	A	General Arrangement	Ranbuild	NA
MUBRK1-17317	A	General Arrangement	Ranbuild	NA
260720231200	4	Site Plan	Hunter Valley Sheds 'n' more	26/07/2023

Note: the proposed 15 car parking spaces shown on the plan identified as Plan Number 260720231200 – Site Plan (Hunter Valley Sheds 'N' More) shows an indicative parking area only. The establishment of a gravel hardstand parking area is subject to additional conditions of consent.

Document Title.	Ver. No.	Prepared By.	Dated.
Flood Impact Assessment	B	RHM Consulting Engineers	22 January 2024

In the event of any inconsistency between the approved plans and the supporting documentation, the approved plans prevail. In the event of any inconsistency between the approved plans and a condition of this consent, the condition prevails.

Note: an inconsistency occurs between an approved plan and supporting documentation or between an approved plan and a condition when it is not possible to comply with both at the relevant time.

Reason: To ensure all parties are aware of the approved plans and supporting documentation that applies to the development

OPERATIONAL CONDITIONS IMPOSED UNDER THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT AND REGULATIONS AND OTHER RELEVANT LEGISLATION

2) Building Code of Australia

Where the carrying out of the development involves the carrying out of building work within the meaning of the Environmental Planning and Assessment Act 1979 that building work must be carried out in accordance with the provisions of the Building Code of Australia.

3) Access to Premises Standard

The building shall comply with the requirements of the *Commonwealth Disability (Access to Premise Standard) 2010.*

ANCILLARY MATTERS TO BE COMPLETED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE

4) Requirement for a Construction Certificate

No works shall commence on site until such time as a Construction Certificate has been issued for either part or all of the works. If a certificate is issued for part of the works, it must cover the works being undertaken onsite.

***Note**: A Construction Certificate issued by an Accredited Certifying Authority must be deposited with Council at least 48 hours prior to the commencement of any earthworks, engineering or building work on the site.*

5) Survey Report

A survey report signed and dated (including contact details) by the registered land surveyor must be provided to the Principal Certifier prior to the issue of the Construction Certificate. The survey shall confirm the location of the building/structure in relation to all boundaries in relation to applying the correct considerations for fire separation.

6) Access to Premises for People with a disability

Prior to the issue of the Construction Certificate details are to be submitted to the Principal Certifier demonstrating the building will be accessible and comply with the NCCS – BCA Volume 1 and Australian Standards.

This includes, but is not limited to the submission of plans demonstrating compliance with D1P1, D1P2 and F4P1 of the BCA.

7) Potential Flood Damage to Buildings

An assessment, report and certification by a qualified practising Engineer stating that the structure has been designed to withstand the flood pressures, including debris and buoyancy forces, imposed in the event of a 1% AEP flood and that the structure will not sustain unacceptable damage from the impact of floodwater and debris is to be submitted to the Certifying Authority for approval with the Construction Certificate.

8) Sewer Boundary Shaft

Prior to the issue of a Construction Certificate the person acting with this consent is to either:

a) demonstrate to the satisfaction of the consent authority that the sewer boundary shaft is located outside the footprint of the development. Council Certifiers would accept a report signed by a surveyor confirming the structure will not be located over the sewer boundary inspection shaft as suitable documentary evidence demonstrating compliance with this requirement.

b) Submit plans detailing the relocation of the inspection shaft to a location outside the

building footprint as part of the development.

9) Parking Area

A gravel hardstand parking area is to be installed to service the development. Prior to the issue of a Construction Certificate an updated car parking plan is to be prepared detailed the location and construction of parking spaces generally in accordance with the approved plans and subject to the following (the requirements below take precedence over any inconsistency in the approved plans):

a) The parking hardstand and manoeuvring areas are to be formed and compacted with gravel/dust using DGB20 gravel as a minimum base course.

b) The gravel hardstand areas (excluding the driveway vehicle access) shall be setback a minimum of 5m from any adjoining property.

c) The gravel hardstand area is to be provided with a connection point to the vehicle access driveway.

d) The gravel hardstand areas are to be setback a minimum of 5m from the high bank of the open stormwater drain which runs parallel to the rear boundary of the subject site.

e) The gravel hardstand area should comprise a minimum area of 200m^2.

f) In addition to the gravel parking hardstand area (1) accessible parking space to be installed to comply with the accessibility requirements of the Building Code of Australia and Access to Premises Standard. This parking space is to be shown on the submitted car parking plan. To achieve compliance with the Building Code of Australia it will be necessary for the accessible parking space to be fully constructed, sealed, line marked, and accessible path of travel provided to the building in accordance with relevant Australian Standards.

10) Electrical Fittings for flood affected development

Electrical and mechanical equipment is to be installed in accordance with the requirements of Section 13 of the Muswellbrook Development Control Plan 2009. Prior to the issue of a Construction Certificate documentary evidence is to be provided to the Certifying Authority to demonstrate the following:

a) ***Main Power Supply*** - subject to approval of the relevant energy authority the incoming main commercial power service equipment, including all metering equipment, shall be located 500mm above the 1% AEP flood level. Main power supply shall be designed so that it can be easily disconnected from the development.
b) ***Wiring*** - all wiring, power outlets, switches, etc. should, to the maximum extent possible, be located 500mm above the 1% AEP flood (the Flood Planning Level). All electrical wiring installed below the Flood Planning Level shall be designed for continuous submergence in water and should contain no fibrous components. Only submersible type splices should be used below the Flood Planning Level. All conduits located below the Flood Planning Level are to be installed in a manner that allows them to self-drain if subjected to flooding.
c) ***Equipment*** - all equipment installed below or partially below the Flood Planning

Level is to be capable of disconnection by a single plug and socket assembly.

The 1% AEP flood height for the site has been determined as 144.94m AHD.

11) Section 7.12 Contributions

Pursuant to section 4.17(1) of the Environmental Planning and Assessment Act 1979, and the Muswellbrook Shire Council Section 94A Development Contributions Plan 2010, a contribution of $913.60 shall be paid to Muswellbrook Shire Council.

The amount to be paid is to be adjusted at the time of the actual payment, in accordance with the provisions of the Muswellbrook Shire Council Section 94A Development Contributions Plan 2010. The contribution is to be paid prior to the issue of the Construction Certificate.

12) Sediment and Erosion Control Plan

Before the issue of a construction certificate, the applicant is to ensure that an erosion and sediment control plan is prepared in accordance with the following documents before it is provided to and approved by the certifier:

- Council's development control plan,
- the guidelines set out in the NSW Department of Housing manual 'Managing Urban Stormwater: Soils and Construction Certificate' (the Blue Book), and
- the 'Do it Right On-Site, Soil and Water Management for the Construction Industry' (Southern Sydney Regional Organisation of Councils and the Natural Heritage Trust).
- Ensure the erosion and sediment control plan includes measures to prevent material related to works carried out as part of the development from entering into Council's stormwater drainage infrastructure locatedat the rear of the development site.
  The applicant must ensure the erosion and sediment control plan is kept onsite at all times during site works and construction.

CONDITIONS THAT MUST BE ADDRESSED PRIOR TO COMMENCEMENT

13) Site Sign

A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:

(1) stating that unauthorised entry to the work site is prohibited;

(2) showing the name of the principal contractor (or person in charge of the work site), and a telephone number at which that person may be contacted at any time for business purposes and outside working hours; and

(3) showing the name, address and telephone number of the Principal Certifying Authority for the work.

Any such sign must be maintained while to building work or demolition work is being carried out but must be removed when the work has been completed.

This condition does not apply to building works being carried out inside an existing building.

14) Site Facilities

(a) If the development involves building work or demolition work, the work site must be fully enclosed by a temporary security fence (or hoarding) before work commences.
(b) A minimum width of 1.2m must be provided between the work site and the edge of the roadway so as to facilitate the safe movement of pedestrians.
(c) Any such hoarding or fence is to be removed when the work has been completed.
(d) A garbage receptacle fitted with a tight-fitting lid for the reception of all food scraps and papers from the work site must be provided prior to building work commencing and must be maintained and serviced for the duration of the work.
(e) Toilet facilities must be provided on the work site at the rate of one toilet for every 20 persons or part of 20 persons employed at the work site.
(f) Each toilet provided must:
- be a standard flushing toilet, connected to a public sewer, or
- if connection to a public sewer is not available, to an on-site effluent disposal system approved by the council, or
- an approved temporary chemical closet.

(g) The provision of toilet facilities must be completed before any other work is commenced.
(h) A person having the benefit of this certificate who causes an excavation that extends below the level of the base of the footings of a building on an adjoining allotment of land must at their own expense and where necessary:
- protect and support the building from damage, and
- If necessary, underpin and support the building in accordance with the details prepared by a professional engineer.

(i) A person having the benefit of this certificate who causes the excavation must, at least 7 days before commencing this work, give notice of intention to do so to the owner of the adjoining allotment of land and provide particulars of the proposed work.
(j) Erosion and sediment controls must be provided in accordance with the details shown on the approved plans, prior to the disturbance of any soil on the work site.

CONDITIONS THAT MUST BE COMPLIED WITH DURING DEMOLITION AND BUILDING WORK

15) Construction Hours

(a) Subject to this clause, building construction is to be carried out during the following hours:

i. between Monday to Friday (inclusive)—7.00am to 6.00pm
j. on a Saturday—8.00am to 1.00pm

(1) Building construction must not be carried out on a Sunday or a public holidays.
(2) Demolition works and excavation works must only be carried out between Monday to Friday (inclusive) between 8.00am and 5.00pm.
(3) The builder and excavator must display, on-site, their 24-hour contact telephone

numbers, which are to be clearly visible and legible from any public place adjoining the site.

16) Site Waste Minimisation

Throughout the carrying out of building works the person acting with this consent shall take reasonable steps to minimise waste from the carrying-out of the development in accordance with the following objections of Chapter 24 Waste Minimisation and Management of Council's Development Control Plan.

- Optimise adaptive reuse opportunities of existing building/structures.
- Maximise reuse and recycling of materials.
- Minimise waste generation.
- Ensure appropriate storage and collection of waste.
- Minimise environmental impacts associated with waste management.
- Avoid illegal dumping.
- Promote improved project management.

(10) **Damage to Public Infrastructure**

The applicant shall bear the cost of all restoration works to Council property damaged during the course of this development. The applicant shall submit in writing and/or photographic record, of any existing damage to Council property before commencement of work.

Note: This documentation will be used to resolve any dispute over damage to infrastructure. If no documentation is received prior to commencement of work it will be assumed that the infrastructure was undamaged and the applicant will be required to restore all damaged infrastructure at their expense.

(11) Materials

In accordance with the provisions of the Muswellbrook Development Control Plan the external cladding of the building shall be constructed from non-reflective metal cladding. Zincalume or reflective white sheet metal cladding is not be used without the prior written approval from Council.

(15) Prohibition on Use of Pavements

Building materials and equipment must be stored wholly within the work site, unless prior written approval has been obtained from council. Equipment must not be operated on the footpath or roadway, unless prior written approval has been obtained from council.

(17) Mandatory Council inspections

During the carrying out of building works the person acting with this consent shall ensure that all mandatory stage inspections specified by any approvals issued under Section 68 of the Local Government Act 1993 or Section 138 of the Roads Act 1993 are carried out by Council at the relevant stage of works specified by any such approval.

CONDITIONS WHICH MUST BE COMPLIED WITH PRIOR TO THE ISSUE OF THE OCCUPATION CERTIFICATE

17) Occupation

The building is not to be used or occupied until a final inspection has been carried out and an occupation certificate has been obtained from the Principal Certifying Authority.

18) Car parking

Prior to the issue of an Occupation Certificate all off-street car parking areas are to be constructed in accordance with the requirements of this consent and the plan endorsed by the Certifying Authority with the Construction Certificate.

Where that plan includes an accessible parking space that parking space is to be fully constructed, sealed and line marked in accordance with the relevant Australian Standards.

19) Flood Evacuation Plan

Prior to the issue of an Occupation Certificate, a Flood Evacuation Plan is to be prepared in relation to the development. The evacuation plan is to be submitted to and endorsed in Council Community Infrastructure Department's Chief Engineer and endorsed in writing. The Flood Evacuation Plan shall:

a) Be prepared by a suitably qualified hydraulic engineer or flood risk expert.
b) Have regard to related provisions set out in the Section 13 of Muswellbrook Development Control Plan.
c) Be generally in accordance with the submitted Flood Impact Report.

Documentary evidence demonstrating that the Flood Evacuation Plan has been submitted to and endorsed by Council is to be provided to the Certifying Authority with the Occupation Certificate application.

The approved Flood Evacuation Plan is to be adhered at all times by the person acting with this consent.

20) Driveway Entry Upgrade

Prior to the issue of an Occupation Certificate a sealed vehicle driveway crossover and layback is to be installed at the sites New England Highway access in line Council's Footpaths Kerbs and Guttering Policy (F10/1). In addition to the design requirements of that policy the concrete crossover is to extend 3m into the property from its New England Highway property boundary.

In accordance with that Policy and the Roads Act 1993, a Section 138 permit must be obtained from Council prior to the installation of a new driveway and the carrying out of any works within the road reserve. Where you are interested in seeking approval for a secondary access it is recommended that you contact Council's Community Infrastructure Department on 6549 3700 at your earliest convenience to obtain their requirements for any new vehicle access.

CONDITIONS RELATED TO THE ESTABLISHMENT OF A STORMWATER EASEMENT

21) Council Easement

An easement is to be registered over the waterway/stormwater drain located on the land in favour of Council. The terms of any easement should include:

- A restriction on the carrying out of works or the installation of structures in the easement.
- Provide Council with the authority to enter the land to carry out the works associated with the management of the stormwater system.
- The easement is to encompass the entirety of the stormwater drain to the satisfaction of Council Community Infrastructure Officers

Council Community Infrastructure Engineers shall participate in processes related to the establishment of the easement.

Documentary evidence demonstrating that the process of easement registration has commenced with Council's Community Infrastructure Department is to be submitted to the Certifying Authority prior to the issue of an Occupation Certificate.

CONDITIONS THAT MUST BE COMPLIED WITH AT ALL TIMES

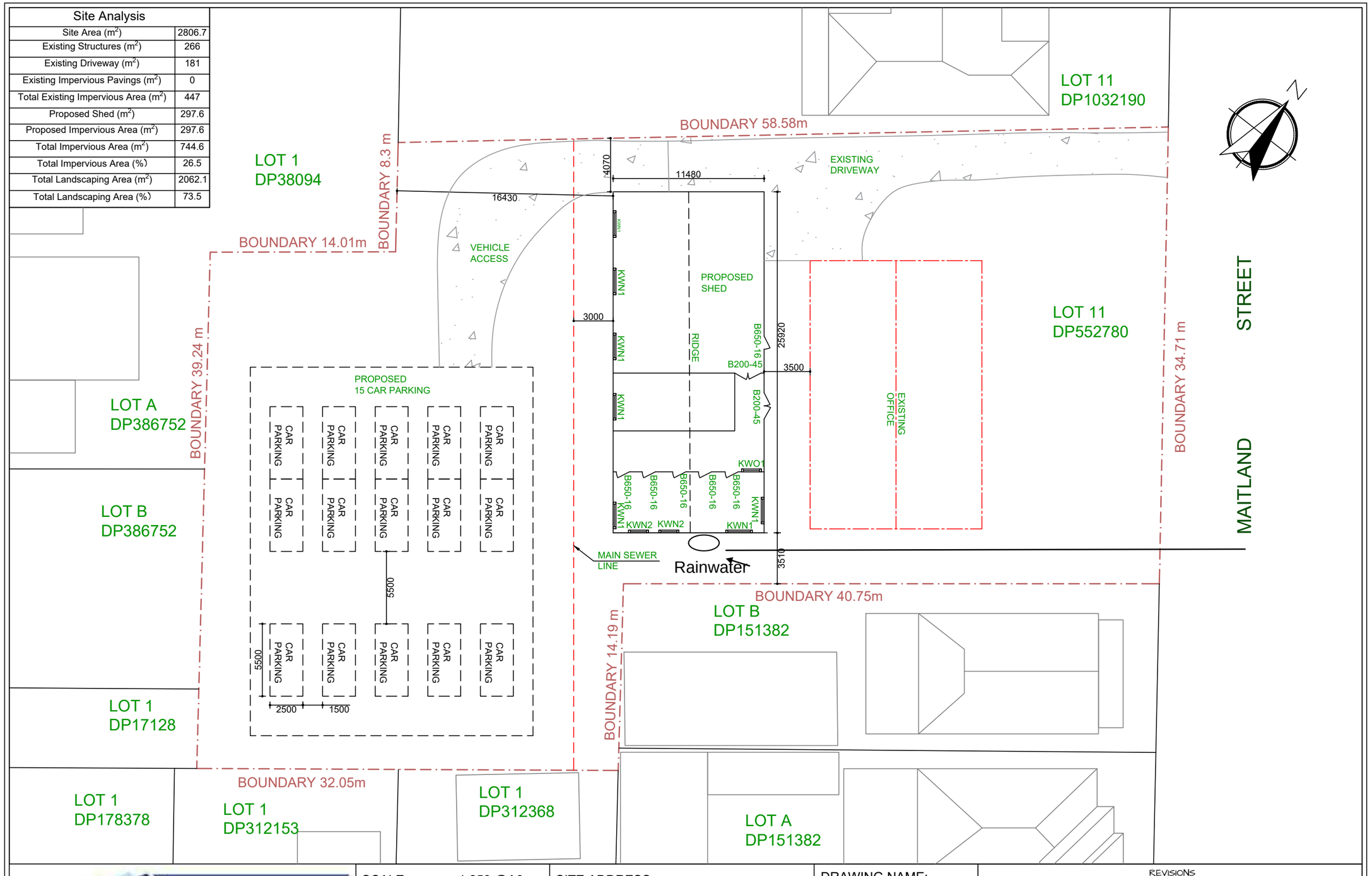
22) Stormwater Disposal

All stormwater from the development including all hard standings and overflows from rainwater tanks is to be collected and disposed of via a water tank with an overflow outlet piped to Council's kerb and gutter.

23) Hours of Operation

The operating hours of the premises are to remain unchanged and in accordance with the hours of operation approved by Council under previous development applications for the site unless otherwise approved by Council in writing.

Site Analysis	
Site Area (m^2)	2806.7
Existing Structures (m^2)	266
Existing Driveway (m^2)	181
Existing Impervious Pavings (m^2)	0
Total Existing Impervious Area (m^2)	447
Proposed Shed (m^2)	297.6
Proposed Impervious Area (m^2)	297.6
Total Impervious Area (m^2)	744.6
Total Impervious Area (%)	26.5
Total Landscaping Area (m^2)	2062.1
Total Landscaping Area (%)	73.5



HUNTER VALLEY SHEDS 'n' MORE

SCALE: 1:250 @A3
DATE DRAWN: 26/07/2023
DO NOT SCALE DRAWING
Written Dimensions Take Priority Over Scale

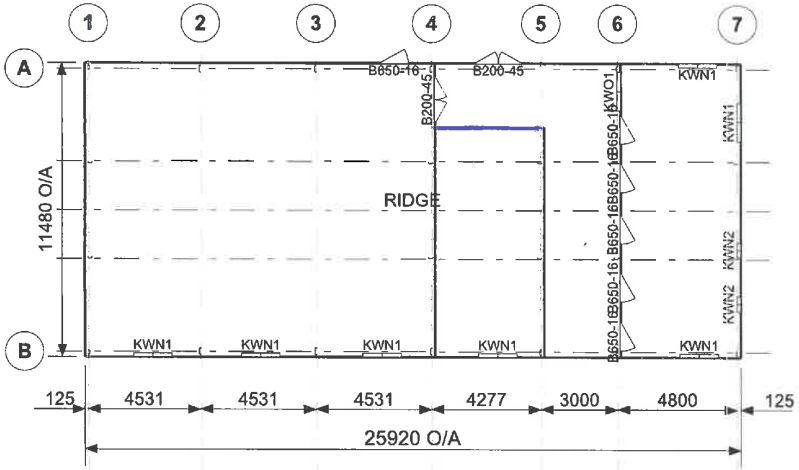
SITE ADDRESS:-
17 Maitland St, Muswellbrook, New South Wales, 2333
LOT 11 DP 552780

DRAWING NAME:-
Site Plan

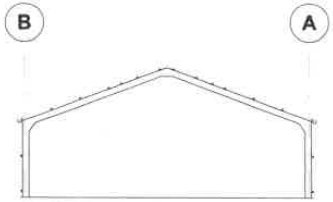
REFERENCE NUMBER:-
260720231200

REVISIONS

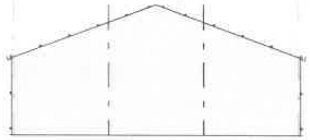
REV	DATE	DESCRIPTION
1	26/07/2023	For Review



GROUND FLOOR PLAN



SECTION GRID 2, 3



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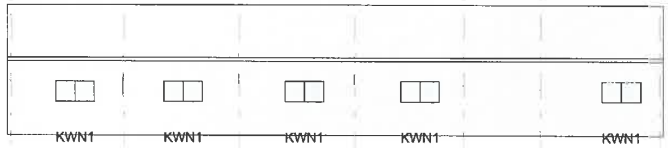
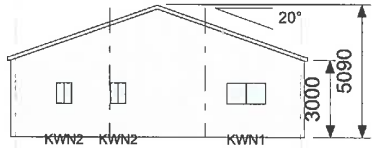


ELEVATION GRID B



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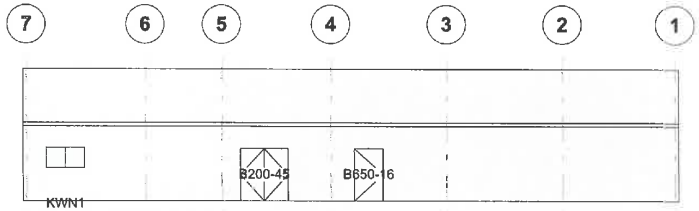

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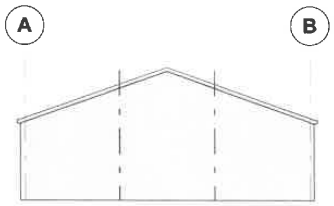


ELEVATION GRID 1

Cont. on page 2

RANBUILD

CLADDING

ITEM	PROFILE (min)	FINISH	COLOUR
ROOF	CUSTOM ORB 0.42 BMT	CB	SM
WALLS	TRIMDEK 0.35 BMT	CB	SM
CORNERS	-	CB	SM
BARGE	-	CB	SM
GUTTER	SHEERLINE	CB	SM
DOWNPIPE	100x75	CB	SM

0.35bmt=0.40tct; 0.42bmt=0.47tct; 0.48bmt=0.53tct

ACCESSORY SCHEDULE & LEGEND

QTY	MARK	DESCRIPTION
6	B650-16	Larnec Door & Frame Kit, 650/37W, Std. 2040 x 1100 C/Bond
2	B200-45	Larnec Door & Frame Kit, 650/37D, double 2040 x 2/920 C/Bond (BG)
1	KWO1	900x1500 Window Opening (BG). Window must be fitted
7	KWN1	AMI - Reg A & B, 790x1505 CLR + FG Fly Screen, Window Kit (BG)
2	KWN2	AMI - Reg A & B, 790x589 CLR P/Vent + FG Fly Screen, Window Kit (BG)

ARCHITECTURAL DRAWING ONLY, NOT FOR CONSTRUCTION USE

CLIENT
Wanaruah Local Aboriginal Land Council

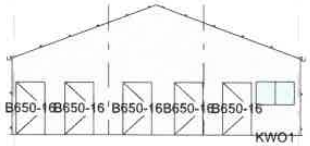
SITE
19 MAITLAND STREET,
MUSWELLBROOK NSW 2333

BUILDING
BIG G
11480 SPAN x 3000 EAVE x 25920 LONG

TITLE
GENERAL ARRANGEMENT

SCALE	DRAWING NUMBER	REV	PAGE
A4 SHEET 1:250	MUBRK1-17317	A	1/2

SECTION GRID 4



SECTION GRID 6

Cont. on page 1

RANBUILD

SCALE	REV
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DRAWING NUMBER	PAGE
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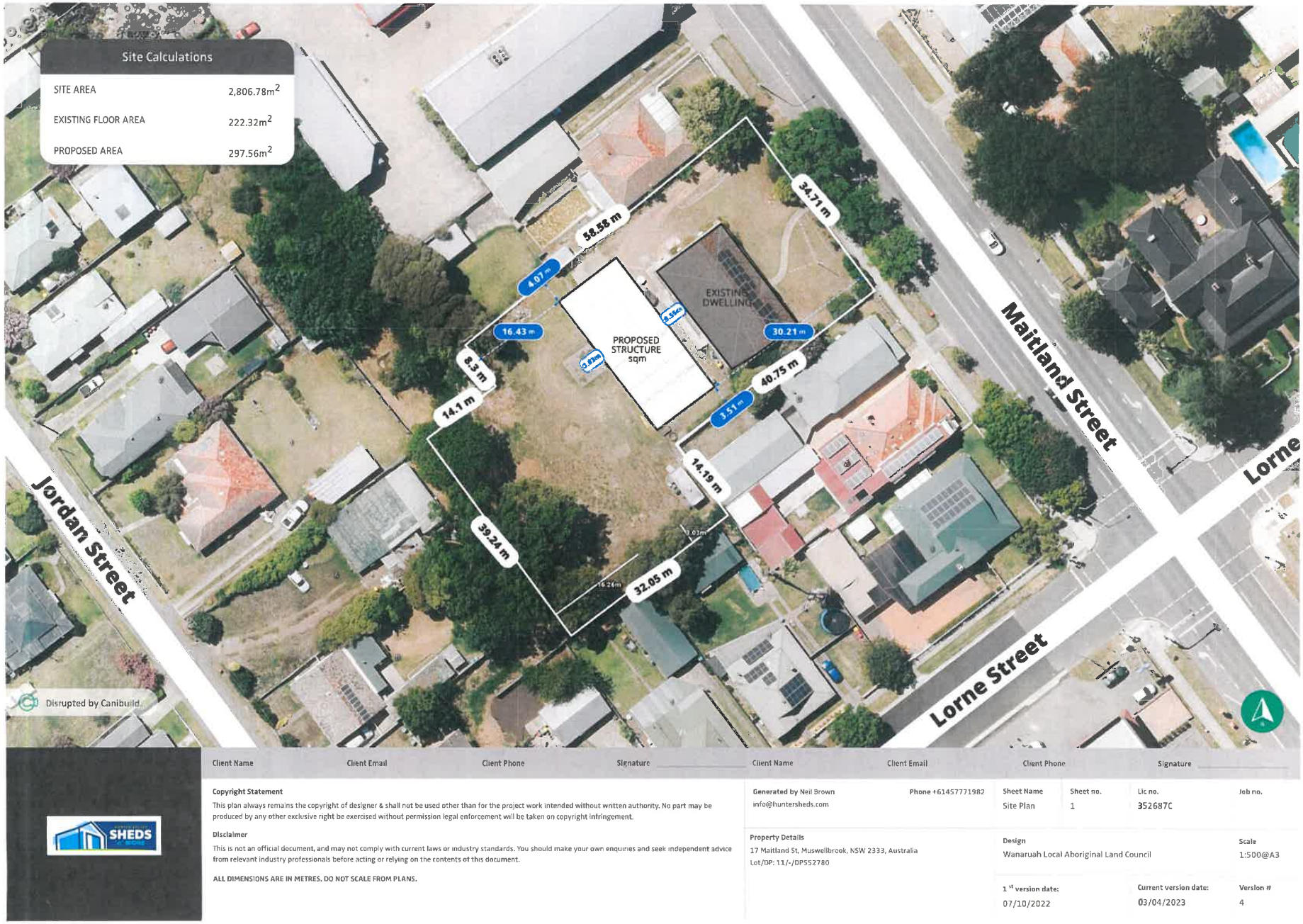

Client Name | Client Email | Client Phone | Signature

Client Name | Client Email | Client Phone | Signature

SHEDS

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Generated by Neil Brown **Phone** +61457771982
info@huntersheds.com

Property Details
17 Maitland St, Muswellbrook, NSW 2333, Australia
Lot/DP: 11/-/DP552780

Sheet Name	Sheet no.	Lic no.	Job no.
Site Plan	1	352687C	

Design Wanaruah Local Aboriginal Land Council

Scale 1:500@A3

1st version date:	Current version date:	Version #
07/10/2022	03/04/2023	4

Client Name Client Email Client Phone Signature

Client Name Client Email Client Phone Signature

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info@huntersheds.com

Property Details
17 Maitland St, Muswellbrook, NSW 2333, Australia
Lot/DP: 11/-/DP552780

Sheet Name	Sheet no.	Lic no.	Job no.
Site Plan	2	352687C	

Design
Wanaruah Local Aboriginal Land Council

Scale
1:200 @A3

1st version date:	Current version date:	Version #
07/10/2022	03/04/2023	4

RHM Consulting Engineers

Civil & Structural Consulting Engineers
ABN 82 153 018 800
PO Box 312, Scone NSW 2337
Ph: 02 6545 2800
www.rhmce.com.au

3 November 2023

Job Number: 23-080
Reference: 2023-11-03 bh

Hunter Valley Sheds n More
C/- A1 Planning
4/1 Shipley Drive
RUTHERFORD NSW 2320

Attention: Alison Clark
Email: Contact@a1planning.com.au

Dear Alison,

FLOOD IMPACT ASSESSMENT – PROPOSED STEEL FRAMED STRUCTURE & SLAB
17-19 MAITLAND STREET MUSWELLBROOK

Further to your request, RHM Consulting Engineers (RHMCE) has undertaken a structural assessment on the proposed Steel Framed Structure (Shed) and Slab to be located at 17-19 Maitland Street Muswellbrook, as per suggested requirements by Muswellbrook Shire Council. The proposed location of the shed is noted in Figure 1.0. The structural assessment considered:

1. The impacts of flood due to the proximity to the Hunter River and Muscle Creek.
2. Flood levels as provided in Muswellbrook Floodplain Risk Management Study and Plan (Muswellbrook FRMS&P) undertaken by Royal Haskoning DHV dated 2019.
3. Flood Information Certificate for 17-19 Maitland Street Muswellbrook provided by Muswellbrook Shire Council dated 13 June 2023. Refer to Annexure A.
4. Structural details provided by Ryan Chalmers "Proposed Building – 19 Maitland Street Sheet 1 to 7 Rev A" dated 28 September 2023, enclosed within Annexure B.

With respect to flood induced forces, referring to the FRMS&P provided by Muswellbrook Shire Council, the area surrounding Maitland Street and in particular at the site:

1. The existing structure and the proposed new shed location fronts Maitland Street and are located on the south-west side of Muscle Creek. Refer to Figure 1.0. Maitland Street is renowned for being susceptible to flooding particularly as one moves towards Sydney Street.
2. The proposed new structure is positioned to the rear of existing structures and is somewhat shielded from the directional flooding flows.
3. Some parts of the town will be flood affected in the 1%AEP, likely due to tailwater flooding where Muscle Creek enters the Hunter River. The area defined within this report is enclosed within Figure 2.0. The proposed shed is within this defined area.
4. The roadway to Maitland Street (New England Highway) serves as a flood route during large flood events. Access to the subject site and thus the proposed development is also via Maitland Street. This means that access to the subject site in times of flooding will be through flooded areas. The roadway consists of dual lane, two directional carriageways with kerb and gutter that conveys runoff. At the subject site, Maitland Street is not serviced by pits or storm drains, with some pits and drains located further to the east of the site.
5. A natural swale drain exists behind the proposed subject site, with the swale extending in a north-westerly direction from 16-18 Jordan Street through to 58-66 Sydney Street (Sydney Street Tyre and Battery). The swale drain appears to be up to several metres in depth but contains downstream occlusion and termination at Sydney Street. Localised ponding is likely to occur within the drain, adjacent to the proposed site.

Given the proposed shed location is shielded by the adjacent structures, flooding impacts will likely be limited to low-velocity hydrostatic pressures and smaller debris impact loads. Flood water parameters in this area have been explicitly provided by Muswellbrook Shire Council, with information obtained through the FRMS&P indicate broader flow characteristics such as areas of localised ponding and flood extents.

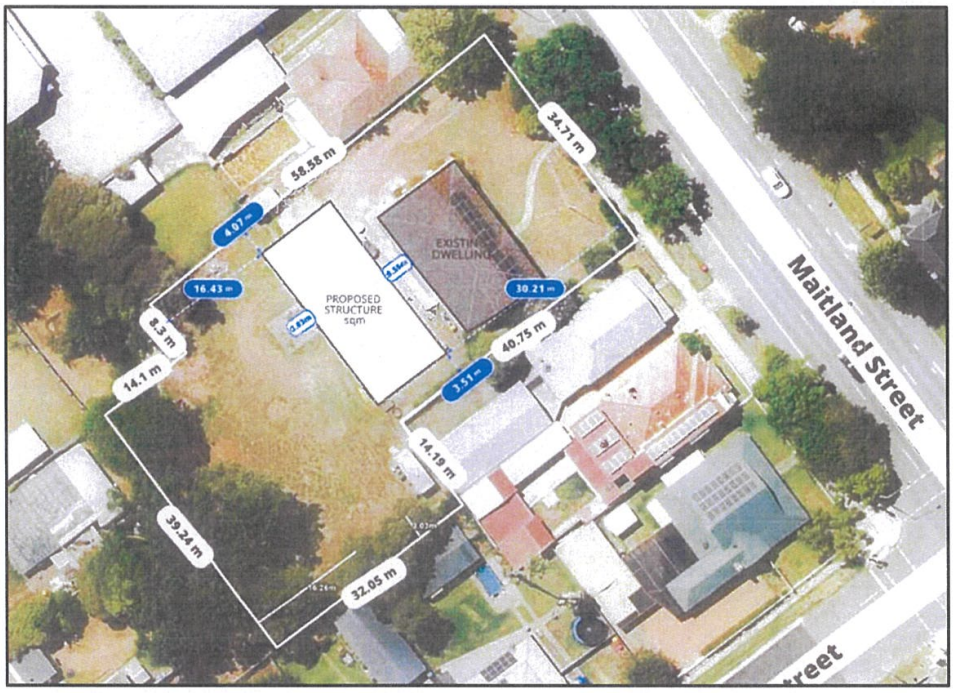


Figure 1.0 – Proposed Location of the Shed at 17-19 Maitland Street Muswellbrook.

Taking the Figure 2.0 into consideration and flood data provided by Muswellbrook Shire Council, the expected flood depth at the subject site is estimated at RL144.81 AHD that is the estimated depth of flooding during the 1% AEP could be up to 1.0m in depth across parts of the subject site. Such depths can have significant impacts.

Therefore, the following flood load cases have been adopted:

Flood Load Case LC1 (Location 4):

- Flood depth 440mm.
- Flood water velocity = 0.11m/s.
- Specific gravity of water = 1000kg/m3.

Flood Load Case LC2 (Location 7):

- Flood depth 980mm.
- Flood water velocity = 0.6m/s.
- Specific gravity of water = 1000kg/m3.

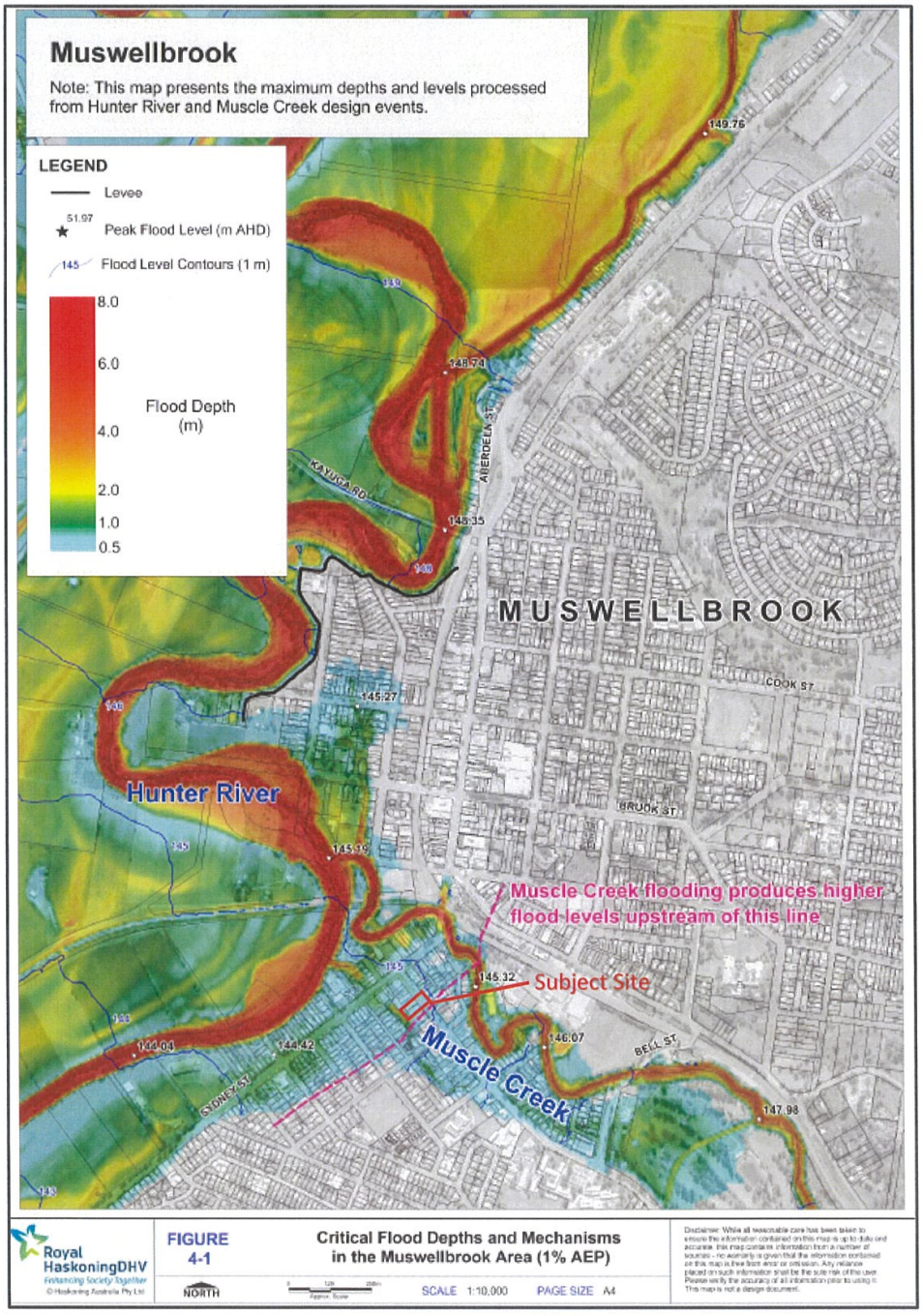


Figure 2.0 – Extract of 1% AEP Location of Levee & Area Subjected to Part Flooding"
(Extract from *"Muswellbrook Floodplain Risk Management Study and Plan"* dated April 2019 prepared by Royal Haskoning DHV)

A structural assessment on the proposed steelwork and slab has been undertaken in accordance with the above load cases. The assessment considered details for the proposed steelwork and foundations prepared by Ryan Chalmers, enclosed within Annexure B.

Taking this into consideration and given the proposed structure would be shielded by adjacent structure there is a likelihood the floodwater impact on the proposed shed will be limited to standard flood flows and light debris loads. In such an event, there is the potential the localised flood waters may inflict severe structural damage. Typically, damage may result in:

- Water damage & siltation ingress internally.
- Damage to external cladding. In some cases, this will need to be replaced.
- Collection of debris & impact damage associated with debris.
- Interruption of services particularly the potential for re-wiring.
- Frame distortion and deflection.

There is a high likelihood the structure could distort to a manner that would require parts of the structure to be replaced.

In addition to the above, the following parameters have been considered:

1. As the shed is permeable via spaces at the base of the external clad sheet and around the perimeter of the doors, water will build up internally within the shed. Therefore, the difference in water height between internal and external has been assumed to be 200mm maximum and hence loads have been assessed on this difference.

2. The effects of buoyancy are counteracted by the induction of water internally and the associated concrete slab. Hence buoyancy forces have also been assessed on the water height differential as defined within item 1.0.

Based upon the above parameters and assumptions made, RHMCE hereby confirm that the expected forces due to flooding on the proposed shed slab can be resisted and hence the structural integrity of the structure should be maintained albeit damage as listed above is considered likely, particularly if exposed to impact loads. Acceptance of the risks by the owners and the awareness of evacuation procedures should be sourced prior to construction. On assessment RHM Consulting Engineers would suggest the following:

a) The void space between the concrete slab and clad sheeting is left open. In the event the owner wishes to seal this space, two (2) openings approximately 200mm high by 800mm long should be installed in the walls approximately 200mm above FFL. This will allow water to enter the shed hence ensuring the water height differential does not exceed 200mm as assumed.

b) An additional row of wall girts (Topspan TS9612) be installed at approximately 500mm above FFL to the full perimeter of the shed, to allow for concentrated loads at the base of the wall sheeting.

c) A 300mm deep x 300mm wide edge thickening be installed around the perimeter of the shed slab. This beam should be reinforced with 3-11TM bottom. The slab thickness of 100mm should be maintained with slab reinforcement being SL82 Mesh Top. Bored concrete piers shall be installed beneath the column locations. Refer to drawings provided by Ryan Chalmers.

d) The shed is not occupied during a "flood warning" periods to include minor flood events.

It should be noted that if the owner wishes to install a fully sealed shed structure capable of resisting buoyancy forces, the self-weight of the shed foundation should be no less than 980kg per square metre, based on water displacement depth of 980mm. This is equivalent to 400mm thick concrete slab across the entire footprint. The cost and construction methodology for this is impractical and extremely costly.

As stated above, flooding and stream behaviour is variable and unpredictable and therefore any structure constructed near to a natural watercourse or within a floodplain comes with risks. These risks are well documented and may include:

- Water inundation into the dwelling thus affecting floor finishes and internal property.
- The deposit of silts and other debris to the dwelling and the surrounds.
- Minor structural damage particularly to surfaces exposed to the flood waters.
- Rising damp and water damage.
- Smells due to water and silt ingress.
- Damage and loss of properties.
- Personal distress resulting from flood damage and cleaning post flooding.
- An increase or lack of insurance with respect to flood coverage and thus insurance against damage.

Any damage caused by flooding tends to result in some financial loss and emotional distress and therefore given the proximity of the proposed development to the natural water course such effects need due considerations. In addition, we would suggest a "flood evacuation strategy" should be prepared that addresses the removal of people, property, and valuables from the property in the event of flooding. The strategy should include education and familiarisation with flood warning notices put out by various agencies during rain & flood events. Insurance policies and exclusion need to be reviewed to ensure the level of coverage meet your expectations.

From a structural integrity perspective, the proposed shed slab as detailed in Annexure A can withstand flood impact forces to include the water force and debris loads.

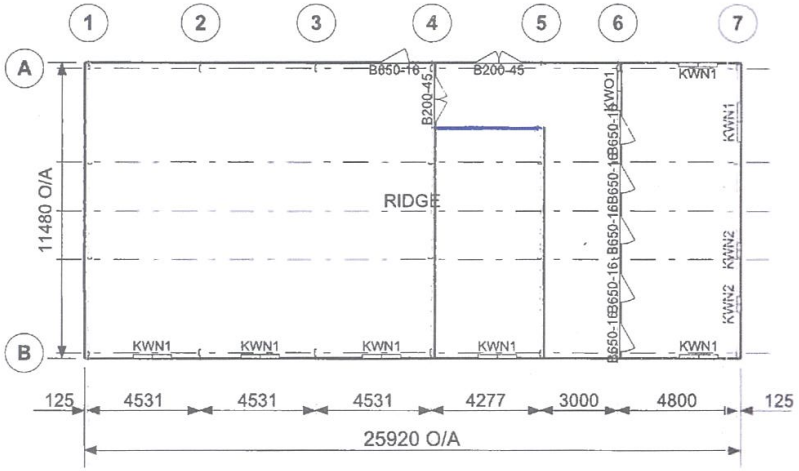
If you have any queries please do not hesitate to contact the undersigned.

Yours faithfully
On behalf of RHM Consulting Engineers

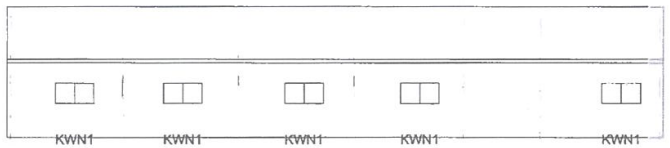
Justin Smart
Design Engineer
MIEAust

Brett Hails
MIEAust, CPEng, NPER
Director – Engineering

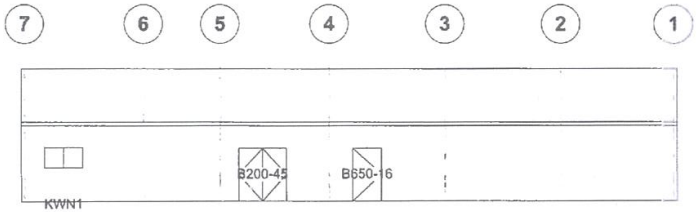
ANNEXURE A – DEVELOPMENT CONSENT SHED PLANS PROVIDED BY A1 PLANNING



GROUND FLOOR PLAN



ELEVATION GRID B



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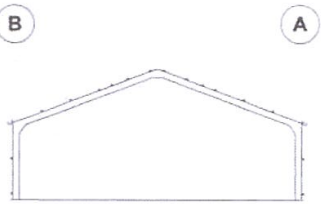
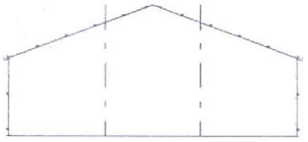


SECTION GRID 2, 3



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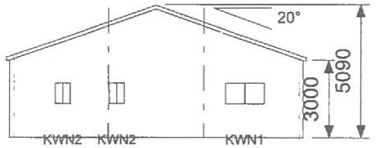

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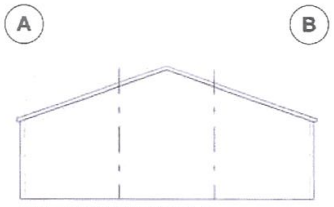


ELEVATION GRID 1

Cont. on page 2

CLADDING			
ITEM	PROFILE (min)	FINISH	COLOUR
ROOF	CUSTOM ORB 0.42 BMT	CB	SM
WALLS	TRIMDEK 0.35 BMT	CB	SM
CORNERS	-	CB	SM
BARGE	-	CB	SM
GUTTER	SHEERLINE	CB	SM
DOWNPIPE	100x75	CB	SM

0.35bmt=0.40tct; 0.42bmt=0.47tct; 0.48bmt=0.53tct

ACCESSORY SCHEDULE & LEGEND		
QTY	MARK	DESCRIPTION
6	B650-16	Lamec Door & Frame Kit, 650/37W, Std. 2040 x 1100 C/Bond
2	B200-45	Lamec Door & Frame Kit, 650/37D, double 2040 x 2/920 C/Bond (BG)
1	KWO1	900x1500 Window Opening (BG). Window must be fitted
7	KWN1	AMI - Reg A & B, 790x1505 CLR + FG Fly Screen, Window Kit (BG)
2	KWN2	AMI - Reg A & B, 790x589 CLR P/Vent + FG Fly Screen, Window Kit (BG)

ARCHITECTURAL DRAWING ONLY, NOT FOR CONSTRUCTION USE

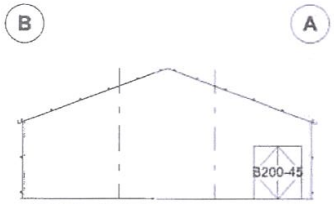
CLIENT
Wanaruah Local Aboriginal Land Council

SITE
19 MAITLAND STREET,
MUSWELLBROOK NSW 2333

BUILDING
BIG G
11480 SPAN x 3000 EAVE x 25920 LONG

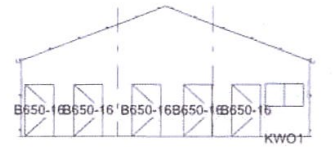
TITLE
GENERAL ARRANGEMENT

SCALE	DRAWING NUMBER	REV	PAGE
A4 SHEET 1:250	MUBRK1-17317	A	1/2



SECTION GRID 4

Cont. on page 1



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RANBUILD

SCALE	REV
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DRAWING NUMBER	PAGE
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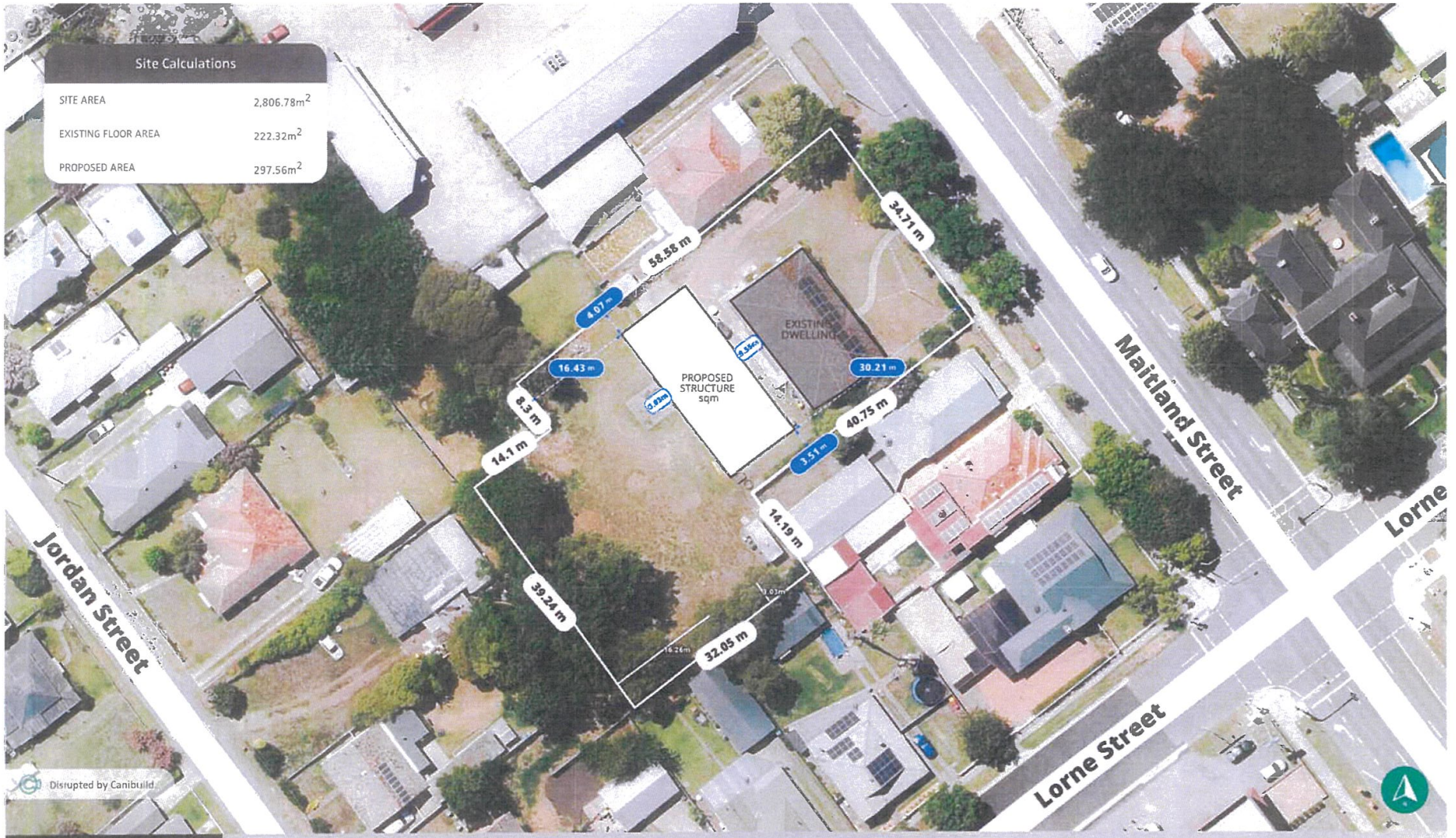

Client Name | Client Email | Client Phone | Signature | Client Name | Client Email | Client Phone | Signature

Generated by Neil Brown
info@huntersheds.com
Phone +61457771982

Property Details
17 Maitland St, Muswellbrook, NSW 2333, Australia
Lot/DP: 11/-/DP552780

Sheet Name	Sheet no.	Lic no.	Job no.
Site Plan	1	352687C	

Design
Wanaruah Local Aboriginal Land Council

Scale
1:500@A3

1st version date:	Current version date:	Version #
07/10/2022	03/04/2023	4

Client Name | Client Email | Client Phone | Signature | Client Name | Client Email | Client Phone | Signature

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ALL DIMENSIONS ARE IN METRES. DO NOT SCALE FROM PLANS.

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Phone +61457771982

Property Details

17 Maitland St, Muswellbrook, NSW 2333, Australia
Lot/DP: 11/-/DP552780

Sheet Name	Sheet no.	Lic no.	Job no.
Site Plan	2	352687C	

Design: Wanaruah Local Aboriginal Land Council

Scale: 1:200 @A3

1st version date:	Current version date:	Version #
07/10/2022	03/04/2023	4

ANNEXURE B – STRUCTURAL DRAWINGS BY RYAN CHALMERS

GENERAL

G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE WORKS. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND ENGINEER FOR DECISION BEFORE PROCEEDING WITH THE WORK.

G2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING OFF THE DRAWING.

G3 ALL LEVELS AND SETTING OUT DIMENSIONS SHOWN ON THE DRAWING SHALL BE VERIFIED BY THE BUILDER.

G4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVER-STRESSED. MASONRY WALLS SHALL BE ADEQUATELY BRACED AGAINST WIND FORCES.

G5 ALL EXCAVATION, SHORING EXCAVATION AND STABILITY OF ADJACENT STRUCTURES SHALL BE THE RESPONSIBILITY OF THE BUILDER.

G6 THE STRUCTURAL WORKS SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE RELEVANT LIVE LOADS IN ACCORDANCE WITH CURRENT LOADING CODE AS1170 UNLESS OTHERWISE NOTED.

G7 UNLESS DETAILED OTHERWISE, NO WALLS ARE DESIGNED AS RETAINING STRUCTURES.

G8 STRUCTURAL ENGINEERING DETAILS SUBJECT TO MINE SUBSIDENCE BOARD REVIEW, APPROVAL AND OR ADDITIONAL REQUIREMENTS.

CONCRETE

C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT CONCRETE STRUCTURES CODE AS3600.

C2 CONCRETE QUALITY – AS3600

ELEMENT	SLUMP MM	MAX AGG SIZE CEMENT MM	TYPE	F'c MPa
FOOTING	80	20	A	20
SLAB	80	20	A	25
BEAMS	80	20	A	25

C3 CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE IN ACCORDANCE WITH CURRENT CONCRETE STRUCTURES CODE AS3600 UNLESS OTHERWISE SHOWN. PROVISION OF COVER IS THE RESPONSIBILITY OF THE BUILDER.

C4 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

C5 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER. ALL CONSTRUCTION JOINTS SHALL BE SCABBLED OVER THE WHOLE FACE AND ANY UNSOUND MATERIAL REMOVED.

C6 NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER. REINFORCING SHALL NOT BE CUT, BUT SHALL BE DISPLACED AT HOLES.

C7 ALL CONCRETE SHALL BE MECHANICALLY VIBRATED AND VIBRATOR SHALL NOT BE USED TO SPREAD CONCRETE.

C8 FORMWORK TO SUSPENDED SLABS AND BEAMS SHALL REMAIN IN BRACE FOR A FULL 21 DAYS, CANTILEVERS BEING BACK PROPPED FOR A FULL 28 DAYS.
IF THERE IS LESS THAN 21 DAYS BETWEEN PLACING OF CONCRETE FOR SUCCESSIVE SLABS, PROPS SHALL BE PLACED DIRECTLY UNDER PROPS OVER SO THAT TWO SLABS ARE CARRYING THE LOAD. DO NOT PLACE OR BUILD BRICKWORK OFF SLABS UNTIL FORMWORK IS REMOVED.

C9 CONDUITS, PIPES, ETC MUST NOT BE PLACED IN CONCRETE COVER. PLACE IN MIDDLE THIRD OF EDGE AND INTERNAL BEAMS.

C10 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY. IT IS NOT SHOWN IN TRUE PROJECTION.

C11 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

C12 ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON PLASTIC OR MS CHAIRS PLASTIC TIPPED OR GALVANISED GENERALLY NOT GREATER THAN 750 MM CENTRES BOTH WAYS. BARS TO BE TIED AT ALTERNATE INTERSECTIONS.

C13 REINFORCEMENT SYMBOLS:
- Y = TEMPCORE TWISTED DEFORMED BAR IN ACCORDANCE WITH AS1302
- N = REPLACEMENT FOR Y GRADE BAR
- S = STRUCTURAL GRADE DEFORMED BAR IN ACCORDANCE WITH AS1302
- R = STRUCTURAL GRADE ROUND BAR IN ACCORDANCE WITH AS1302
- F = WELDED WIRE FABRIC IN ACCORDANCE WITH AS1302
- SL = SQUARE LAP FABRIC (REPLACEMENT FOR F GRADE FABRIC
- RL = RECTANGULAR LAP FABRIC

CONCRETE (CONTINUED)

C14 UNLESS NOTED OTHERWISE ALL TOP CROSSROADS SHALL BE N12 @ 400MM C/S, ALL BOTTOM CROSSROADS SHALL BE N12 @ 300MM C/S.

C15 SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN AND SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.
- FABRIC – ONE FULL MESH PLUS 25MM BOTH WAYS UNLESS NOTED OTHERWISE.
- BARS – 50 BAR DIAMETERS UNLESS NOTED OTHERWISE.

C16 NO CONCRETE TO BE POURED DURING TEMPERATURES ABOVE 32°C DEG.

STRUCTURAL STEEL

S1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT STEEL STRUCTURES CODE AS4100.

S2 CONNECTIONS SHALL BE PROVIDED TO CARRY THE REACTIONS SHOWN UNLESS OTHERWISE DETAILED.

S3 TWO COPIES OF WORKSHOP DRAWINGS SHALL BE SUBMITTED FOR EXAMINATION AND APPROVAL BEFORE FABRICATION.

S4 WELDS SHALL BE 6MM CONTINUOUS FILLET, ALL BOLTS 16MM DIAMETER, AND ALL GUSSET PLATES 10MM THICK UNLESS OTHERWISE NOTED.

S5 CONCRETE ENCASED STEELWORK SHALL BE WRAPPED WITH 4MM WIRE AT 100MM CENTRES AND SHALL HAVE A MINIMUM 50MM COVER OF CONCRETE UNLESS NOTED OTHERWISE.

S6 UNLESS OTHERWISE NOTED OR SPECIFIED, ALL STEELWORK NOT ENCASED IN CONCRETE SHALL BE GIVEN ONE COAT OF RED OXIDE ZINC CHROMATE PRIMER PRIOR TO DISPATCH.

S7 ALL HIGH TENSILE BOLTS SHALL BE MANUFACTURED AND TENSIONED IN COMPLIANCE WITH CURRENT AS CODE FOR HIGH TENSILE BOLTS.

FOUNDATIONS

F1 THE FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING INTENSITY OF 350 KPA. FOUNDATION MATERIAL SHALL BE APPROVED FOR THIS PRESSURE BEFORE PLACING CONCRETE.

F2 FOOTINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF CURRENT AS2870.

F3 FILL TO BE PLACED IN LAYERS OF 200MM USING MULTIPLE PASSES OF AN EXCAVATOR OR SIMILAR CONSOLIDATION DEVICE IN ACCORDANCE WITH CURRENT AS2870.

F4 IF THE SITE HAS BEEN SUBJECT TO A GEOTECHNICAL INVESTIGATION, THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER SHALL BE COMPLIED WITH IN FULL.

F5 FOUNDATION DEPTH ARE MINIMUM REQUIREMENTS ONLY AND SHOULD BE INCREASED TO PROVIDE 100MM INTO FIRM NATURAL MATERIAL. WHERE SHALE OR ROCK STRATA IN ENCOUNTERED LESS THAN 600MM BELOW FINISHED GROUND LEVEL, PROVIDE PIERS OR FOOTINGS TO SHALE OR ROCK STRATA.

F6 WHERE REQUIRED, PIERING TO BE:
- 400MM DIAMETER IN CONTROLLED FILL AND CLAY @ 1800MM C/S
- 300MM DIAMETER TO UNDERLYING ROCK/SHALE @ 1800MM C/S
- PIER REINFORCEMENT AS DIRECTED BY ENGINEER.

A3 ORIGINAL SIZE

REVISION

ISSUE	DATE	DESCRIPTION
A	28/09/23	ORIGINAL ISSUE

PROJECT

PROPOSED BUILDING
19 MAITLAND STREET,
MUSWELLBROOK, NSW, 2333

FOR

WANARUAH LOCAL ABORIGINAL LAND COUNCIL

STRUCTURAL ENGINEERING DETAILS

DO NOT SCALE DRAWING

RYAN CHALMERS

NER 3826369
NSW BPB 3431

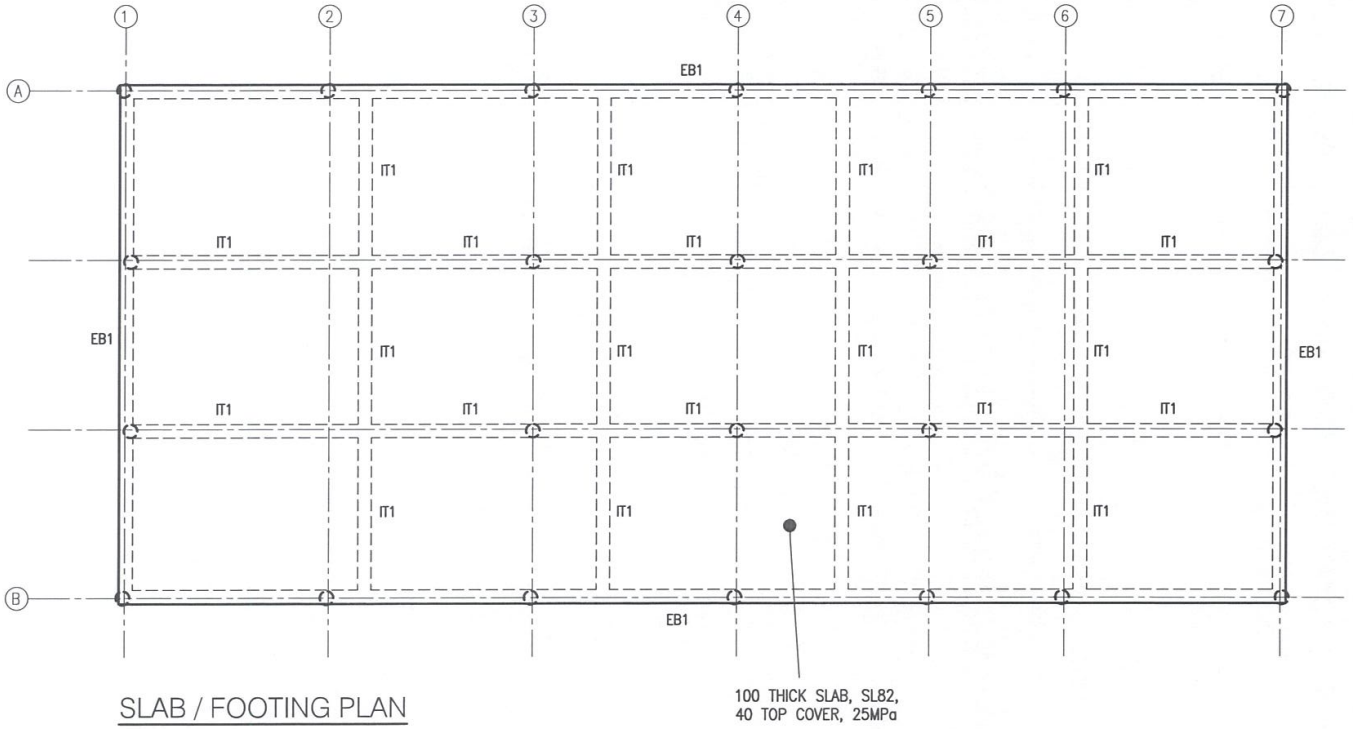
MOB. 0414704777

r_chalmers@hotmail.com

ADDITIONAL CONTACT DETAILS

MJM CPENG; NPER; RPEQ; ;BPB RBP; FIEAUST
0414355185

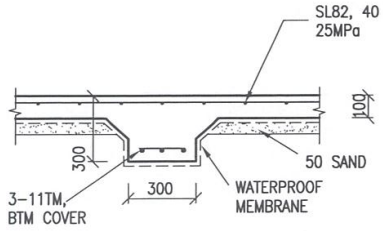
DESIGNED	DATE	
R.C	28.09.23	
DRAWN	**SCALE**	**SHEET NO.**
PC	AS SHOWN	1 OF 7



SLAB / FOOTING PLAN

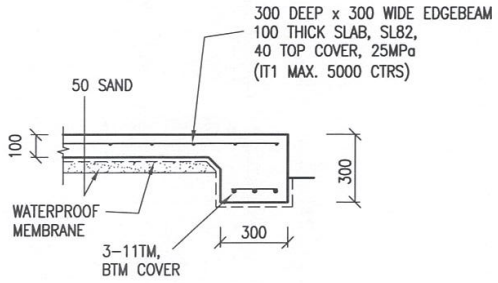
SCALE 1:100 @ A3

○ = 300ø PIER x 1200 DEEP BORED CONCRETE PIERS
UNDER COLUMNS AT LOCATIONS SHOWN
4N12 BARS IN CAGE R10 LIGS @ 300 CTRS



IT1 DETAIL

SCALE 1:20



EB1 DETAIL

SCALE 1:20

A3 ORIGINAL SIZE

REVISION		
ISSUE	DATE	DESCRIPTION
A	28/09/23	ORIGINAL ISSUE

PROJECT

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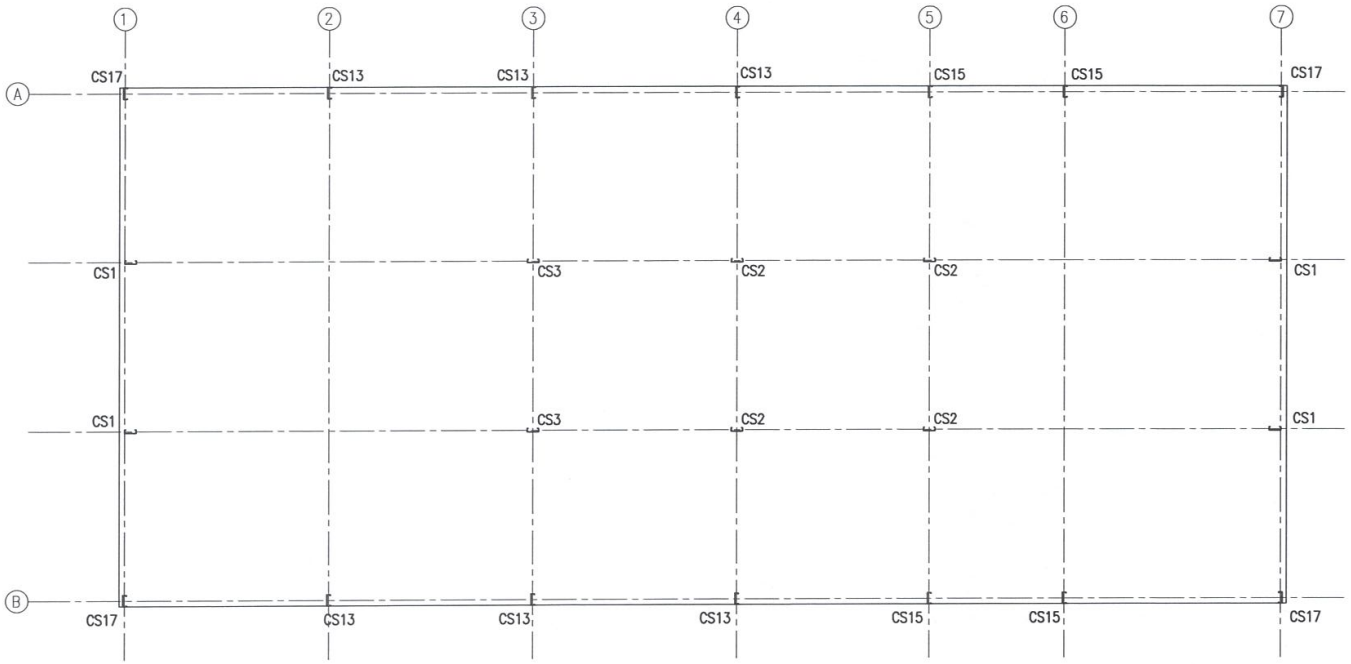
DESIGNED	DATE	
R.C	28.09.23	
DRAWN	**SCALE**	**SHEET NO.**
PC	AS SHOWN	2 OF 7



COLUMN LAYOUT

SCALE 1:100 @ A3

MEMBER SCHEDULE	
CS1	C250–24
CS2	C250–24
CS3	C250–24

A3 ORIGINAL SIZE

REVISION		
ISSUE	DATE	DESCRIPTION
A	28/09/23	ORIGINAL ISSUE

PROJECT

PROPOSED BUILDING
19 MAITLAND STREET,
MUSWELLBROOK, NSW, 2333

FOR

WANARUAH LOCAL ABORIGINAL LAND COUNCIL

STRUCTURAL ENGINEERING DETAILS

DO NOT SCALE DRAWING

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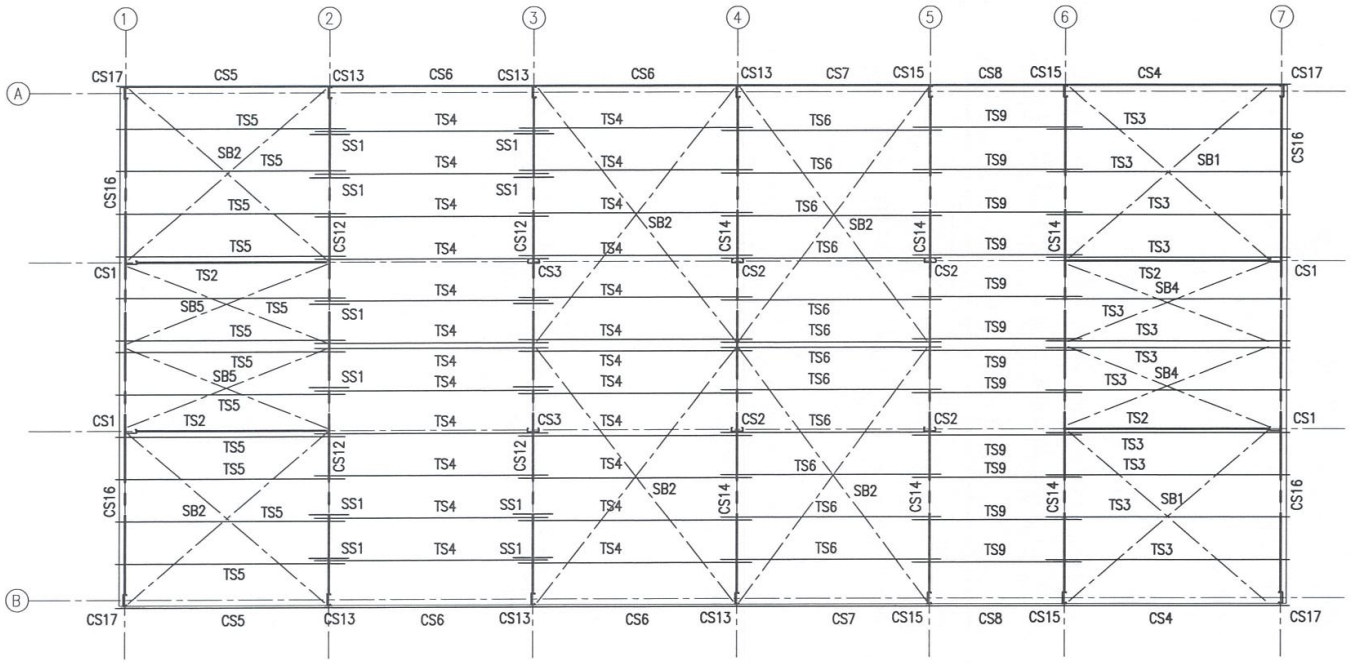
0414355185

DESIGNED	DATE	
R.C	28.09.23	
DRAWN	**SCALE**	**SHEET NO.**
PC	AS SHOWN	3 OF 7



ROOF FRAMING PLAN

SCALE 1:100 @ A3

MEMBER SCHEDULE	
CS1	C250-24
CS2	C250-24
CS3	C250-24
CS4-8	C150-10 HEADER AT EAVES
CS12-17	C250-24
TS2-10	96x1.2 TOP HATS
SB1-4	30x1.0 GAL STRAP BRACING FIXED TO EVERY PURLIN

A3 ORIGINAL SIZE

REVISION

ISSUE	DATE	DESCRIPTION
A	28/09/23	ORIGINAL ISSUE

PROJECT

PROPOSED BUILDING
19 MAITLAND STREET,
MUSWELLBROOK, NSW, 2333

FOR

WANARUAH LOCAL ABORIGINAL LAND COUNCIL

STRUCTURAL ENGINEERING DETAILS

DO NOT SCALE DRAWING

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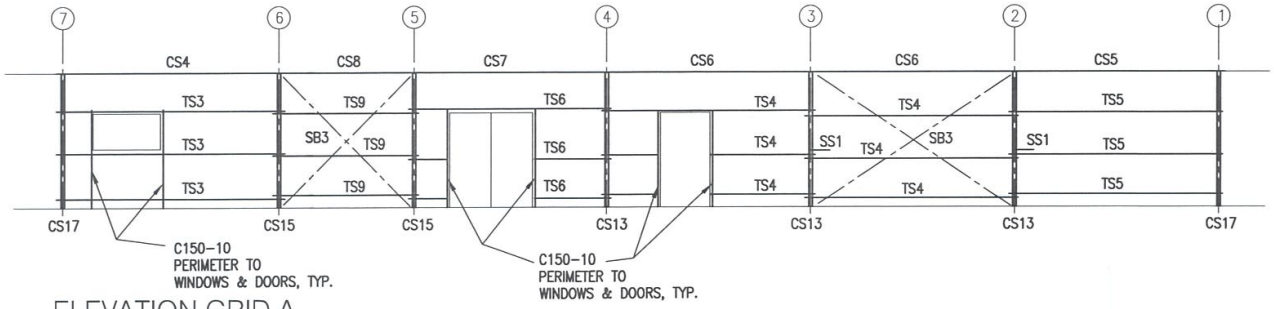
ADDITIONAL CONTACT DETAILS

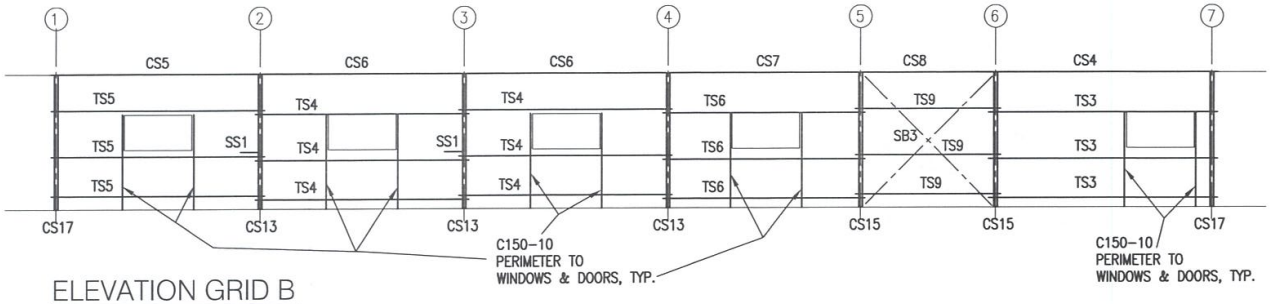
MJM CPENG; NPER; RPEQ; ;BPB RBP; FIEAUST
0414355185

DESIGNED	DATE	
R.C	28.09.23	
DRAWN	**SCALE**	**SHEET NO.**
PC	AS SHOWN	4 OF 7



ELEVATION GRID A

SCALE 1:100 @ A3



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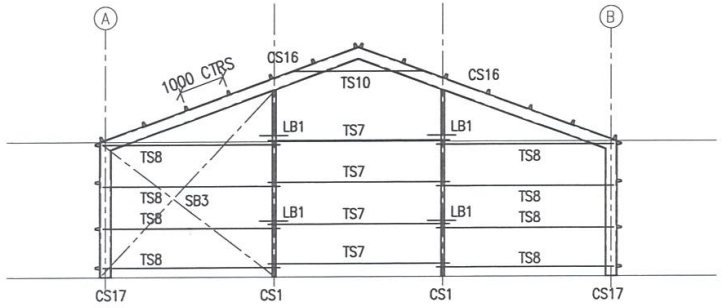

ELEVATION GRID 1

SCALE 1:100 @ A3

A3 ORIGINAL SIZE

REVISION		
ISSUE	DATE	DESCRIPTION
A	28/09/23	ORIGINAL ISSUE

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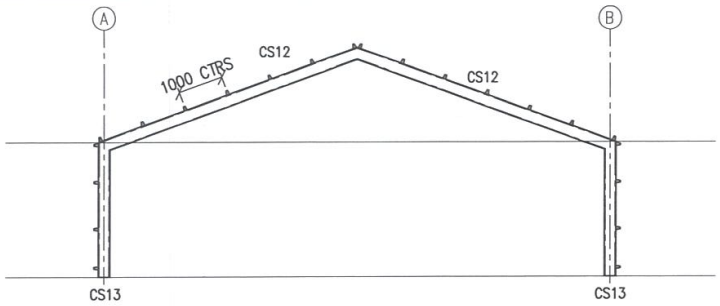
ADDITIONAL CONTACT DETAILS

MJM CPENG; NPER; RPEQ; ;BPB RBP; FIEAUST
0414355185

DESIGNED	DATE	
R.C	28.09.23	
DRAWN	**SCALE**	**SHEET NO.**
PC	AS SHOWN	5 OF 7



GRID SECTION 2 & 3

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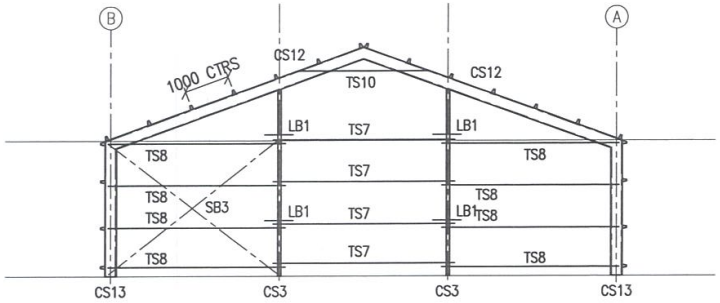

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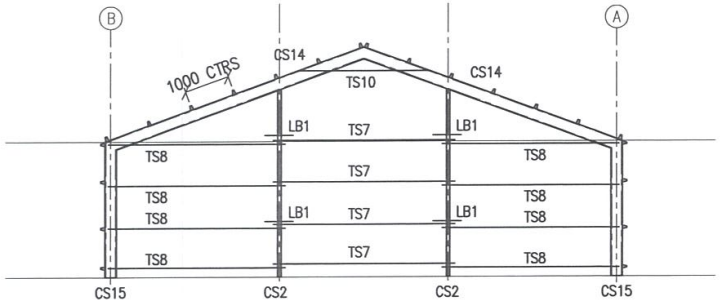

GRID SECTION 5

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A3 ORIGINAL SIZE

REVISION		
ISSUE	DATE	DESCRIPTION
A	28/09/23	ORIGINAL ISSUE

PROJECT

PROPOSED BUILDING
19 MAITLAND STREET,
MUSWELLBROOK, NSW, 2333

FOR

WANARUAH LOCAL ABORIGINAL LAND COUNCIL

STRUCTURAL ENGINEERING DETAILS

DO NOT SCALE DRAWING

RYAN CHALMERS

NER 3826369
NSW BPB 3431

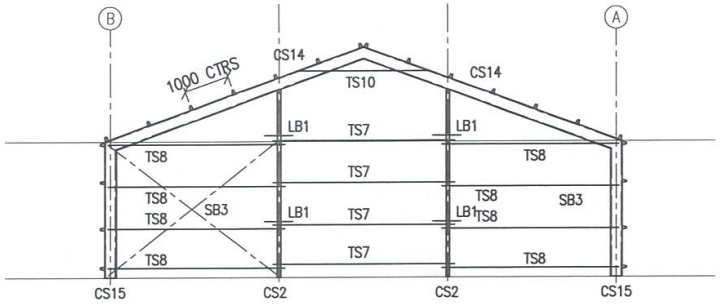
MOB. 0414704777

r_chalmers@hotmail.com

ADDITIONAL CONTACT DETAILS

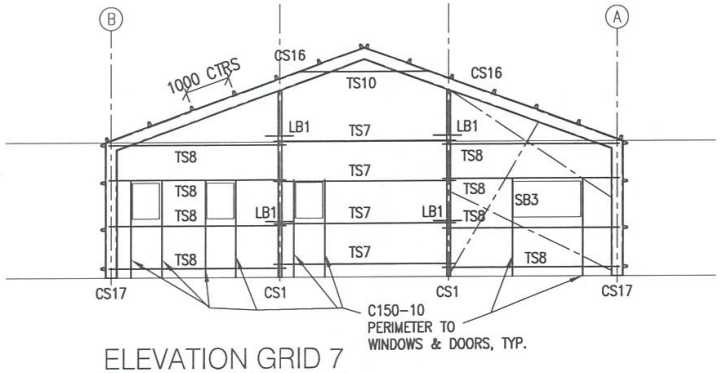
MJM CPENG; NPER; RPEQ; ;BPB RBP; FIEAUST
0414355185

DESIGNED	DATE	
R.C	28.09.23	
DRAWN	**SCALE**	**SHEET NO.**
PC	AS SHOWN	6 OF 7



ELEVATION GRID 6

SCALE 1:100 @ A3



ELEVATION GRID 7

SCALE 1:100 @ A3

A3 ORIGINAL SIZE

REVISION		
ISSUE	DATE	DESCRIPTION
A	28/09/23	ORIGINAL ISSUE

PROJECT

PROPOSED BUILDING
19 MAITLAND STREET,
MUSWELLBROOK, NSW, 2333

FOR
WANARUAH LOCAL ABORIGINAL LAND COUNCIL

STRUCTURAL ENGINEERING DETAILS

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DESIGNED	DATE	
R.C	28.09.23	
DRAWN	**SCALE**	**SHEET NO.**
PC	AS SHOWN	7 OF 7

10.1.2. DA 2023-56 Geotechnical Investigations (lower) - Muswellbrook Pumped Hydro

Attachments:	1. Attachment A - s4.15 Assessment Report [**10.1.2.1** - 18 pages] 2. Attachment B - Recommended conditions of consent [**10.1.2.2** - 5 pages] 3. Attachment C - Application Amendments [**10.1.2.3** - 64 pages] 4. Attachment D - Redacted Submissions [**10.1.2.4** - 7 pages] 5. Attachment E - Response to Submissions [**10.1.2.5** - 8 pages]
Responsible Officer:	Sharon Pope - Director - Planning & Environment
Author:	Tanya Alsleben (Project Planner)
Community Plan Issue:	*Not Applicable*
Community Plan Goal:	*Not Applicable*
Community Plan Strategy:	*Not Applicable*

PURPOSE

The report has been prepared to assist Council in the determination of DA 2023-56, involving geotechnical investigations and associated land clearing related to investigatory works to inform the design and feasibility of the possible future Muswellbrook pumped hydro project.

The site that is the subject of this development application encompasses land that is part of the former Muswellbrook Coal Open cut mine. The application has been reported to Council for determination due to limitations in the delegations issued to Council Officers in relation to mining and energy generation projects.

OFFICER'S RECOMMENDATION

Council grants development consent to DA 2023-56 for the Geotechnical Investigations and associated works at Lot 1 DP 1004305, Lot 59 DP 752484, Lot 60 DP 752484, Lot 61 DP 1113302, Lot 62 DP 752484 & Lot 44 DP 1112699, subject to the recommended conditions of consent included in Attachment B.

Moved: _____ Seconded: _____

DESCRIPTION OF PROPOSED DEVELOPMENT

This development application seeks consent to carry out geotechnical investigations within the former Muswellbrook Coal Mine site to inform the design of a potential pumped hydro energy storage scheme on the land.

The proposed geotechnical works would be carried out across a site that incorporates eight lots, the majority of which are in the ownership of Idemitsu Australia. The geotechnical investigation area aligns with the investigation area for the lower reservoir for the pumped hydro project. A separate application has been lodged for geotechnical investigations on

land that comprises the upper reservoir.

Works proposed under this application would involve:

- The establishment of access tracks within the site to drilling locations.
- Earthworks, clearing, and site establishment works at bore hole and test pit investigation locations.
- The drilling of two boreholes between 200m–300m below surface level. The section 4.15 Assessment in attachment A includes additional commentary around the work involved in the borehole pit drilling and investigation.
- The excavation of four test pits up to 5m deep and 4m in length.
- Removal of investigation equipment and site restoration at the completion of investigatory works.

The work is proposed to be completed within a 12-week period.

The applicant has sought permission for the work to be done over a 24-hour, 7-day-a-week period as the boring equipment does not perform well if required to stop and start.

Vehicle access to the site would be via the New England Highway, Sandy Creek Road, and Limestone Road. A Traffic Impact Assessment has been submitted in relation to the project. The project would involve modest traffic movements limited to the duration of the work.

The image below identifies the test pit and borehole location at the site. Note, the test pits and boreholes identified in green are no longer part of the proposal. These additional investigation areas were initially proposed as part of the project, however, have been removed from the scope of work by an amendment to the proposed development.

ASSESSMENT SUMMARY

Several technical documents were submitted as part of the proposed development. Given the volume of accompanying information, the entirety of these accompanying reports have not been included as attachments to this report. A summary is provided below. Copies of any of the accompanying reports referenced can be circulated to Councillors under separate cover if requested.

- Statement of Environmental Effects – document details the scope of the proposed development and includes an assessment of the application against the relevant planning assessment criteria.
- Biodiversity Assessment – prepared by ecological consultants examining vegetation and ecosystem disturbance associated with the proposed works against legislated criteria. The report concludes that the proposed development may proceed without the requirement for further examination of ecological impacts through a Biodiversity Development Assessment Report.
- Aboriginal Heritage Assessment – The report investigated potential cultural heritage impacts of the geotechnical works program in the lower reservoir. The report concludes that the proposed development will have a low risk of harming Aboriginal objects or places, and outlines recommendations to minimise any potential impact to Aboriginal Heritage.
- Noise and Vibration Assessment – prepared by an acoustic consultant, it assessed the noise and vibration impacts for the proposed works. The report concluded that predicted noise levels will stay below the acceptable noise threshold (below 76dB(A)) and that the project may be supported from a noise impact perspective.
- Traffic Impact Assessment – prepared by traffic engineering consultants, this report reviewed the volume of traffic related to the proposed development and its potential impact on Council's local road network. The overall volume of traffic related to this, and the upper reservoir project, is anticipated to involve 64 heavy vehicle movements per day during both mobilisation and demobilisation, and 8 heavy vehicle movements and 16 light vehicle movements per day for the duration of the proposed works. Having considered the short duration of the works, the extra traffic was viewed to have a minimal impact on the road network.

Council Officers have assessed the proposal under Section 4.15 of the Environmental Planning and Assessment Act 1979 (see Attachment A). Key issues and findings are:

- The land subject to this development is zoned a mixture of RU1 Primary Production and C3 Environmental Management under the provisions of the Muswellbrook LEP 2009 (MLEP 2009). The proposed earthworks are a type of activity permissible with consent under this Environmental Planning Instrument and compatible with the relevant land use zone provisions.
- The proposed development is integrated development pursuant to the provisions of the Coal Mine Subsidence Compensation Act 2017 and the Water Management Act 1993. The proposed development was referred to NSW Subsidence Advisory and the Department of Planning and Environment – Water for their assessment as Approval Authorities for the development. General Terms of Approval were issued by each of these Approval Authorities in relation to the proposal, and their requirements have been incorporated into the recommended conditions of consent.
- The proposed development was referred to Council officers. Feedback provided from these internal referrals has informed the assessment of the application and recommended conditions of consent.
- The proposed development is compliant with the relevant provisions of the Muswellbrook Development Control Plan 2009 (MDCP 2009). A review of the proposed development against relevant DCP provisions is included in the attached assessment report.
- The proposed development is compatible with the provisions of relevant State Environmental Planning Policies.
- A Noise Impact Assessment prepared for the works concluded that the works may be carried out with unrestricted operating hours without generating noise emissions that would have a significant impact on adjoining residential receivers.

- In 2020 Council granted development consent to geotechnical work related to the pumped hydro project (DA 2020/40). That development application proposed site access via Limestone Road, and involved site investigation works. Council has not received any complaints related to the impact of works associated with DA 2020/40.

CONSULTATION

The Application was notified to adjoining owners from 16/06/2023 – 07/07/2023 (21-day notification period). A notice was also placed on Council's website and Facebook page at the commencement of the notification period. Three (3) submissions were received during the notification period. Redacted copies of the submissions have been included as attachment D. Matters raised by the submissions have also been reviewed and commented on in the Section 4.15 Assessment.

Matters raised by the submissions primarily relate to concerns about the detrimental impact to the environment, natural habitats, traffic impacts, and the management of waste. These matters have been considered through the assessment of the development application and were not considered to warrant refusal of the proposed development.

OPTIONS

Council may:

A. Approve the proposed development subject to the recommended conditions of consent.
B. Approve the proposed development subject to amended conditions of consent.
C. Refuse the proposed development and, in doing so, provide reasons for refusal.

CONCLUSION

DA 2023-56 has been reported for determination to Council due to the scale of the proposed development, the number of submissions received, and that the proposed activity is related to a future energy generating development. The proposed development was assessed against the provisions of Section 4.15 of the Environmental Planning and Assessment Act 1979.

Council Officers recommend that the development be approved subject to the recommended conditions outlined in Attachment B.

LEGAL IMPLICATIONS

Where the applicant is dissatisfied with the determination of the development application, they have an opportunity, under the provisions of the Environmental Planning and Assessment Act 1979, to appeal that determination at the Land and Environment Court

DEVELOPMENT ASSESSMENT REPORT

Attached: Site Plan

REPORT TO: COUNCIL

ADDRESS:	Lot 1 DP 1004305, Lot 59 DP 752484, Lot 60 DP 752484, Lot 61 DP 1113302, Lot 62 DP 752484, Lot 44 DP 1112699, Lot 1 DP 184481, Lot 100 DP 666041 Limestone Road MUSWELLBROOK, 374 Sandy Creek Road MCCULLYS GAP
APPLICATION No:	2023/56
PROPOSAL:	Geotechnical Investigations & Clearing of Native Vegetation
OWNER:	Muswellbrook Coal Company Pty Ltd
APPLICANT:	Mr S Galway Level 24 200 George Street SYDNEY NSW 2000
AUTHOR:	Tanya Alsleben
DATE LODGED:	31/05/2023
DATE OF REPORT:	14/02/2024

1. SITE, LOCALITY AND DESCRIPTION

The subject site is located to the north of the former Muswellbrook Coal Mine site. The lots are zoned as RU1 Primary Production and C3 Environmental Management. Access to the site is from Limestone Road, an unsealed dirt road that comes off Sandy Creek Road. The total area of the site is approximately 250ha and is comprised of 7 lots. Parts of the subject site have previously been disturbed by mining activities carried out on the land, while land in the northern part of the site is in a more natural state.

The lots that are part of the subject site are referenced below:

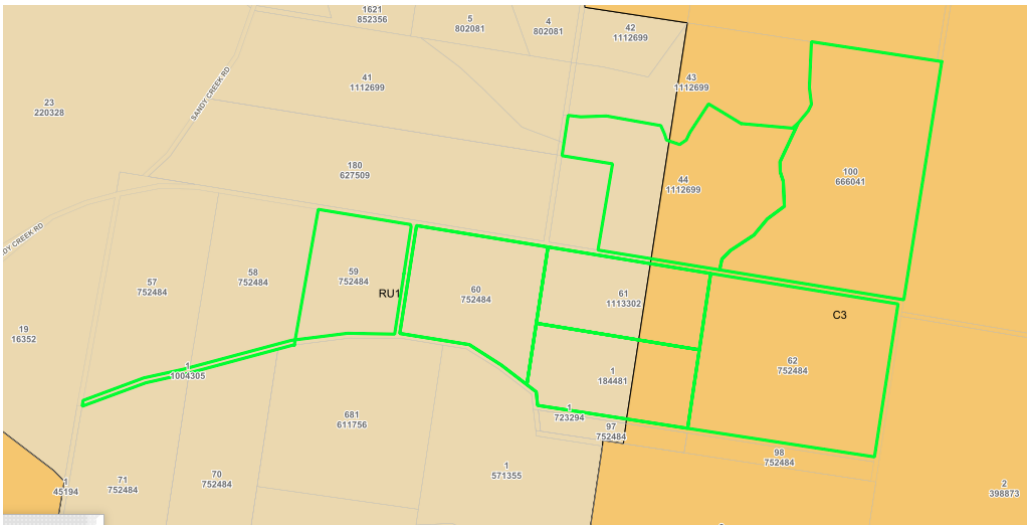
1. Lot 1 DP 1004305
2. Lot 59 DP 752484
3. Lot 60 DP 752484
4. Lot 61 DP 1113302
5. Lot 62 DP 752484
6. Lot 44 DP 1112699
7. Lot 1 DP 184481
8. Lot 100 DP 666041

The entirety of the subject site is identified in the image below.

Figure 1. – Site Aerial Image (Source: Spectrum)

The lots subject to the application fall within the RU1 Primary Production and C3 Environmental Management Zone.

Figure 2. – Muswellbrook LEP Land Use Zone (Council Mapping Software).



Flood Prone Land	YES ☐ NO ☒
Bushfire Prone Land	YES ☒ NO ☐
Terrestrial Vegetation	YES ☒ NO ☐
Heritage Conservation Item	YES ☐ NO ☒
Heritage Conservation Zone	YES ☐ NO ☒
Contaminated Land	YES ☒ NO ☐
Mine Subsidence	YES ☒ NO ☐
Classified Road Frontage	YES ☐ NO ☒
Council Infrastructure within Site	YES ☐ NO ☒
Other	YES ☐ NO ☐

2. DESCRIPTION OF PROPOSAL

This application seeks consent to carry out geotechnical investigations within the former Muswellbrook Coal Mine site at Bells Mountain, Muswellbrook to inform a feasibility study for a potential pumped hydro energy storage scheme on the land.

The geotechnical investigations are likely to take up to three months to complete, subject to weather and drilling progress. There are two types of investigation proposed – boreholes and test pits. Both require clearing and creation of a level pad.

The scope of the proposal and the location/number of boreholes and test pits proposed was amended by the applicant through the assessment process. The amendment reduced the number of test pits and updated proposed locations.

The amended proposal involves:

- Two borehole pits – as described later in the works description, a borehole involves drilling between 200m – 300m below surface level
- Four test pits – test pits involve excavations up to 5m deep and 4m in length with associated disturbance.

The image below illustrates the boreholes and test pits currently proposed (the green test pits and boreholes have been removed from the project).

A summary of the full scope of associated works take from the Statement of Environmental Effects has been included below.

1. **Creation of access tracks**
   - Augmentation and improvement of existing access tracks to facilitate safe site access.
   - Creation of new access tracks and clearing of land to allow this.
   - Ongoing Maintenance of the access tracks

2. **Establishment of Laydown areas**
   - Creation of a level laydown area with a maximum pad size of 25m by 25m for each borehole. This equates to a total of 1250m^2 = 0.125ha of vegetation clearing.
   - Creation of a level laydown area with a maximum pad size of 10m by 10m for each test pit. This equates to a total of 700m^2 = 0.07ha of vegetation clearing.

3. **Borehole Creation, Use and Decommissioning**
   - Borehole creation using a drilling rig, reaching depths of around 200m – 300m below ground surface
   - Excavating up to seven test pits using a track mounted excavator digging pits up to 5 m deep, 1 m wide and 4 m long. Test pits are backfilled immediately after reaching target depth and geotechnical logging and sampling is completed
   - Boreholes would be decommissioned within 28 days of completing all drilling, testing, and imaging. This would involve either the Installation of fully grouted vibrating wire piezometers and data logger or backfilling with full grout.

4. **Site rehabilitation works, including:**
   - Removing all equipment and environmental controls
   - Undertaking maintenance works including erosion control of temporary access tracks
   - Reinstating areas where a cut/fill bench was created
   - Re-seeding access track areas which are not required for future site access

5. **Test Pits**
   Four test pits would be excavated using a track mounted excavator. The test pits would be excavated up to 5 m deep and 4 m in length. A geotechnical engineer would log the soils and rock encountered, take photographs, and collect soil samples for laboratory testing.

   Each test pit could take up to two hours to complete. The work area will be delineated with flagging tape. The test pits would be backfilled with excavated spoil upon completion of logging and photography.

6. **Geophysical Survey Work**
   Geophysical survey using seismic refraction tomography (SRT) may be undertaken.

This involves placing a series of non-destructive geophones on the ground surface, connected by cables and return signals collected using geophones.

7. Exempt Survey and Mapping Works

Minor geophysical survey works may be undertaken as exempt development, under Clause 2.30 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* as part of the development.

3. RELEVANT HISTORY

A search of Council's electronic database identified two development applications relevant to the site:

DA 2002-205 for the use of the site for mining operations. The approval granted under this development application includes detailed conditions that specify the permissible scope of activities during active mining operations.

Additionally, it outlines the obligatory measures for the closure and rehabilitation of the land once mining activities are concluded. Over time, the application has undergone several modifications, with its most recent being the 10th approved revision.

Under this DA, the applicant was permitted to carry out mining operations until 31 December 2022, with coal handling, storage and transportation of coal permitted to 31 March 2023.

DA 2020-40 is an application that was approved by Council on 30 June 2020 for geotechnical investigation works related to the Bells Mountain pumped hydro project and involving two boreholes and associated works at the subject site.

4. REFERRAL COMMENTS

Internal Referrals

The application was refereed to Council's Roads and Drainage Section and Council's Development Compliance Officer.

Roads and Drainage Section

The proposed development was initially referred to Council Roads and Drainage Officers who provided advice to inform the development assessment. That advice was provided to the applicant who submitted a response to the matters raised. The response provided by the applicant was not re-referred to Council Roads and Drainage Engineers.

Overall, the proposed development is considered unlikely to have any significant impact on Council's Road network as the proposal only involves geotechnical investigations conducted over a limited duration with limited heavy vehicle or operational traffic within that period.

Development Compliance Officer

Council's Compliance Officer did not object to the proposed development and made recommendations related to conditions of consent and management practices to minimise the environmental impact of the investigation works. These recommendations have been considered in preparing the recommended conditions of consent.

External Referrals

Subsidence Advisory

The subject site is located within a 'subsidence district' identified as being potentially impacted by mine subsidence under the Coal Mine Subsidence Compensation Act 2017. Accordingly,

the proposed development is integrated development under the *Environmental Planning and Assessment Act 1979* and requiring referral to NSW Subsidence Advisory.

NSW Subsidence Advisory provided their General Terms of Approval to the proposed development on the 30th June 2023. Where approved, it is incumbent on Council to impose conditions to ensure the development is carried out in accordance with the General Terms of Approval in accordance with legislative requirements for the processing of integrated development applications. These have been included in the draft conditions of consent.

Department of Planning and Environment-Water
The proposed development involves work that may interfere with an aquifer, which requires an aquifer interference approval under Clause 91(3) of the Water Management Act 2000. Accordingly, the development is integrated development under the Environmental Planning and Assessment Act 1979 requiring referral to the Department of Planning and Environment – Water to consider and issue General Terms of Approval.

General Terms of approval to the proposed development were issued on 29 November 2023. Where approved, it is incumbent on Council to impose conditions. They have been included in the draft conditions of consent.

5. ASSESSMENT - Section 4.15 Matters for Consideration

This report provides an assessment of the material presented in the Application against the relevant State and local planning legislation and policy.

Section 4.15(1)(a)(i) The provisions of any Environmental Planning Instrument (EPI)

A. Muswellbrook Local Environmental Plan 2009 (MLEP 2009)

Part 2 Permitted or prohibited development

Land use Zone	RU1 Primary Production & C3 Environmental Management
Proposed Use	Earthworks
Permissibility	**Permitted with Consent**
Zone Objective	**Complies with Objective**

Land Use Zone and Permitted Land Use

The development site is zoned RU1 Primary Production and C3 Environmental Management pursuant to MLEP 2009. The proposed development does not propose the establishment of a land use at the site, but the carrying out of geotechnical investigation works as 'work' earthworks.

Earthworks are deemed a development type not subject to the Land Use Table of the MLEP 2009. The proposed geotechnical investigations are therefore permissible with consent at the Site, as these are development types that are not prohibited. This is the case as Direction 5 of the Standard Instrument lists those development types which are both defined in NSW and which may be included in any LEP Land Use Table – 'earthworks' is not included in that list. Accordingly, Council Officers are satisfied that the proposed works are permissible with consent.

Land use zone objectives

In addition to the land use permissibility the Muswellbrook LEP also requires consideration of the related land use zone objectives. The subject site is zoned a mixture of RU1 Primary Production and C3 Environmental Management.

The objectives under the RU1 Primary Production Zone are as follows:

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To protect the agricultural potential of rural land not identified for alternative land use, and to minimise the cost to the community of providing, extending and maintaining public amenities and services.
- To maintain the rural landscape character of the land in the long term.
- To ensure that development for the purpose of extractive industries, underground mines (other than surface works associated with underground mines) or open cut mines (other than open cut mines from the surface of the flood plain), will not—
  (a) destroy or impair the agricultural production potential of the land or, in the case of underground mining, unreasonably restrict or otherwise affect any other development on the surface, or
  (b) detrimentally affect in any way the quantity, flow and quality of water in either subterranean or surface water systems, or
  (c) visually intrude into its surroundings, except by way of suitable screening.
- To protect or conserve (or both)—
  (a) soil stability by controlling development in accordance with land capability, and
  (b) trees and other vegetation, and
  (c) water resources, water quality and wetland areas, and their catchments and buffer areas, and
  (d) valuable deposits of minerals and extractive materials by restricting development that would compromise the efficient extraction of those deposits.

The proposed development is a temporary use (investigation) and not contrary to the objectives under the RU1 Primary Production Zone.

The objectives under the C3 Environmental Management Zone are as follows:

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- To provide for a limited range of development that does not have an adverse effect on those values.
- To maintain, or improve in the long term, the ecological values of existing remnant vegetation of significance including wooded hilltops, river valley systems, major scenic corridors and other local features of scenic attraction.
- To limit development that is visually intrusive and ensure compatibility with the existing landscape character.
- To allow agricultural activities that will not have an adverse impact on the environmental and scenic quality of the existing landscape.
- To promote ecologically sustainable development.
- To ensure that development in this zone on land that adjoins land in the land zoned C1 National Parks and Nature Reserves is compatible with the objectives for that zone.

The proposed development is a temporary use (investigation) and not contrary to the objectives under the C3 Environmental Management Zone.

Part 4 Principal Development Standards

The provisions set out in this Part of Muswellbrook LEP 2009 do not include any controls which affect the carrying out of the proposed development.

Part 5 Miscellaneous Provisions

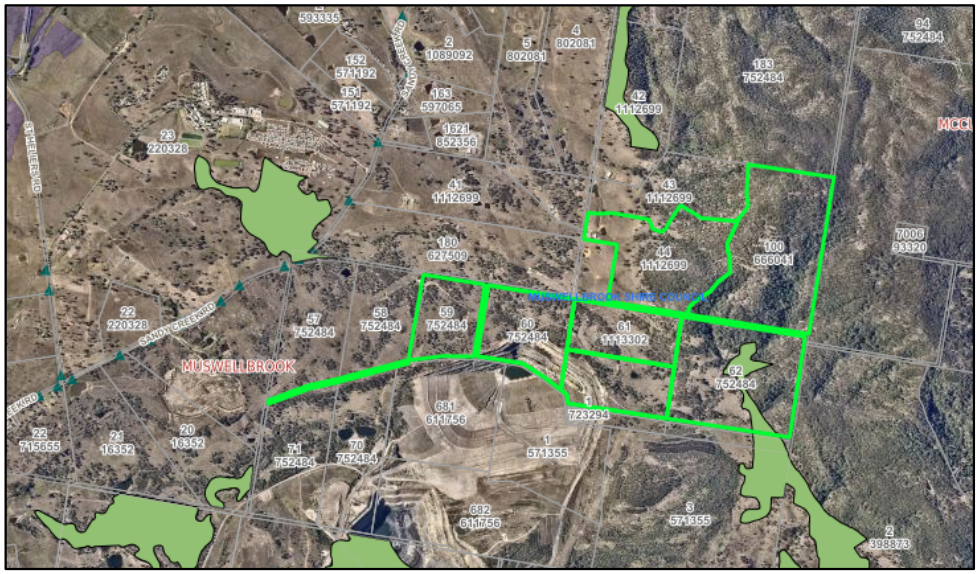
The provisions set out in this Part of Muswellbrook LEP 2009 do not include any controls which affect the carrying out of the proposed development.

Part 7 Additional Local Provisions

7.1 Terrestrial Biodiversity
Lot 62 DP 752484 has been identified as terrestrial biodiversity under the MLEP 2009. Under this clause,

(3) Development consent must not be granted for development on land to which this clause applies unless the consent authority is satisfied that the development satisfies the objective of this clause and—

- *(a) the development is designed and will be located and managed to avoid any potential adverse environmental impact, or*
- *(b) if a potential adverse environmental impact cannot be avoided, the development—*
  - *(i) is designed and located so as to have minimum adverse impact, and*
  - *(ii) incorporates effective measures to remedy or mitigate any adverse impact caused.*



The portion of the proposed sites has been identified as terrestrial biodiversity on the MLEP 2009. The applicant has provided a biodiversity assessment report outlining the expected environmental impact due to the development and provided measures to prevent and mitigate any direct impact to the adjacent vegetation and threatened species' habitat.

Council Officers have reviewed the submitted ecological assessment which indicate no significant long-term damage.

Accordingly, Council Officers are satisfied that the proposal would be compatible with this Section of the Muswellbrook LEP 2009.

7.6 Earthworks

The proposed development involves extensive earthworks for the preparation of the site and the geotechnical investigation. Clause 7.6 of the Muswellbrook LEP states that

(3) Before granting development consent for earthworks, the consent authority must consider the following matters—

- *(a) the likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality,*
- *(b) the effect of the proposed development on the likely future use or redevelopment of the land,*
- *(c) the quality of the fill or of the soil to be excavated, or both,*
- *(d) the effect of the proposed development on the existing and likely amenity of adjoining properties,*
- *(e) the source of any fill material or the destination of any excavated material,*
- *(f) the likelihood of disturbing relics,*
- *(g) the proximity to and potential for adverse impacts on any watercourse, drinking water catchment or environmentally sensitive area.*

Drainage Patterns and Soil Stability - The development involves minor above ground works that will have erosion control measures imposed in accordance with an approved erosion and sediment control plan. The development is unlikely to have any significant impact on the overland flow of rainwater. The underground penetration of the development has been referred to the Department of Planning and Environment-Water who has issued general terms of approval requiring a water licensing approval. This requirement has been included in the recommended condition of consent should the application be approved.

Future Use and redevelopment of the land – The subject site forms a part of the land that has been used for mining activities (Muswellbrook Coal open cut coal mine). The proposed investigations are part of a potential future use for the site.

Quality of Soil to be excavated – The drilling involved for the geotechnical investigation has been estimated to create around 60 tonnes of dirty water and drill cuttings. The management of drill tailing, and excavated soil is heavily regulated by the State. A condition has been included requiring the drilling waste to be disposed of by a licensed contractor in accordance with the NSW EPA requirements.

Impact on Adjoining properties – Discussed in detail later in this report.

Source or destination of any fill material – Discussed in points above. Condition Imposed.

Likelihood of disturbing relics – The following standard Heritage NSW condition has been included in relation to uncovering relics:

Archaeological deposits or Relics

> *The applicant must ensure that if any unexpected archaeological deposits or relics not identified and considered in the supporting documents for this approval are discovered, work must cease in the affected area(s) and the Environmental Protection and Regulation Group of the OEH must be contacted.*
>
> *Additional assessment and approval may be required prior to works continuing in the affected area(s) based on the nature of the discovery.*

Adverse impacts on any watercourse etc – Considered under DPE-Water License.

B. State Environmental Planning Policies Relevant to the Proposal

SEPP (Biodiversity and Conservation) 2021
Satisfactory: ☒ Yes ☐ No ☐ NA Chapter 2 Vegetation in non-rural areas

This chapter aims to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and to preserve the amenity of non-rural areas. The proposal does not involve the clearing of any native vegetation in a non-rural area and therefore this section of the SEPP does not need to be considered further.

Chapter 3 Koala habitat protection 2020

This planning instrument encourages the conservation and management of natural vegetation areas that provide habitat for koalas.

The land subject to this development application has been identified as RU1 Primary Production and C3 Environmental Management and this chapter under the SEPP applies if:

i. the land has an area of more than 1ha or
ii. has, together with adjoining land in the same ownership, an area of more than 1 hectare.

The proposed development will require the removal of 0.86 hectares of potential Koala habitat. While this does not trigger the Koala SEPP, the applicant has provided a Biodiversity Assessment considering the potential impacts to flora and fauna caused by the development (discussed later in this report)

Chapter 4 Koala habitat protection 2021

This Chapter of the SEPP does not apply to Muswellbrook Shire Council.

The Chapters 5 to 13 are not applicable within the Muswellbrook Shire LGA.

SEPP (Industry and Employment) 2021

Satisfactory: ☐ Yes ☐ No ☒ NA

Chapter 2 Western Sydney employment area

Not Applicable

Chapter 3 Advertising and signage

The proposal does not involve any signage and therefore, this chapter under the SEPP does not need to be considered further.

SEPP (Planning Systems) 2021

Satisfactory: ☐ Yes ☐ No ☒ NA

Chapter 2 State and regional development

The DA is determined by MSC as the capital investment value is $830,000 (excluding GST), and the proposed geotechnical investigation therefore does not meet the requirements for State Significant Development or Regionally Significant Development under State Environmental Planning Policy (Planning Systems) 2021.

Chapter 3 Aboriginal land

The proposed development is not located within the Aboriginal Land Application Map and therefore this section of the SEPP does not need to be considered further.

SEPP (Primary Production) 2021

Satisfactory: ☐ Yes ☐ No ☒ NA

The proposal does not involve any Primary Production use as defined under this SEPP and therefore does not need to be considered further.

SEPP (Resilience and Hazards (2021)

Chapter 3 Hazardous and offensive development

This chapter contains planning provisions for hazardous and offensive development and aims to ensure that adequate consideration is given to the likely impacts of such development.
The proposal does not fall under the definition of hazardous or offensive industry and therefore does not need to be considered further.

Chapter 4 Remediation of Land

This chapter under the SEPP requires that a consent authority must not consent to the carrying out of any development on land unless:

(a) It has considered whether the land is contaminated, and
(b) If the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and
(c) If the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

The subject site is potentially contaminated land due to the mining activities that have been carried out in the vicinity of the land. The proposed development does not involve a new permanent use for the site but rather a temporary use for 12 weeks for a geotechnical investigation, which is suitable for the site without further investigation.

SEPP (Resources and Energy) 2021

Satisfactory: ☐ Yes ☐ No ☒ NA

Chapter 2 Mining, petroleum production and extractive industries

While the subject site is affected by a mining lease, the proposed development does not involve any work that would be considered mining, petroleum production or an extractive industry. Rather, the proposed geotechnical investigations are intended to support the potential future provision of pumped hydro energy storage at the Site. Due to this, this section of the SEPP does not need to be considered further.

SEPP (Transport and Infrastructure) 2021

Satisfactory: ☐ Yes ☐ No ☒ NA

Chapter 4 Major infrastructure corridors

This chapter applies to all land:
- in a future infrastructure corridor; or
- within 25 in any direction of a future infrastructure corridor

The proposal does not involve any development on the land to which this SEPP applies and therefore does not need to be considered further.

Section 4.15(1)(a)(ii) the provisions of any draft EPI.

There are no draft EPIs relevant to the subject Application.

Section 4.15(1)(a)(iii) the provisions of any development control plan

Muswellbrook DCP 2009

Section 3 Site Analysis	
Satisfactory: ☒ Yes ☐ No ☐ NA A site and other relevant documentation has been provided with the application.	
Section 8 Rural and Environmental Zones	
Satisfactory: ☒ Yes ☐ No ☐ NA	
8.2 Built Form	
8.2.1 Scenic Protection and Building Location	*The controls under this section of the DCP relate to new buildings constructed in rural zones and minimisation of their impact on the natural landscape. The proposed development does not involve any new buildings, however, there will heavy machinery on the site for 12 weeks. The subject site is located at a reasonable distance away from any residential dwellings and screened by trees and therefore is not expected to have a significant impact on the scenic qualities of the locality. In addition to this, the works are temporary and will be removed within 12 weeks.*
8.2.2 Setbacks	*No buildings proposed, development will be over 50m from any public road.* ***Complies***
8.2.3 Colours and Materials	*No buildings proposed, not applicable.*
8.2.4 Car Parking and Access	*The development will create an increase in heavy vehicles accessing Sandy Creek Road for a period of 12 weeks. This has been discussed in detail later in this report.* ***Conditions Imposed for management.***
8.2.5 Temporary Dwellings	***Not applicable.***
8.3 Environmental Matters	
8.3.1 Topography	*The development will involve laydown areas for:* *2 boreholes (2 x 25m x 25m = 1250m^2), and;* *4 test pits (7 x 10m x 10m = 700m^2)* *In addition to this, access tracks will be created which will require minor filling around existing culverts to provide safe access.* *Council's Assessing has imposed a condition to requiring the submission of a detailed soil erosion and sediment control plan to be approved by Council prior to the commencement of the work.*
8.3.2 Vegetation	*The development will involve clearing of trees and vegetation for the establishment of the level pads and the access tracks. The applicant has provided a Biodiversity Assessment assessing the impacts of the development against the relevant legislation and found to be compliant. The report also outlines measures to mitigate or minimise damage to vegetation and species habitat.* *Council's Assessing Officer has reviewed the report and found the proposed measures to be satisfactory and recommends including a condition of consent requiring the development to be carried out in accordance with the measures outlined in the report.*
8.3.3 Riparian Buffers	*The development will require a controlled activity approval from DPE-Water, discussed earlier in this report.*
8.3.4 Management of Rivers, Creeks, Streams and Drainage	*As above.*
8.3.5 Services	*Not relevant.*
Section 11 – Extractive industry	

Satisfactory: ☐ Yes ☐ No ☒ NA

The proposed development does not relate to the mining industry currently on the site but rather investigations into future (non-extractive) use of the site and therefore this section does not need to be considered further.

Section 20 – Erosion and Sediment Control

Satisfactory: ☒ Yes ☐ No ☐ NA

Soil Erosion and Sediment control plan conditioned to be provided.

Section 21 – Contaminated land

Satisfactory: ☒ Yes ☐ No ☐ NA

Discussed under remediation SEPP considerations.

Section 24 – Waste Minimisation and Management Systems

Satisfactory: ☒ Yes ☐ No ☐ Not Applicable

The following waste is expected to be created by the development:

Table 6-5: Expected waste streams associated with the geotechnical investigations

Waste Stream	Description
Green waste	From the clearing of vegetated areas including both native and exotic vegetation species for access tracks and test pit and borehole sites.
Excavation waste /spoil	Spoil material generated from geotechnical investigation works.
Wastewater	Approximately 60 tonnes of liquid wastewater from the geotechnical investigation drilling works will be generated and potential for stormwater runoff.
General wastes	This includes site work area waste, scrap materials, recyclables (aluminium cans, glass etc.) and putrescible waste.

The management of this waste is regulated by the State and a condition requiring the drilling waste to be disposed of by a licensed contractor in accordance with the NSW EPA requirements is included.

Section 25 – Stormwater Management

Satisfactory: ☐ Yes ☐ No ☐ Not Applicable

The development does not involve any construction works that will increase hardstand space on the site. The development does involve earthworks that can change the natural flow of stormwater on the site and the site is suitably setback from any nearby development and therefore is not likely to impact these developments. A condition is included to require a Soil Erosion and Sediment control plan to be prepared for the site to ensure that the stormwater flow does not cause soil erosion issues in the locality due to the development.

Section 4.15(1)(a) (iiia) the provisions of any planning agreement

There are no planning agreements relevant to the subject Application.

Section 4.15(1)(a)(iv) the provisions of the regulations

Division 8A of the Environmental Planning and Assessment Regulation 2000 applies to the development.

Development Contributions

The cost of works for the proposed development is $993,939.00.

Under the provision of Council's Section 94A Contribution Plan a developer contribution at a rate of 1% the total cost of the development would be applicable to the development.

A recommended condition of consent requiring a developer contribution of $9,939.39 has been included.

Section 4.15(1)(a)(v) the provisions of any coastal zone management plan

Not applicable - The Application does not relate to a coastal area.

Section 4.15(1)(b) the likely impacts of that development

Context and Setting

The proposed development involves the carrying out of geotechnical investigations. The application does not involve the construction of any buildings. Visual impacts of clearing and access track construction related to these works would be limited and would present no significant issue for the amenity of the existing context and setting. waste

Potential Impact on Adjacent Properties

The proposed development would have a limited impact on the amenity of neighbouring properties. The proposed works would be carried out of a limited period of 12 weeks. During this period there is the potential for minor noise, lighting and traffic impacts in the locality related to the construction work. Noise and Vibration and Traffic Impact Assessments prepared in relation to the application suggest that related impacts would not have a significant adverse impact on the amenity of neighbouring properties.

Access, Transport and Traffic

A Traffic Impact Assessment has been prepared in relation to the proposed development The Traffic Impact Assessment outlines traffic associated with these in addition to traffic attached to a secondary application involving similar geotechnical works at the upper catchment of the Bells Mountain reservoir. The table below identifies the number of traffic movements anticipated:

Task Name	Vehicle Type	No. of one-way vehicle movements per day- Lower Reservoir	No. of one-way vehicle movements per day- Upper Reservoir	Total no. of one-way heavy vehicle movements per day
Site mobilization and demobilisation (first/ last few days)	Heavy Rigid Truck	16	16	**32**
Geotechnical investigation works	Light Vehicles	4	4	**8**
	Medium Rigid Truck (water cart plus sucker truck)	2	2	**4**

These vehicles would access the site via New England Highway onto Sandy Creek and Limestone Road.

Council Officers are satisfied that the limited duration and volume geotechnical investigation traffic described in that report could be accommodated by and is unlikely to have any significant impact on the local road network.

Air/Microclimate

The proposed works will be distant from residential receivers in the locality. The works would involve the disturbance of soil and related dust exposures.

The applicant has outlined the following measure below to reduce the development impact on air quality:

When accessing the Site along unsealed roads:
- *Maintain a speed within posted speed limits that limits dust generation behind moving vehicles. If dust plumes are observed to be above the height of the vehicle, slow down*
- *Accelerate and decelerate slower than on sealed roads, to avoid wheel spinning that could generate dust*

During construction and maintenance of the drilling cut/fill pad:
- *Limit the size of exposed material within practicable safe limits*
- *During periods of hot, windy weather, spray clean water on the exposed material to limit dust generation potential*

Where carried out in accordance with the above, and best practice sediment and erosion control management, the project is not anticipated to have significant air quality impacts.

Flora and Fauna

The proposed development would involve some vegetation clearing related to the establishment of access tracks and set down areas for the geotechnical investigations. An Ecological Assessment has been prepared to quantify the clearing and likely impacts.

This report has identified that the proposed clearing would not have a significant impact on ecological communities and would not exceed trigger levels within the Biodiversity Conservation Act 2016 that require additional investigations or the establishment of off-sets under that legislation

Waste

Commentary has been included under the DCP Waste minimisation management heading related to the waste generation and management associated with the proposed development. Where the development is carried out in accordance with proposed waste management strategies it is unlikely to have an adverse related impact on the environment.

Noise & Vibration

A noise and vibration assessment has been carried out to assess the potential noise and vibration impacts that may be generated due to the geotechnical site investigation work.

The proposed development involves the carrying out of work on 24 hour, seven days a week basis.

The report identifies potentially affected sensitive receivers. Background noise levels have been established with unattended noise measurements.

A review of the predicted noise levels notes there are no exceedances of the standard hours noise management levels predicted at any sensitive receivers for any bore hole locations. Construction noise levels are predicted to be well below the highly affected NML of 75 dB(A).

The report has outlined best-practice standard noise mitigation measures implemented where feasible and reasonable. Council Officers have reviewed this information and are satisfied that the proposed mitigation measures are satisfactory.

Natural Hazards

The site has been identified as Bushfire prone. The proposed works are temporary in nature and therefore no specific bushfire requirements are outlined in Planning for Bushfire Protection 2019. The Assessing Officer recommends a condition to restrict any works on days identified on the Bushfire Danger index as Extreme or Catastrophic.

Technological Hazards

Development to be in accordance with General Terms of Approval from NSW Subsidence Advisory

Social and Economic Impact on the Locality

The proposed development is temporary in nature and not expected to have any long term social or economic impact in the locality.

Cumulative Impacts

The proposed development will assist the design of a pumped hydro battery storage system on Bell's Mountain.

The pumped hydro project would be a separate application.

Section 4.15(1)(c) the suitability of the site for the development

The proposed development is compatible with surrounding land uses and site characteristics, subject to consent conditions.

Section 4.15(1)(d) any submissions made

The Application was notified to adjoining owners from 16/06/2023 – 07/07/2023. A notice was also placed on Council's website and Facebook page at the commencement of the notification period.

Three (3) submissions were received during the notification period.

The content of the submissions was provided to the applicant. The applicant submitted a detailed response to the submitter concerns which is attached for Council's information.

Council Officers have completed a review of the issues raised in the submissions and provided commentary on key themes raised in the table below:

Submitter Concern	Planning Comment
detrimental impact to the environment and natural habitats	The submissions refer to potential environmental impacts associated with the Bells Mountain Pumped Hydro Project. Council is not considering an application for the pumped hydro project. In relation to those potential impacts of the geotechnical investigations, the applicant has engaged appropriately qualified consultants to undertake ecological, Aboriginal heritage due diligence, noise and traffic impact assessments. Each of these investigations identify that the proposed development

	would not have significant adverse impact. Council Officers have had regard to these reports and completed their own review of associated environmental impacts and are satisfied that development application may be supported from an environmental impact perspective.
- Improvement of Sandy Creek Road and Limestone Road - Heavy vehicle load on Council Roads	The proposed development would not involve significant increases to vehicle traffic. Traffic movements associated with the development would peak through the mobilisation and demobilisation phases of the development. These phases would occur in the first and last few days of the 12-week work program and involve 16 heavy rigged vehicle movements to and from the site. During the regular operating phase of the works 4 light vehicle and 2 medium rigged truck (water cart) movements are expected. Overall, this volume of traffic occurring over the 12-week period is not anticipated to have a significant impact on Council's local road network. Council Officers have recommended conditions of consent to require the repair of any damage to local infrastructure and for a Traffic Management Plan to be submitted in relation to the management of heavy vehicle movements at the Limestone/Sandy Creek Road intersection.
Disposal of excess drillings and waste water	The applicant has provided specifications for the two types of drill rigs and outlined that the drill water will be managed in tanks on site (shown below) and disposed of to an appropriate waste facility. 
- Concerns relating to Dust and noise - Detrimental impact to the residents	The applicant has proposed several measures to minimise noise dust such as

	speed limits and operational limits. The proposed development is located over 250m to the nearest dwelling. The development at this stage is only for geotechnical drilling and expected to last for around 12 weeks. Noting the physical separation of drill rigs from adjoining properties and the limited duration of works dust associated with the works are anticipated to be limited.
- Opposition to the Pumped Hydro Project - Destroy the integrity of Bell's Mountain	Council is required to assess and determine the development before it, being the undertaking of geotechnical investigations proposed. Council is not considering the potential environmental impacts attributed to the Muswellbrook Pumped Hydro Project. That will be another assessment process. Refusal of the application for reasons associated with the future pumped hydro project would not present a valid reason for refusal where a decision was challenged through the Land and Environment Court.

Council Officers have considered the matters raised in the submissions and consider that the proposal may be approved subject to conditions.

Section 4.15(1)(e) the public interest.

It is considered that the proposal is in the public interest.

6. CONCLUSION

The proposed development has been assessed against the relevant heads of consideration of Section 4.15 of the Environmental Planning and Assessment Act 1979. As outlined above it is considered that the proposed development would be in accordance with the relevant planning provisions.

Accordingly, it is recommended the application be approved subject to conditions of consent.

Signed by:

Tanya Alsleben
Planning Assistant
Date: 14/02/2024

Reviewed by:

IDENTIFICATION OF APPROVED PLANS

(1) Approved Plans and Supporting Documents

Development must be carried out in accordance with the following approved plans and supporting documentation (stamped by Council), except where the conditions of this consent expressly require otherwise.

Document Title.	Ver. No.	Prepared By.	Dated.
Statement of Environmental Effects (As amended by DA Amendment)	5	SMEC Australia Pty Ltd	28/04/2023
Letter requesting amendment to DA		EMM Consulting	29/01/2024
Traffic Impact Assessment Amendments		EMM Consulting	29/01/2024
Revised Noise and Vibration Assessment	E	Resonate	26/01/2024
Biodiversity Assessment	4	SMEC Australia Pty Ltd	06/04/2023
Aboriginal Heritage Management	-	Extent Heritage Pty Ltd	15/03/2023

In the event of any inconsistency between the approved plans and the supporting documentation, the approved plans prevail. In the event of any inconsistency between the approved plans and a condition of this consent, the condition prevails.

Note: an inconsistency occurs between an approved plan and supporting documentation or between an approved plan and a condition when it is not possible to comply with both at the relevant time.

Reason: To ensure all parties are aware of the approved plans and supporting documentation that applies to the development

(2) General Terms of Approval

The development is to be carried out in accordance with the General Terms of Approval issued by the following approval bodies and referenced below:

a) Department of Planning and Environment – Water, General Terms of Approval reference No IDAS-2023-10410, dated 29 November 2023.
b) NSW Subsidence Advisory General Terms of Approval Reference TBA23-01923 dated 30 June 2023

These General Terms of Approval have been stamped with Council's Approval Stamp and form part of this Notice of Determination.

Reason: prescribed by legislated.

CONDITIONS THAT MUST BE ADDRESSED PRIOR TO COMMENCEMENT

(3) Environmental Management Plan (EMP)

Prior to the commencement of works, an environmental management plan (EMP) must be submitted to and approved by Council. The plan must include the matters identified in Table 6-4 Safeguards and management measures in the approved Statement of Environmental Effects and noise mitigation measures outline in the Revised Noise and Vibration Assessment

Reason: To require details of measures that will protect the public, and the surrounding environment, during site works and construction.

(4) Section 7.12 Contributions

Pursuant to section 4.17(1) of the Environmental Planning and Assessment Act 1979, and the Muswellbrook Shire Council Section 94A Development Contributions Plan 2010, a contribution of $9,939.39 shall be paid to Muswellbrook Shire Council.

The amount to be paid is to be adjusted at the time of the actual payment, in accordance with the provisions of the Muswellbrook Shire Council Section 94A Development Contributions Plan 2010. The contribution is to be paid prior to the commencement of works.

Reason: Prescribed by legislation through Section 7.11 of the Environmental Planning and Assessment Act 1979 and Council's Section 94A Contribution Plan

(5) Section 138 Permit

Prior to commencing of any works, a permit must be obtained from Council, under Section 138 of the Roads Act 1993.

A traffic Management Plan is to be submitted to Council with any Section 138 application detailing traffic management controls to be implemented through the development for the management of traffic at the Limestone Road Sandy Creek Road intersection. The Traffic Management Plan is to be developed by a suitably qualified Traffic Engineer.

Reason: ensure safe movement of heavy vehicles and comply with Roads Act requirements.

(6) Controlled Activity Permit

Prior to the commencement of works on waterfront land the person acting with this consent is to obtain a Controlled Activity Permit from NSW Department of Planning and Environment – Water pursuant to the requirements of their General Terms of Approval and the provisions of the Water Management Act 2000.

Reason: Condition under General Terms of Approval from DPE- Water

(7) Site Sign

A sign must be erected in a prominent position at any entry point to the work site work site:

a) stating that unauthorised entry to the work site is prohibited,
b) showing the name of the principal contractor (or person in charge of the work site), and a telephone number at which that person may be contacted at any time for business purposes and outside working hours, and
c) showing the name, address and telephone number of the Council.

Any such sign must be maintained while to building work or demolition work is being carried out but must be removed when the work has been completed.
This condition does not apply to building works being carried out inside an existing building.

Reason: Prescribed Condition under Clause 70 of EP&A Regulation

(8) Complaints Management

The person acting with this consent is to prepare a complaint management procedure in relation to noise and dust complaints associated with the works. The particulars of that procedure are to be generally in accordance with measures set out in the applicant's 27 September 2023 correspondence to Council and the 29 January 2024 amendment to the proposed development. The procedure must detail a process for receiving, investigating, acting on and the reporting of complaints received during the carrying out of works.

Prior to the commencement of works a written notice is to be provided to neighbouring property owners and nearby residential receivers identified in the documentation accompanying this development application advising those individuals of the phone number and any other relevant contact information for making complaints related to the works. A site sign is also to be installed at a prominent position at the Limestone Road site access displaying this contact information.

A copy of the complaint management procedure is to be submitted to Muswellbrook Shire Council prior to the commencement of works along with evidence demonstrating compliance with the other requirements of this condition.

Reason: ensure the development incorporates measures to address impacts on adjoining properties where they arise through the carrying out of work.

CONDITIONS THAT MUST BE COMPLIED WITH DURING THE CARRYING OUT OF WORKS

(9) Archaeological deposits or Relics

The applicant must ensure that if any unexpected archaeological deposits or relics not identified and considered in the supporting documents for this approval are discovered, work must cease in the affected area(s) and the Environmental Protection and Regulation Group of the OEH must be contacted.

Additional assessment and approval may be required prior to works continuing in the affected area(s) based on the nature of the discovery.

Reason: Prescribed by legislation

(10) Erosion and Sediment Controls

At all times erosion and sediment controls are to be maintained across the site in accordance with the Construction Environmental Management Plan and the requirements of this approval.

Reason: manage soil erosion impacts.

(11) Damage to Adjoining Properties

All precautions must be taken to prevent any damage likely to be sustained to adjoining properties. Adjoining owner property rights must be observed at all times. Where damage occurs to adjoining property all necessary repair or suitable agreement for necessary repairs are to be undertaken by the applicant in consultation with, and with the consent of, the affected property owner.

Reason: To ensure that the development does not have any lasting negative impact on adjoining properties

(12) Damage to Public Infrastructure

The applicant shall bear the cost of all restoration works to Council property damaged during this development. The applicant shall submit to Council, in writing and/or photographic record, evidence of any existing damage to Council property before commencement of work.

Note: This documentation will be used to resolve any dispute over damage to infrastructure. If no documentation is received prior to commencement of work, it will be assumed that the infrastructure was undamaged, and the applicant will be required to restore all damaged infrastructure at their expense.

Reason: Protection of Council infrastructure

(13) Rehabilitation

Prior to the completion of works rehabilitation of the site including bore holes and test pits is to be completed in accordance with the Statement of Environmental Effects and industry best practice.

Reason: ensure the site is appropriately remediated and left in safe condition at the completion of works.

(14) Bush Fire Mangement

Drilling and excavations activities that may generate sparks are not to occur on declared total fire ban days or on days identified on the Bushfire Danger index as

Extreme or Catastrophic.

Reason: to minimise the potential for bush fire resulting from undertaking the works.

Level 3 175 Scott Street
Newcastle NSW 2300
02 4907 4800
www.emmconsulting.com.au

29 January 2023

Sharon Pope
Director Environment and Planning
Muswellbrook Shire Council
via email

Re: Muswellbrook Pumped Hydro Energy Storage Lower Reservoir Geotechnical Investigation (DA2023/56) - Amendment

Dear Sharon,

1 Introduction

Geotechnical Investigation Development Application (DA2023/56) was lodged on 31 May 2023 to Muswellbrook Shire Council (MSC) by the Muswellbrook Pumped Hydro Company Pty Ltd (MPH) to facilitate geotechnical investigations within the lower reservoir area of the proposed Muswellbrook Pumped Hydro Energy Storage Project (the project) which is currently subject of prefeasibility and environmental assessment.

DA2023/56 and the supporting Statement of Environmental Effects (SMEC 2023; SoEE), was publicly exhibited by MSC between 13 June 2023 and 7 July 2023.

Since this time, further design assessment has been completed and MPH seek an amendment to the project in accordance with Division 2, Section 37 (1) of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) which allows an applicant to apply to the consent authority for an amendment to the development application at any time prior to its determination.

The proposed amendments are outlined below and identified in Figure 1.1:

- Amend the location of borehole (BH) BH11, to be relocated to the location of previously proposed test pit (TP) TP5
- Amend the location of BH12, to be relocated along the existing access track
- Removal of TP5, TP6, TP7
- Removal of access track beyond the original TP5 (new BH11) location
- Amend working hours from standard working hours (7am to 6pm weekdays, 8am to 1pm Saturdays, no work Sundays and public holidays), to 24 hours a day, seven days a week
- Amend construction traffic light vehicle movements to account for 24 hours operation.

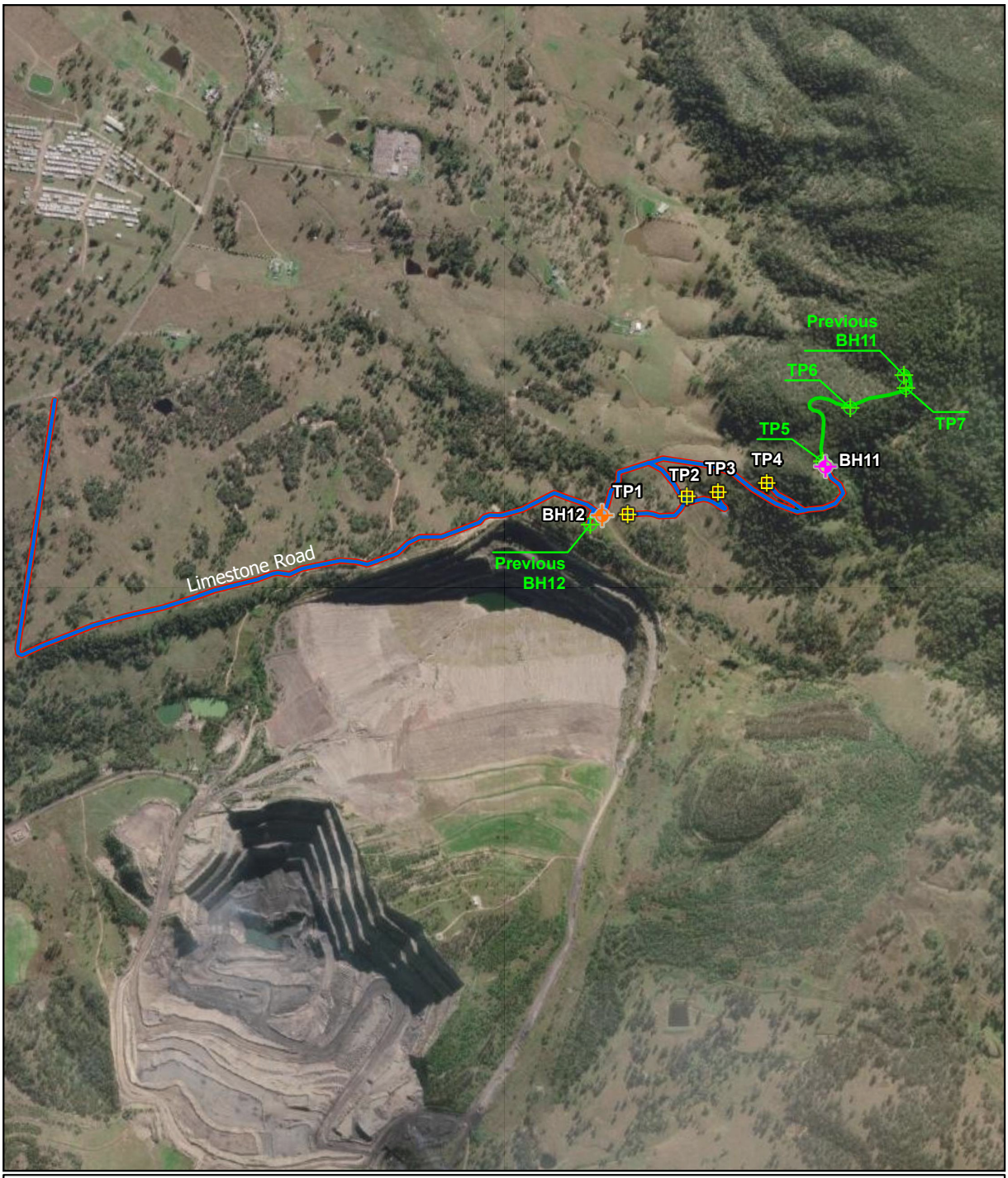


Figure 1.1 - Project Overview

Sources: AGL Energy Limited, Esri (Maxar)

Scale: 1:17,000 at A4

Coord Sys: GDA2020 MGA Zone 56

0 200 400 600 800 1,000 m

File: MPHES DA AMENDMENT FIG1-1

LEGEND

- Study area
- Lower reservoir access tracks (amended)
- Lower reservoir access tracks (originally proposed)
- Activities no longer proposed

Boreholes and Testpits

- BHd
- BHs
- TP

2 Planning and strategic context

The planning context and strategic context remain unchanged to that presented in Section 2 of the SoEE, and as such is not duplicated within this document.

3 Site description

The removal of some test pits and change in location of boreholes will reduce the number of land parcels within the project area. The amended geotechnical investigations comprise works within, or access gained through the land parcels outlined in Table 3.1 below.

Figure 3.2 provides a map of land ownership within the lower reservoir portion of the overall proposed PHES project, which is largely located on MCC-owned land.

Table 3.1 Parcel details

Nature of works	Parcel details
Access	Lot 1 DP1004305, Coal Road Muswellbrook (access via Limestone Road) Lot 59 DP752484, Coal Road Muswellbrook Lot 60 DP752484, Coal Road Muswellbrook Lot 61 DP1113302, Coal Road Muswellbrook Lot 62 DP752484, Coal Road Muswellbrook Lot 1 DP184481, Coal Road Muswellbrook Lot 100 DP666041, Coal Road Muswellbrook
Geotechnical works	Lot 60 DP752484, Coal Road Muswellbrook Lot 61 DP1113302, Coal Road Muswellbrook Lot 100 DP666041, Coal Road Muswellbrook

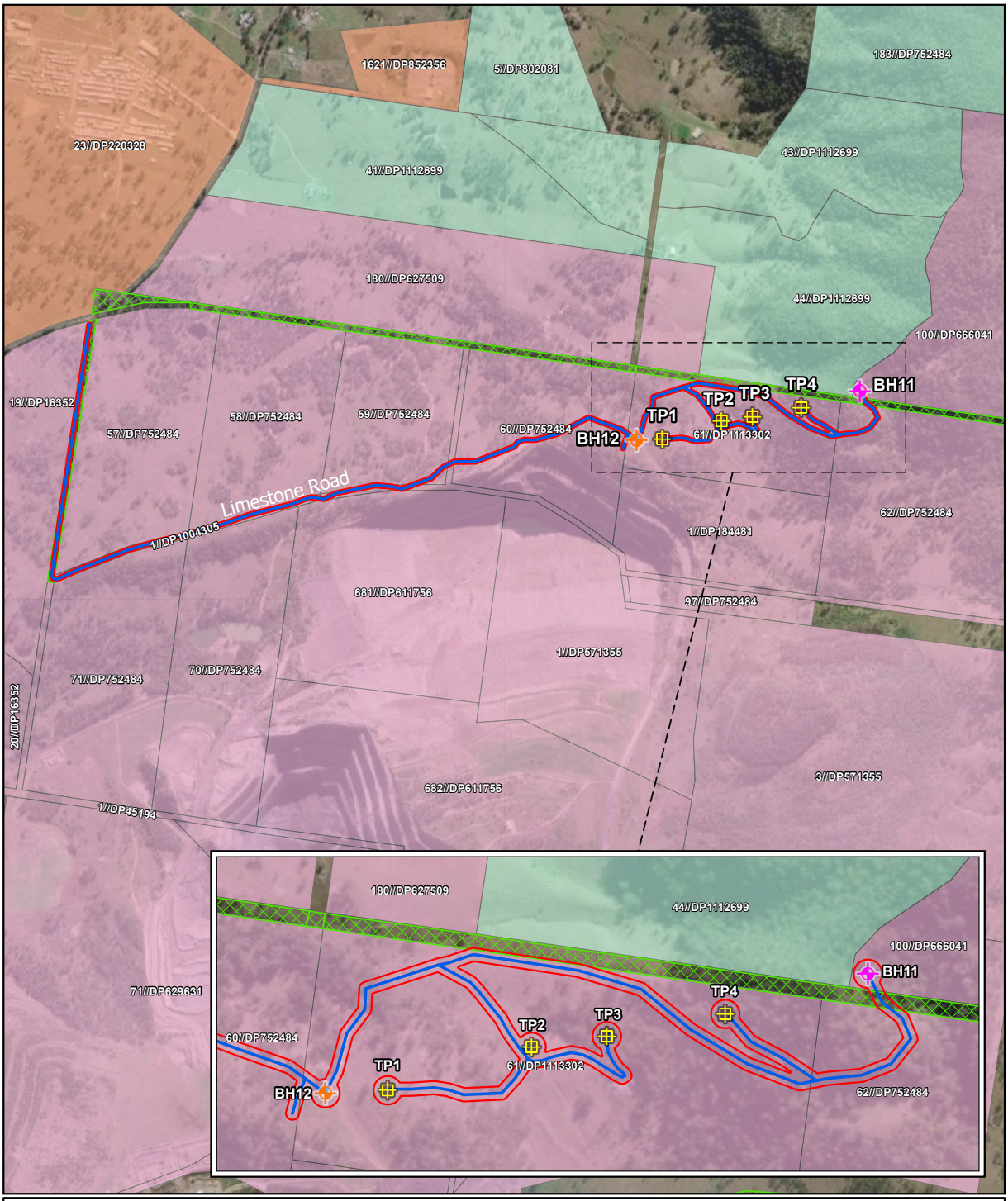


Figure 3.1 - Lower reservoir land ownership detail

Sources: AGL Energy Limited, Esri (Maxar)

Scale: 1:17,000 at A4

Coord Sys: GDA2020 MGA Zone 56

0 200 400 600 800 1,000 m

File: MPHES DA AMENDMENT FIG3-1

LEGEND

Study area

Lower reservoir access tracks (amended)

Boreholes and Testpits

BHd

BHs

TP

Landowner

Idemitsu

Private owners

State owned

Crown Land

4 Amendment description

The project description remains largely unchanged from the SoEE. The geotechnical drilling will be undertaken in the same manner as described in the SoEE and request for information (RFI) responses provided to MSC. The site access, decommissioning and rehabilitation will remain unchanged.

A comparison of the original proposed project and the proposed amendment is provided in Table 4.1 and presented in Figure 1.1.

Table 4.1 Amended project details

Element	Original project	Amended project
Number of boreholes	Drilling two boreholes: • BH11 • BH12	Drilling two boreholes at amended locations: • BH11 – at location of original TP5 • BH12 – at amended location closer to existing access track.
Number of test pits	Excavating up to seven test pits: • TP1-TP7	Excavating up to **four test pits**: • TP1-TP4 – unchanged. Changes have been made to the following test pits: • TP5 – removed (to be developed as BH11) • TP6 – removed • TP7 – removed.
Lower reservoir access tracks	Approximately 2.01 km of access tracks to be developed for access to test pit and borehole locations.	Approximately 1.33 km of access tracks to be developed for access to test pit and borehole locations. Access tracks beyond TP5 (now BH11) are no longer required. This will result in the removal of 0.68 km of access track.
Clearing area – native vegetation	0.908 ha	0.531 ha
Work hours	Standard working hours: • Monday – Friday: 7am-6pm • Saturday: 8am-1pm • Sunday and public holidays: no work	24 hours a day, seven days a week
Traffic movements	64 daily vehicle movements for mobilisation / demobilisation. 24 daily vehicle movements for geotechnical investigations.	An additional 4 light vehicle movements consisting of: • 2 light vehicle movements at 6:30 pm daily (accounting for night shift arrival) • 2 light vehicle movements at 6:30 am daily (accounting for night shift departure)

5 Statutory Assessment

The statutory assessment remains unchanged to that presented in Section 5 of the SoEE.

Division 2, Section 37 (1) of the EP&A Regulation allows an applicant to apply to the consent authority for an amendment to the development application at any time prior to its determination, facilitating this amendment.

6 Evaluation of impacts

6.1 Impact assessment summary

As described in Section 4, the amended project is smaller in scope than that assessed in the SoEE. As such, a substantial change in impacts is not anticipated. The potential impacts of the proposed amendments is provided in Table 6.1, where further assessment has been required this is detailed in the following sections.

Table 6.1 Summary of impacts

Environmental element	Potential impacts
Biodiversity	The proposed amendments would result in a reduction in the area of clearing required for the project. A discussion of the change in impacts is presented in Section 6.2. The impacts of the amended project are summarised here: • Clearing of approximately 0.531 ha of native vegetation, which does not contain any Threatened Ecological Communities (EECs) as currently listed under the *Biodiversity Conservation Act* (BC Act) or the *Environment Protection and Biodiversity Conservation Act* (EPBC Act) • Removal of threatened species habitat, including 0.463 ha of threatened fauna habitat • Possible fauna injury or mortality as a result of habitat disturbance • Key threatening processes including bushrock removal, clearing of native vegetation, loss of hollow-bearing trees and removal of dead wood and dead trees. **No additional mitigation measures are required.**
Aboriginal heritage	As identified in the SoEE, ground surface visibility was poor at the location of the original TP5 and west to the original location of BH11. This area has historically undergone minimal ground disturbance with much of the area never being cleared. There is a higher potential for Aboriginal cultural heritage to remain in situ. The proposed amendments to the project will reduce the area of surface impact required for the geotechnical investigations. The mitigation measures identified in the SoEE remain applicable to the new BH11 location: • Before the commencement of works, the Registered Aboriginal Party (RAP) be consulted, observing statutorily defined processes. • An archaeologist be present to monitor the works from TP4 to the new BH11 location. In addition to the above controls and as discussed with consulted Aboriginal parties, Aboriginal cultural monitors will be present at site during any clearing activities. As to monitor activities and provide advice should cultural materials be identified.
Non-Aboriginal heritage	No non-Aboriginal heritage items will be disturbed as part of the proposed amendments. **No additional mitigation measures are required.**

Table 6.1 Summary of impacts

Environmental element	Potential impacts
Noise and vibration	The noise assessment assessed geotechnical borehole drilling works with a piling rig (bored), water cart and light vehicles. It identified that noise levels are not predicted to exceed the standard hours noise management levels at sensitive receivers for any of the bore hole locations. The proposed amendments would not result in any construction works closer to the sensitive receivers than that assessed in the noise assessment prepared for the SoEE. The proposed amendments include out-of-hours work. No exceedances of the day, evening, or night out-of-hours criteria are predicted to occur at any residential receivers. The assessment also considered vibration impacts associated with drilling and access track development works. The works were assessed to comply with safe working distances for potential building damage and not result in vibration levels above human comfort criteria. The proposed amendments would reduce the length of access track development works required for the geotechnical assessment, and no works would be closer to buildings than assessed. No changes to the vibration impacts are expected. **No additional mitigation measures are required.**
Traffic and access	There would be no change in the site access point for the proposed works. Four additional daily light vehicle movements would be required for 24 hour works. EMM reviewed the amended project in consideration of traffic and determined that the change of the operations to 24 hours a day, seven days a week, as well as the four additional light vehicle movements per day, will present negligible impacts to the road network. **No additional mitigation measures are required.**
Waste	The proposed amendments would result in a reduction in vegetation clearing, and therefore a reduction in green waste. All other waste streams would be similar to that assessed in the SoEE. The management of waste generated streams generated from the lower reservoir geotechnical investigation will be defined in the geotechnical investigations works Environmental Management Plan (EMP) inclusive of waste disposal options. **No additional mitigation measures are required.**
Surface Water	The proposed amendments would not result in any significant changes to the surface water environment. There would be a reduction in the clearing required for the works, and therefore a reduction in erosion risk associated with the works. An erosion and sediment control plan would be prepared in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) and included in the EMP. A Controlled Activity approval would also be sought for these works under the *Water Management Act 2000* for works within the C3 Environmental Management Zone as mapped on the *Muswellbrook Local Environment Plan 2009*. **No additional mitigation measures are required.**
Groundwater	The proposed amendments would not result in any significant changes to the groundwater environment to that identified within the SoEE. **No additional mitigation measures are required.**

Table 6.1 Summary of impacts

Environmental element	Potential impacts
Crown Land reserves	As identified in the SoEE, Crown road reserves are present at the site of the geotechnical investigations. The Crown roads reserves have no designated Lot or Deposited Plan numbers but have been confirmed as being owned by NSW Crown Lands. Therefore, a separate approval is required for both accessing these roads and to undertake track improvement and construction works including vegetation removal. The Crown road reserve to the east of mine Pit 2 is located on the slopes of Bells Mountain and will require civil works to form an access track to allow geotechnical drilling equipment to traverse through the area. The approximate area of Crown road reserve that will be impacted by the development of access tracks is 560 m^2 The impacts to Crown land as assessed in the SoEE remain unchanged. **No additional mitigation measures are required.**

6.2 Biodiversity

6.2.1 Overview

Clearing for test pads requires cut and fill earthworks to create a level surface. The clearing for the testing pads is not to be permanent as vegetation regrowth will be facilitated post investigation. The maximum clearing of native vegetation for a borehole pad is assumed as 25 x 25 metres, and a test pit as 10x10 metres. The amended project will have a reduced number of test pits, and therefore there would be a reduction in the clearing area required for pads compared to the original project, as outlined in Table 6.2.

The majority of the vegetation clearing will be from the clearing of new access tracks. Existing access tracks are to be used where possible. The exact clearing extent required for new access tracks will be determined by slope and the condition of substrates encountered along the proposed alignment. Track width is to be minimised at all times but has been assumed as six metres clearing width to provide an upper estimate for vegetation clearing. There would be an overall reduction in native vegetation clearing as a result of the amended project, given the reduction in access track requirements as outlined in Table 6.3.

The amended project disturbance footprint and associated impacts to Plant Community Types (PCTs) is displayed in Figure 6.1

Table 6.2 Clearing required for boreholes and test pits

Investigation area	Pad dimension (m)	Vegetation type	TEC	Original area (hectares)	Amended area (hectares)
BH11	25 x 25	PCT 1605	No	0.0625	0
BH12	25 x 25	Non-native	No	0.0625	0.0625
TP1	10 x 10	PCT 796	No	0.01	0.01
TP2	10 x 10	PCT 796	No	0.01	0.01
TP3	10 x 10	PCT 1608	No	0.01	0.01
TP4	10 x 10	PCT 1608	No	0.01	0.01
TP5	10 x 10	PCT 1605	No	0.01	0

Table 6.2 Clearing required for boreholes and test pits

Investigation area	Pad dimension (m)	Vegetation type	TEC	Original area (hectares)	Amended area (hectares)
New BH11	25 x 25	PCT 1605 / PCT 1543	No	-	0.0625
TP6	10 x 10	PCT 1605	No	0.01	0
TP7	10 x 10	PCT 1605	No	0.01	0
Total **native** vegetation clearing for pads				0.1325	0.1025
Total change in **native** clearing for pads compared to original project					-0.03 (23% decrease)

^It is noted BH12 is proposed to be largely relocated to an existing access track, resulting in only minor impacts to PCT 796. As to be conservative PCT 796 has been assumed for the total BH12 site.

Table 6.3 Clearing required for pads and access tracks

PCT	Terrain	Track clearing width (metres)	Original area (hectares)	Amended area (hectares)
Non-native (Exotic grassland)	Lower slopes	2-4	0.1514	0.1650
PCT 796 (Grassland)	Lower slopes	2	0.0535	0.0684
PCT 1543 (Dry rainforest)	Moderate gradients on mid slope	6	0.0785	0.1185
PCT 1608 (Dry sclerophyll forest)	Mid slope	6	0.3375	0.3392
PCT 1605 (Dry sclerophyll forest)	Mid slope and ridgeline	6	0.4387	0.0049
Total **native** vegetation clearing			0.908	0.531
Total change in clearing for compared to original project				-0.377 (42% decrease)

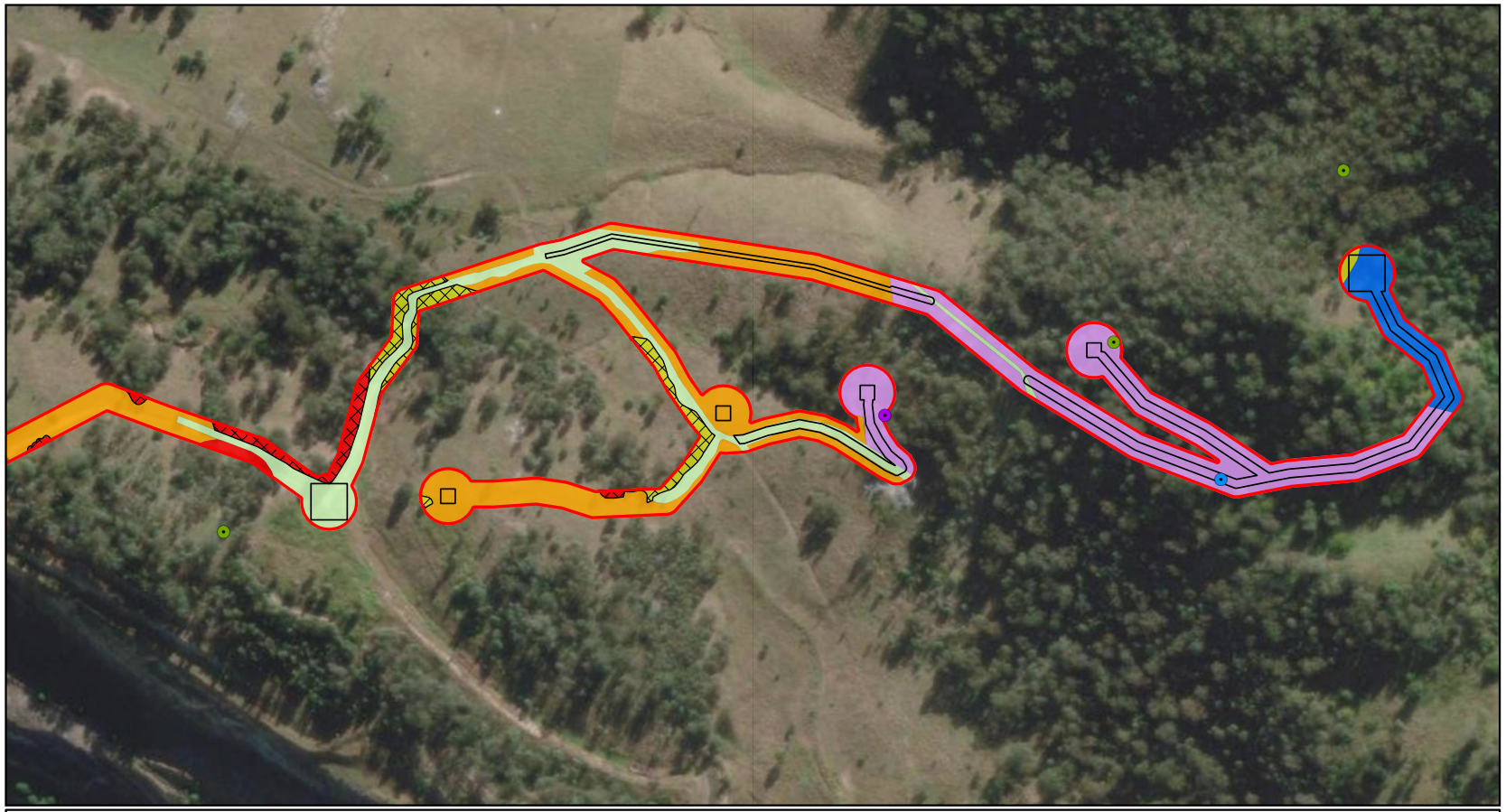


Figure 6.1 - Disturbance footprint and associated PCTs

Sources: AGL Energy Limited, Esri

Scale: 1:4,000 at A4

Coord Sys: GDA2020 MGA Zone 56

0 50 100 150 200 m

File: MPHES DA AMENDMENT FIG6-1

LEGEND

Study Area

Clearing Area

Threatened Ecological Communities

Habitat trees

Habitat tree

Hollow-bearing tree

Recorded threatened species

Speckled Warbler

Vegetation

Non-native

PCT 796 Derived grassland of the NSW South Western Slopes

PCT 1543 Rusty Fig - Native Quince - Native Olive dry rainforest of the Central Hunter Valley

PCT 1605 Narrow-leaved Ironbark - Native Olive shrubby open forest of the central and upper Hunter

PCT 1608 Grey Box - Grey Gum - Rough-barked Apple - Blakelys Red Gum grassy open forest of the central Hunter

PCT 1691 Narrow-leaved Ironbark - Grey Box grassy woodland of the central and upper Hunter

6.2.2 Threatened species habitat

i Flora

No threatened flora species were recorded in the study area, however it is possible that certain species could have gone undetected during surveys. Potential habitat for five threatened species with known associations with the PCT's present has been considered. There would be an overall reduction in fauna habitat removal as a result of the amended project as outlined in Table 6.4.

Table 6.4 Direct impacts on potential threatened flora habitat

Habitat type	Threatened flora species	Original area (hectares)	Amended area (hectares)
PCT 1605 Dry sclerophyll forest	*Cymbidium canaliculatum*	0.4387	0.0049
PCT 1691 Grassy woodland	*Diuris tricolor* (Pine Donkey Orchid) *Dichanthium setosum* (Bluegrass) *Thesium austral* (Austral Toadflax)	0	0
PCT 1543 Dry rainforest	*Cynanchum elegans* (White-flowered Wax Plant)	0.0785	0.1185
PCT 796 Native grassland	*Diuris tricolor* (Pine Donkey Orchid) *Dichanthium setosum* (Bluegrass) *Thesium austral* (Austral Toadflax)	0.0535	0.0684
Native grassland and exotic pasture	*Dichanthium setosum* (Bluegrass)	0.2049	0.1650
Total clearing of threatened flora habitat		0.776	0.357
Total change in clearing for compared to original project			-0.419 (54% decrease)

ii Fauna

The study area provides suitable nesting and foraging habitat for threatened woodland birds, bats and arboreal mammals in four native vegetation communities. The study area also supports a number of hollow-bearing trees that may provide breeding habitat for a number of arboreal mammals and birds. There would be an overall reduction in fauna habitat removal as a result of the amended project as outlined in Table 6.5.

Table 6.5 Estimated areas of threatened fauna habitat removal

PCT	Habitat type	Original area (hectares)	Amended area (hectares)
PCT 1543	Dry rainforest	0.0785	0.1185
PCT 1605	Dry sclerophyll forest	0.4387	0.0049
PCT 1608	Dry sclerophyll forest	0.3375	0.3392
PCT 1691	Grassy woodland	0	0
Total clearing of threatened fauna habitat		0.855	0.463
Total change in clearing for compared to original project			-0.392 (46% decrease)

6.2.3 Indirect impacts

Indirect impacts will remain substantially unchanged from the original assessment, and include:

- Increase in edge effects as a result of vegetation clearing (reduced compared to original project)
- Introduction and spread of weeds and exotic flora
- Invasion and spread of pests
- Invasion and spread of pathogens and disease
- Increase in noise, light, and vibration
- Temporary change to surface runoff and sedimentation (reduced compared to original project).

6.2.4 Summary

The amended project presents a substantial reduction in direct impacts biodiversity, being an approximate 50% decrease in clearing requirements.

6.3 Traffic

6.3.1 Overview

The Traffic Impact Assessment (TIA) prepared for the SoEE was reviewed in appreciation of the amended Geotechnical Invetigation program described in Section 1, and is available as Appendix A.

A comparison of the original proposed project and the proposed amendment is provided in Table 6.6 below.

Table 6.6 Amended project details

Element	Original project	Amended project
Work hours	Standard working hours: Monday – Friday: 7 am–6 pm Saturday: 8 am–1 pm Sunday and public holidays: no work	24 hours a day, seven days a week
Traffic movements	64 daily vehicle movements for mobilisation/demobilisation. 24 daily vehicle movements for geotechnical investigations.	An additional 4 light vehicle movements consisting of: 2 light vehicle movements at 6:30 pm daily (accounting for night shift arrival) 2 light vehicle movements at 6:30 am daily (accounting for night shift departure)

Note: A movement consists of a one-way journey from one place to another. If the return journey is included, this counts as two movements.

The additional four light vehicle movements will be on top of the 24 daily vehicle movements for geotechnical investigations, for a total 28 daily vehicle movements. The 64 daily vehicle movements for mobilisation/demobilisation will remain unchanged.

6.3.2 Assessment outcomes

The 2024 baseline traffic volumes have been compared to the original project vehicle movements as well as the additional four light vehicle movements proposed in the amended project to determine the impact of the

project's traffic to the surrounding road network. Both Aberdeen Street (New England Highway) and Sandy Creek Road will be assessed.

A 24-hour traffic count was performed at the Aberdeen Street (New England Highway)/Sandy Creek Road intersection on Tuesday 21 November 2023. Transport for New South Wales (TfNSW) has provided advice that there is expected to be a 1.2% growth per annum (p.a.) in background traffic in the vicinity of the intersection. Therefore, the 2024 baseline traffic volumes can be calculated by applying a 1.2% p.a. growth rate to the daily traffic volume.

The assessment has been conducted by comparing the project vehicle movements to the peak weekday traffic conditions as that is when the potential traffic impacts to the baseline road traffic conditions are likely to be the greatest.

The 2024 baseline traffic volumes and the proportion of project traffic on those roads are shown in Table 6.7.

Table 6.7 Comparison of background and project daily traffic volumes

Road	Two-way 2024 baseline	Original project mobilisation/ demobilisation (proportion of 2024 baseline)	Original project geotechnical investigation (proportion of 2024 baseline)	Additional geotechnical investigation (proportion of 2024 baseline)	Amended project geotechnical investigation (proportion of 2024 baseline)
Aberdeen Street	11,628	64 (0.55%)	24 (0.21%)	4 (0.03%)	28 (0.24%)
Sandy Creek Road	777	64 (8.24%)	24 (3.09%)	4 (0.51%)	28 (3.60%)

As shown in the above table, the additional movements are very minor compared to the background traffic volumes and the original project volumes. Therefore, it is considered that no further assessment is necessary as the impact of the additional movements to the surrounding road network is negligible.

6.3.3 Summary

As documented in the review of TIA in appreciation of the amended project, see Appendix A, the change of the operations to 24 hours a day, seven days a week, as well as the four additional light vehicle movements per day, will present negligible impacts to the road network. No further mitigations to that proposed in the SoEE, or subsequent documentation is proposed.

6.4 Noise

6.4.1 Overview and assessment outcomes

The Noise and Vibration Assessment (NVA, Resonate 2023) prepared for the SoEE was reviewed in appreciation of the amended Geotechnical Invetigation program described in Section 1, and is available as Appendix B.

The revised NVA (Resonate 2024, see Appendix B) determined the following predicted construction noise impacts largely associated with the change in borehole locations and adoption of 24 hr drilling operations. It is noted that the location of the below noted receivers is available in Figure 1 of Appendix B, detailed predicted construction noise levels are available in Appendix B of the revised NVA (see Appendix B of this letter report).

Results are summarised below in respect of the Interim Construction Noise Guideline (ICNG, Department of Environment and Climate Change 2009) criteria:

- There are no exceedances of the standard hours noise management levels predicted at any receivers for any of the test pit and bore hole works during standard hours work.

- There are no exceedances of the out of hours noise management levels predicted at any receivers for any of the test pit and bore hole works during out of hours work.
- Bore hole works noise levels are predicted to be well below the highly affected NML of 75 dB(A) at all receivers.

6.4.2 Summary

Noise mitigation measures as outlined in the SoEE would continue to be adopted by the amended geotechnical drilling program. A summary of the proposed mitigation measures noted in the SoEE is provided below:

- Fixed and mobile construction plant and equipment shall be located to maximise separation distance from nearest noise and vibration sensitive and residential receivers
- Construction plant shall be orientated away from nearest receivers where possible
- Where practical, simultaneous operation of dominant noise generating plant shall be managed to reduce noise impacts, such as operating at different times or increasing the distance between the plant
- Where possible and in compliance with occupational safety and health standards, reversing beepers on trucks would be replaced with low pitch non-tonal beepers (quackers). Alternatives to reversing beepers include the use of spotters and designing the site to reduce the need for reversing may assist in minimising the use of reversing beepers
- Ensure that all works comply with the ICNG standard daytime period's start and finish times (noting this will be adopted for the test pits, this amendment seeks approval of OOHs works)
- Where feasible and practicable, surrounding residences shall be notified of potential construction works at least two weeks prior to the commencement of works
- Construction noise and vibration management practices are to be provided to all staff and contractors and be included during site inductions and daily tool-box talks. The tool-box talks should include as a minimum, the permitted hours of construction work, work site locations, site ingress/egress and the required noise management measures for each construction phase.

6.5 Environmental management

The amended project will reduce direct environmental impacts associated with the decreased disturbance footprint when compared to that originally proposed. Indirect amenity impacts, such as noise, are predicted to increase reflective of 24 hour operations, however mitigation measures consistent with the SoEE are proposed to minimise potential impacts. It is noted that 24 hr drilling operations will reduce the overall project length, thus shortening the period in which impacts may be experienced.

In summary no additional mitigation measures as outlined in Section 6.10 of the SoEE, are required based on the amendments proposed

7 Justification and conclusion

The geotechnical investigations demonstrate compliance with the relevant environmental planning instruments and would allow MPH to fully consider its option to develop a pumped hydro energy storage (PHES) scheme at Muswellbrook Coal Mine in order to repurpose the site as mine rehabilitation activities progress.

The amended project will reduce direct environmental impacts associated with the decreased disturbance footprint when compared to that originally proposed. Indirect amenity impacts, such as noise, are predicted to increase reflective of 24 hour operations, however mitigation consistent with the SoEE are proposed to minimise potential impacts. It is noted that 24 hr drilling operations will reduce the overall project length, thus shortening the period in which impacts may be experienced.

The geotechnical investigations are considered critical if MPH is to meet its responsibilities for relevant actions under the Hunter Regional Plan 2026 (DPE 2016) for diversifying and growing the energy sector. The geotechnical investigations are also considered to be wholly aligned with the Pumped Hydro Roadmap (DPE 2018). It is also a direct response to Action 1 of the Pumped Hydro Roadmap, which is bringing forward private investment, described as "supporting the commercialisation of new, large-scale on-demand electricity projects."

The geotechnical investigations would assist MPH in verifying the site's suitability to generate pumped hydroelectricity, by providing a range of geotechnical data which is prerequisite to finalising this feasibility. The geotechnical investigations would therefore allow MPH to better understand how to direct its resources into future planning to meet the needs of NSW's energy demand. Moreover, the geotechnical investigations can be undertaken with only minimal environmental impacts. Overall, the geotechnical investigations are considered to be in the public interest and is therefore recommended for MSC's approval.

The site is considered to be suitable to support the current geotechnical investigations as:

- The geotechnical investigations constitute earthworks, a deemed development type which is permitted in any land zone
- There are no relevant matters under SEPP (Resilience and Hazards) 2021 which require further considerations to support the geotechnical investigations
- The geotechnical investigations comprise a temporary package of works which would not create lasting amenity impacts or other land use conflicts within the locality
- The geotechnical investigations can be undertaken with minimal environmental impacts, and a comprehensive EMP setting out the mitigation measures outlined in the SoEE
- The potential environmental and amenity impacts of the geotechnical investigations are also considered to be minimal while its public benefit holds great significance. The site is moreover considered to be suitable for the geotechnical investigations.

Accordingly, it is recommended that MSC grants favourable consideration to the amended geotechnical investigations.

Yours sincerely

Tom Frankham
Associate Environmental Scientist
tfrankham@emmconsulting.com.au

References

Department of Environment and Climate Change 2009. Interim Construction Noise Guideline

Department of Planning and Environment 2016. Hunter Regional Plan 2026

Department of Planning and Environment 2018. Pumped Hydro Roadmap

EMM 2024. Muswellbrook Pumped Hydro Energy Storage Lower Reservoir Geotechnical Investigation (DA2023/56) - Amendment - Traffic

Resonate 2024. Muswellbrook Pumped Hydro Lower Reservoir Geotechnical Investigation Noise and Vibration Assessment

SMEC 2023. Muswellbrook Pumped Hydro Energy Storage Lower Reservoir Geotechnical Investigation Statement of Environmental Effects. Prepared for: Muswellbrook Pumped Hydro Company Pty Ltd

Appendix A
Traffic Assessment

Ground floor 20 Chandos Street
St Leonards NSW 2065
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29 January 2024

Sharon Pope
Director Environment and Planning
Muswellbrook Shire Council

Re: Muswellbrook Pumped Hydro Energy Storage Lower Reservoir Geotechnical Investigation (DA2023/56) - Amendment - Traffic

Dear Sharon,

This letter refers to the traffic related matters in support of the main amendment application.

1 Introduction

Geotechnical Investigation Development Application (DA2023/56) was lodged on 31 May 2023 to Muswellbrook Shire Council (MSC) by the Muswellbrook Pumped Hydro Company Pty Ltd (MPH) to facilitate geotechnical investigations within the lower reservoir area of the proposed Muswellbrook Pumped Hydro Energy Storage Project (the project) which is currently subject of prefeasibility and environmental assessment.

DA2023/56 and the supporting Statement of Environmental Effects[1] (SoEE), was publicly exhibited by MSC between 13 June 2023 and 7 July 2023.

Since this time, further design assessment has been completed and MPH seek an amendment to the project in accordance with Division 2, Section 37 (1) of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) which allows an applicant to apply to the consent authority for an amendment to the development application at any time prior to its determination.

This traffic letter supports the main amendment application. The proposed traffic related amendments are outlined below:

- Amend working hours from standard working hours (7 am to 6 pm weekdays, 8 am to 1 pm Saturdays, no work Sundays and public holidays), to 24 hours a day, seven days a week
- Amend construction traffic light vehicle movements to account for 24 hours operation.

[1] 2023 report prepared by SMEC

2 Amendment description

The project description remains largely unchanged from the SoEE. The geotechnical drilling will be undertaken in the same manner as described in the SoEE and request for information (RFI) responses provided to MSC. The site access, decommissioning and rehabilitation will remain unchanged.

A comparison of the original proposed project and the proposed amendment is provided in Table 2.1.

Table 2.1 Amended project details

Element	Original project	Amended project
Work hours	Standard working hours: Monday – Friday: 7 am–6 pm Saturday: 8 am–1 pm Sunday and public holidays: no work	24 hours a day, seven days a week
Traffic movements	64 daily vehicle movements for mobilisation/demobilisation. 24 daily vehicle movements for geotechnical investigations.	An additional 4 light vehicle movements consisting of: 2 light vehicle movements at 6:30 pm daily (accounting for night shift arrival) 2 light vehicle movements at 6:30 am daily (accounting for night shift departure)

Note: A movement consists of a one-way journey from one place to another. If the return journey is included, this counts as two movements.

The additional four light vehicle movements will be on top of the 24 daily vehicle movements for geotechnical investigations, for a total 28 daily vehicle movements. The 64 daily vehicle movements for mobilisation/demobilisation will remain unchanged.

3 Baseline traffic volumes

The 2024 baseline traffic volumes have been compared to the original project vehicle movements as well as the additional four light vehicle movements proposed in the amended project to determine the impact of the project's traffic to the surrounding road network. Both Aberdeen Street (New England Highway) and Sandy Creek Road will be assessed.

A 24-hour traffic count was performed at the Aberdeen Street (New England Highway)/Sandy Creek Road intersection on Tuesday, 21 November 2023. Transport for New South Wales (TfNSW) has provided advice that there is expected to be a 1.2% growth per annum (p.a.) in background traffic in the vicinity of the intersection. Therefore, the 2024 baseline traffic volumes can be calculated by applying a 1.2% p.a. growth rate to the daily traffic volume.

The assessment has been conducted by comparing the project vehicle movements to the peak weekday traffic conditions as that is when the potential traffic impacts to the baseline road traffic conditions are likely to be the greatest.

The 2024 baseline traffic volumes and the proportion of project traffic on those roads are shown in Table 3.1.

Table 3.1 Comparison of background and project daily traffic volumes

Road	Two-way 2024 baseline	Original project mobilisation/ demobilisation (proportion of 2024 baseline)	Original project geotechnical investigation (proportion of 2024 baseline)	Additional geotechnical investigation (proportion of 2024 baseline)	Amended project geotechnical investigation (proportion of 2024 baseline)
Aberdeen Street	11,628	64 (0.55%)	24 (0.21%)	4 (0.03%)	28 (0.24%)
Sandy Creek Road	777	64 (8.24%)	24 (3.09%)	4 (0.51%)	28 (3.60%)

As shown in the above table, the additional movements are very minor compared to the background traffic volumes and the original project volumes. Therefore, it is considered that no further assessment is necessary as the impact of the additional movements to the surrounding road network is negligible.

4 Summary

Overall, the change of the operations to 24 hours a day, seven days a week, as well as the four additional light vehicle movements per day, will present negligible impacts to the road network.

If you have any questions/clarifications, please don't hesitate to contact me on 0425 478 650.

Yours sincerely

Abdullah Uddin
Associate Traffic Engineer
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Appendix B
Revised Noise and Vibration Assessment

Resonate

Muswellbrook Pump Hydro Lower Reservoir

Geotechnical Investigation Noise and Vibration Assessment

S210514RP1 Revision E

Friday, 26 January 2024

Resonate

Document Information

Project	Muswellbrook Pump Hydro Lower Reservoir
Client	SMEC Australia Pty Ltd
Report title	Geotechnical Investigation Noise and Vibration Assessment
Project Number	S210514

Revision Table

Report revision	Date	Description	Author	Reviewer
0	12 December 2022	Draft – first issue	Marc Schlussel	Raymond Sim
A	13 December 2022	Draft – second issue	Marc Schlussel	Raymond Sim
B	13 January 2023	Final	Marc Schlussel	Raymond Sim
C	1 February 2023	Final – update work duration	Marc Schlussel	Raymond Sim
D	17 January 2024	Final – update work hours	Marc Schlussel	Raymond Sim
E	26 January 2024	Final – update sound power level	Marc Schlussel	Raymond Sim

Resonate

Glossary

A-weighting	A spectrum adaption that is applied to measured noise levels to represent human hearing. A-weighted levels are used as human hearing does not respond equally at all frequencies.
Ambient noise	The total noise in a given situation, inclusive of all noise source contributions in the near and far field.
Characteristic	Associated with a noise source, means a tonal, impulsive, low frequency or modulating characteristic of the noise that is determined in accordance with the NSW EPA's *Noise Policy for Industry* to be fundamental to the nature and impact of the noise.
Compliance	The process of checking that source noise levels meet with the noise limits in a statutory context.
Day	Between 7 am and 6 pm as defined in the NPI
dB	Decibel—a unit of measurement used to express sound level. It is based on a logarithmic scale which means a sound that is 3 dB higher has twice as much energy. We typically perceive a 10 dB increase in sound as a doubling of loudness.
dB(A)	dB(A) denotes a single number sound pressure level that includes a frequency weighting ("A-weighting") to reflect the subjective loudness of the sound level. The frequency of a sound affects its perceived loudness. Human hearing is less sensitive at low and very high frequencies, and so the A-weighting is used to account for this effect. An A-weighted decibel level is written as dB(A).
Evening	Between 6 pm and 10 pm as defined in the NPI
Frequency (Hz)	The number of times a vibrating object oscillates (moves back and forth) in one second. Fast movements produce high frequency sound (high pitch/tone), but slow movements mean the frequency (pitch/tone) is low. 1 Hz is equal to 1 cycle per second.
ICNG	NSW EPA's *Interim Construction Noise Guideline*.
L_{10}	Noise level exceeded for 10 % of the measurement time. The L_{10} level represents the typical upper noise level and is often used to represent traffic or music noise.
L_{90}	Noise level exceeded for 90 % of the measurement time. The L_{90} level is commonly referred to as the background noise level.
L_{eq}	Equivalent Noise Level—Energy averaged noise level over the measurement time.
L_{max}	The maximum instantaneous noise level.
Night	Between 10 pm on one day and 7 am on the following day as defined in the NPI
Noise criteria	The general set of non-mandatory noise levels for protecting against intrusive noise (for example, background noise plus 5 dB) and loss of amenity (e.g. noise levels for various land use).
Noise source	Premises or a place at which an activity is undertaken, or a machine or device is operated, resulting in the emission of noise
NPI	NSW EPA's *Noise Policy for Industry*.

Rating Background Level (RBL)	The RBL is the overall single figure background level representing each assessment period (day, evening and night) over the whole monitoring period (as opposed to over each 24-hour period used for the ABL). This is the level used for assessment purposes. It is the median value of: • All the day assessment background levels over the monitoring period for the day; • All the evening assessment background levels over the monitoring period for the evening; or All the night assessment background levels over the monitoring period for the night.
Sound Power Level (SWL)	The sound power level of a noise source is the sound energy emitted by the source. Notated as SWL, sound power levels are typically presented in *dB(A)*.
Sound Pressure Level (SPL)	The level of noise, usually expressed as SPL in *dB(A)*, as measured by a standard sound level meter with a pressure microphone. The sound pressure level in *dB(A)* gives a close indication of the subjective loudness of the noise.

Resonate

Table of Contents

1 Introduction

Resonate Consultants has been engaged by SMEC Australia Pty Ltd to conduct a noise and vibration assessment for geotechnical investigations drilling works to be undertaken in early 2023 at the lower reservoir location of the proposed Muswellbrook Pump Hydro. This geotechnical investigation noise and vibration assessment would be used to support the application to conduct the borehole works.

It is understood the test pit works are likely to occur during standard construction hours and bore hole works are to occur during standard hours and out-of-hours periods. The works have an expected duration of 12 weeks. In accordance with the EPA's *Interim Construction Noise Guideline*, standard hours of construction are as follows:

- Monday to Friday 7 am to 6 pm
- Saturday 8 am to 1 pm
- No work on Sundays or public holidays.

It is also understood that works at the boring sites at the lower reservoir location would be undertaken consecutively and not concurrently.

The objective of this report is to document the potential noise and vibration impacts that may be generated due to the geotechnical site investigation work. A number of noise sensitive receivers located near the boring sites have been identified to be potential impacted by the works and hence an assessment of noise and vibration impacts is required.

2 Existing ambient noise environment

2.1 Site location and noise catchment areas

The borehole sites are to be located within the old Muswellbrook coal mine. The surrounding land-uses of the site are detailed below:

- North – Noise sensitive receivers scattered to the north of the site, including a substation to the North. Nearest sensitive receiver is at a distance of approximately 0.5 kilometres.
- West – Distant noise sensitive receivers scattered to the west of the site. Nearest sensitive receiver is at a distance of approximately 1.4 kilometres.
- East – Vegetation and hills are located to the east of the site with no noise sensitive receivers.
- South – Distant noise sensitive receivers scattered to the south of the site. Nearest sensitive receiver is at a distance of approximately 5.4 kilometres.
- Southwest – Muswellbrook town is located to the southwest of the coal mine approximately 4.4 kilometres away from the proposed bore hole sites.

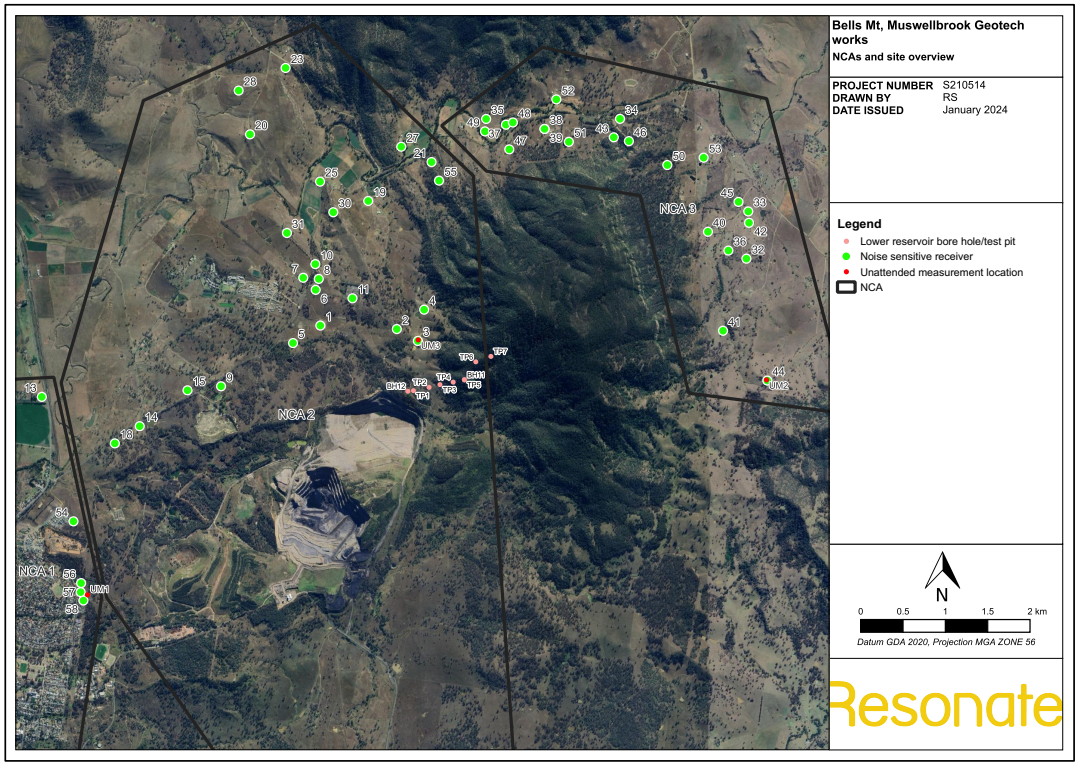


Figure 1: NCA and noise study area overview

2.2 Unattended noise monitoring

Unattended noise monitoring was undertaken between the dates of 11 November 2022 and 23 November 2022 at three locations (UM1, UM2 and UM3 as shown in Figure 1) to characterise the background noise level of the nearest sensitive receiver locations.

2.3 Instrumentation

The instrumentation of the unattended noise monitoring comprised of three Rion NL-42 environmental noise loggers (serial number: 00946983, 00946978, 00946981) fitted with wind shields. Field calibration was conducted at the commencement and at the conclusion of the logging period and no significant calibration drift was observed (drift in calibration did not exceed ±0.5 dB(A)). All instrumentation carried appropriate and current NATA (or manufacturer) calibration certificates.

2.4 Weather conditions

It is a requirement that noise data is captured during periods of favourable weather conditions avoiding adverse impacts of wind and rain on background noise levels. To assess weather conditions for the measurement period, half-hourly weather data was obtained from the Bureau of Meteorology (BOM) weather observation station ID 061363 at Scone Airport AWS.

Noise data has been excluded from the processed results if:

- rain was observed during a measurement period, and/or
- wind speed exceeded 5 m/s (18 km/h) at the measurement height of 1.5 m above ground. Wind data obtained from the BOM is presented as the value at 10 m above ground.

The BOM wind speed data obtained for this report was measured at a height of 10 m above ground level. It is therefore necessary to apply a correction factor in order to estimate the wind speed at the height of the logger (1.5 m).

The methodology to formulate a correction factor has been derived[1]. The correction multiplier for the measured wind speed at 10 m is derived by the following formula:

$$W_{1.5}=W_{10}\times\left(\frac{M_{1.5,cat}}{M_{10,cat}}\right)$$

where:

$W_{1.5}$ = Wind speed at height of 1.5 m
W_{10} = Wind speed at height of 10 m
$M_{1.5,cat}$ = AS 1170 multiplier for receiver height of 1.5 m and terrain category
$W_{10,cat}$ = AS 1170 multiplier for receiver height of 10 m and terrain category

2.5 Unattended noise monitoring results

The noise data obtained from the noise logger has been processed in accordance with the procedures contained in the NSW Noise Policy for Industry (NPI) to establish representative noise levels at the monitoring location.

A summary of background L_{A90} results from the unattended noise survey during proposed operational hours of the playground is presented in Table 1.

[1] Gowen, T., Karantonis, P. & Rofail, T. (2004), *Converting Bureau of Meteorology wind speed data to local wind speeds at 1.5m above ground level*, Proceedings of ACOUSTICS 2004

The background noise levels were determined by taking the arithmetic mean noise level that was exceeded for 90% of the time during the relevant assessment periods for each day and then taking the median of all the days where monitoring took place for each assessment period as identified in the NPI. This process provides a single figure rating background noise level (RBL) for the day, evening and night periods. These RBLs were used to establish the relevant noise criteria in accordance with the NPI for each assessment period.

Detailed graphs presenting measured noise levels versus time overlaid with weather data for the monitoring period are presented in Appendix A.

Table 1: Unattended noise monitoring results summary

Monitoring location	Baseline noise levels – dB(A)					
	Daytime 7:00 am – 6:00 pm		Evening 6:00 pm – 10:00 pm		Night 10:00 pm – 7:00 am	
	RBL	$L_{eq, period}$	RBL	$L_{eq, period}$	RBL	$L_{eq, period}$
UM1	35 (33[1])	44	35	49	33	42
UM2	35 (27[1])	56	31	46	30 (26[1])	37
UM3	35 (27[1])	46	34	53	30 (29[1])	49

(1) Actual RBL is below assumed policy minimums; therefore, NPI minimum RBL has been adopted.

3 Construction noise and vibration criteria

The NSW Department of Environment and Climate Change – *Interim Construction Noise Guideline* (ICNG), presents an accepted method by which construction noise impacts may be assessed for a range of receptor types for works completed in NSW. It provides a set of recommended standard hours of construction, as reproduced below:

- Monday to Friday: 7 am to 6 pm.
- Saturday: 8 am to 1 pm.
- No work on Sundays or public holidays.

The ICNG encourages works to occur within the recommended standard hours of construction unless justification is provided. It focuses on minimising construction noise impacts, rather than only on achieving numeric noise levels, and recognises that some noise from construction sites is inevitable.

The ICNG encourages organisations involved with construction, maintenance or upgrading works (e.g. large scale contractors or Government agencies) to develop their best-practice techniques for managing construction noise and vibration and implementing feasible and reasonable mitigation measures.

In this case, the ICNG is the most suitable guideline document to quantitatively assess potential noise emissions and impacts associated with project construction. The ICNG assessment methodology has been adopted to develop project-specific construction noise management levels (refer Chapter 3), assess potential impacts (refer Chapter 4) and recommend any necessary mitigation, management measures or provisions for monitoring (refer Chapter 5).

Table 2 details the construction noise management levels guidance for residential noise sensitive receptors developed in accordance with the ICNG.

Table 2: Construction airborne noise management levels for residential receivers

Time of Day	Noise Management Level, $L_{Aeq,\ 15\ minute}$ – dB(A)	How to Apply
Recommended standard hours: Monday to Friday 7 am to 6 pm Saturday 8 am to 1 pm No work on Sundays or Public Holidays	Noise affected Rating Background Level (RBL) + 10 dB(A)	The noise affected level represents the point above which there may be some community reaction to noise. • Where the predicted or measured $L_{eq,\ 15\ minute}$ is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. • The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly noise affected 75 dB(A)	The highly noise affected level represents the point above which there may be a strong community reaction to noise. • Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account: 1. times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or mid-

Time of Day	Noise Management Level, $L_{Aeq,\ 15\ minute}$ – dB(A)	How to Apply
		morning or mid-afternoon for works near residences) 2. if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
Outside recommended standard hours	Noise affected Rating Background Level (RBL) + 5 dB(A)	• A strong justification would typically be required for works outside the recommended standard hours. • The proponent should apply all feasible and reasonable work practices to meet the noise affected level. • Where all feasible and reasonable practices have been applied and noise is more than 5 dB(A) above the noise affected level, the proponent should negotiate with the community. • For guidance on negotiating agreements see section 7.2.2 of the ICNG.

3.1 Noise Policy for Industry

Responsibility for the control of noise emissions in NSW is typically vested in Local Government and the NSW Environment Protection Authority (EPA). The *Noise Policy for Industry* (NPI) and relevant application notes provide a framework and methodology for deriving limit conditions for project consent and environment protection licence conditions.

The NPI is designed for the assessment of operational noise emissions from large and complex industrial sources and outlines processes designed to strike a feasible and reasonable balance between the operations of industrial activities and the protection of the community from noise levels that are intrusive or unpleasant.

The NPI measurement and evaluation methodology to quantify existing ambient and background noise levels has been adopted for this assessment, with the baseline values utilised to derive construction noise management levels.

3.2 Construction noise and vibration management levels

Construction works for this project would be undertaken in accordance with the ICNG and could occur during standard construction hours over a period of 12 weeks.

3.2.1 Airborne noise

The project-specific construction “Noise Management Levels” (NML), for works within and outside the recommended standard hours for construction, are presented in Table 3 below.

Resonate

Table 3: Noise Management Levels

Receiver Type	Construction Noise Management Levels, $L_{eq,\ 15\ minute}$, dB(A)				High Noise Affected, $L_{eq,\ 15\ minute}$, dB(A)
	Standard Hours	Out-of-Hours			Daytime (Standard Hours)
	Day	Day	Evening	Night	
Residential NCA 1 (UM1)	45	40	40	38	75
Residential NCA 2 (UM2)	45	40	36	35	75
Residential NCA 3 (UM3)	45	40	39	35	75
Commercial	70	70	70	70	-[1]
Industrial	75	75	75	75	-[1]
Classrooms at schools and other educational institutions	45[2]	45[2]	45[2]	45[2]	-[1]
Hospital wards and operating theatres	45[2]	45[2]	45[2]	45[2]	-[1]
Places of worship	45[2]	45[2]	45[2]	45[2]	-[1]
Active recreation areas	65	65	65	65	-
Passive recreation Areas	60	60	60	60	-

(1) Dash "-" indicates that these criteria do not apply to that receiver type.

(2) Internal noise level criteria. An assumed 10 dB façade noise reduction has been implemented for internal properties.

As the bore hole works will only be carried out during standard construction hours, only the standard hours construction noise management levels will be used to assess the proposed works. Out of hours noise management levels have been presented in Table 3 for completeness only.

3.2.2 Sleep disturbance criteria

As stated in the NPI the potential for sleep disturbance from maximum noise level events generated by industrial premises during the night-time period needs to be considered. The term "sleep disturbance" is considered to be both awakenings and disturbance to sleep stages.

To evaluate potential sleep disturbance or awakening issues associated with the operation of the proposal the NPI screening method has been adopted as follows. There is limited potential for sleep disturbance or awakening issues to occur, where:

- The predicted project night-time noise level ($L_{eq,\ 15\ minute}$ in dB(A)) at any residential receptor remains below 40 dB(A) (or the prevailing night-time background noise level plus 5 dB(A)), whichever is the greater.
- The predicted project night-time noise level (L_{max} in dB(A)) at any residential receptor remains below 52 dB(A) (or the prevailing night-time background noise level plus 15 dB(A)), whichever is the greater.

These screening method features have been adopted for likely maximum noise level events from the operation of the proposal.

In accordance with the NPI, the sleep disturbance noise criteria for assessing the proposal are presented in Table 4 below.

Table 4: Sleep disturbance noise criteria for all NCAs

Receiver Type	$L_{eq,\ 15minute}$ dB(A)	L_{max} dB(A)
Residential receivers (all NCAs)	40	52

As the bore hole works will only be carried out during standard construction hours, noise assessment of the proposed works against the sleep disturbance criteria will not be required.

3.2.3 Ground-borne noise

Ground-borne noise will not be a controlling factor with respect to construction noise impacts. No underground works will occur and therefore air-borne noise levels will exceed the ground-borne noise levels and control noise management requirements. As such, a detailed ground-borne noise assessment is not required for the geotechnical investigation works.

3.2.4 Construction vibration criteria

Ground vibration generated by construction can have a range of effects on buildings and building occupants, with the main effects generally classified as:

- Human disturbance – disturbance to building occupants: vibration which inconveniences or interferes with the activities of the occupants or users of the building
- Effects on building structures – vibration that may compromise the condition of the building structure itself.

In general, vibration criteria for human disturbance are more stringent than vibration criteria for effects on building contents and structural damage. Building occupants will normally feel vibration readily at levels well below those that may cause a risk of cosmetic or structural damage to a structure. However, it may not always be practical to achieve the human comfort criteria. Furthermore, unnecessary restriction of construction activities can prolong construction works longer than necessary, potentially resulting in other undesirable effects for the local community.

Construction vibration criteria have been adopted from the following sources:

- Cosmetic and structural damage to buildings: German Standard DIN 4150-3[2]
- NSW Environmental Protection Agency's Human comfort: Assessing Vibration – a technical guideline (the Guideline)

Cosmetic and structural damage

The DIN 4150-3 structural and cosmetic damage assessment criteria for different types of buildings are presented in Table 5. The criteria are specified as Peak Particle Velocity (PPV) levels measured in any direction at or adjacent to the building foundation.

DIN 4150-3 states that exposing buildings to vibration levels higher than that recommended in Table 5 would not necessarily result in damage. Rather it recommends these values as maximum levels of short-term construction vibration at which experience has shown that damage that reduces the serviceability of structures will not occur due to vibration effects.

[2] German Standard DIN 4150-3, 1999, *Structural Vibration – Part 3: Effects of vibration on structures*.

DIN 4150-3 is considered to be suitable for the assessment of both structural and cosmetic damage as the standard considers a reduction in serviceability of the structure is deemed to have occurred if:

- Cracks form in plastered surfaces of walls.
- Existing cracks in the building are enlarged.
- Partitions become detached from loadbearing walls or floors.

Table 5: DIN 4150-3 vibration cosmetic and structural damage criteria

Structure type	Peak Particle Velocity (PPV), mm/s			
	Foundation of structure			Vibration at horizontal plane of highest floor at all frequencies
	<10 Hz	10-50 Hz	50-100 Hz	
Buildings used for commercial, industrial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40
Dwelling and buildings of similar design and/or use	5	5 to 15	15 to 20	15
Structures that, because of their particular sensitivity to vibration, do not correspond to those listed in rows 1 and 2, and are of great intrinsic value (e.g. heritage-listed buildings)	3	3 to 8	8 to 10	8

DIN4150 states that exceedances of the guidance values do not necessarily mean that damage will occur, but that more detailed analysis may be required in order to quantify the site specific relationship between vibration levels, strain and the potential for damage. If required, the additional analysis may include more detailed vibration, strain or displacement measurements combined with engineering analysis.

Human comfort

The ICNG recommends that vibration from construction works be assessed under the EPA's *Assessing Vibration – a technical guideline* (the Vibration Guideline). The vibration assessment criteria defined in this Vibration Guideline are for human comfort and represent goals that, where predicted or measured to be exceeded, require the application of all feasible and reasonable mitigation measures. Where the maximum value cannot be feasibly and reasonably achieved, the operator would need to negotiate directly with the affected community.

The Vibration Guideline defines vibration assessment criteria for continuous, impulsive and intermittent vibration. Vibration can be classified according to the following definitions:

- Continuous vibration: continues uninterrupted for a defined period. Applies to continuous construction activity such as tunnel boring machinery.
- Impulsive vibration: rapid build-up to a vibration peak followed by a damped decay or the sudden application of several cycles of vibration at approximately the same magnitude providing that the duration is short. Applies to very occasional construction activities that create distinct events such as the occasional dropping of heavy equipment.
- Intermittent vibration: interrupted periods of continuous vibration (such as a drill) or repeated periods of impulsive vibration (such as a pile driver).

- The majority of construction works as part of the proposal would be expected to be intermittent in nature with the potential for some impulsive activities (e.g. demolition works).

Table 6 presents the management levels for continuous and impulsive vibration at different land uses. The management levels specified are as overall unweighted root-mean-square (rms) vibration velocity levels (V_{rms}). The Guideline specifies the management levels as suitable for vibration sources predominantly in the frequency range 8-80 Hz as would be expected for construction vibration.

Table 6: Daytime V_{rms} management levels for continuous and impulsive vibration

Receiver	Continuous vibration V_{rms}, mm/s		Impulsive vibration V_{rms}, mm/s	
	Preferred	Maximum	Preferred	Maximum
Residences – daytime	0.2	0.4	6	12
Residences – night-time	0.14	0.28	2	4
Offices, schools, place of worship	0.4	0.8	13	26
Workshops	0.8	1.6	13	26

For intermittent vibration, the Vibration Dose Value (VDV) is used as the metric for assessment as it accounts for the duration of the source, which will occur intermittently over the assessment period. The VDV management levels at different land uses for intermittent vibration sources are presented in Table 7.

Table 7: VDV management levels for intermittent vibration

Receiver	VDV – Intermittent vibration, $m/s^{1.75}$	
	Preferred	Maximum
Residences – daytime	0.2	0.4
Residences – night-time	0.13	0.26
Offices, schools, places of worship	0.4	0.8
Workshops	0.8	1.6

4 Construction noise assessment

In order to quantify noise emissions from the proposed construction works, environmental noise modelling software (SoundPLAN v8.2 using the CONCAWE calculation algorithm Category 6) has been utilised to predict the $L_{Aeq(15\text{-minute})}$ noise levels at nearby receivers. The calculations include: the source noise levels of the anticipated equipment, the location of selection of nearby sensitive receivers, the number of plant items likely to be operating at any given time and the distance between the equipment and the receivers.

Total sound power levels (SWLs) are then provided for required construction stage. The typical noise levels are based on previous measurements conducted by Resonate and RMS's *Construction Noise and Vibration Guideline* (CNVG). The predicted noise level results are presented as a summary of the potential noise impacts when the work is located at the nearest position within the project area to the sensitive receiver in question.

In practice, the noise levels will vary because plant will move around the worksites and will not all be operating concurrently. As such, noise levels are likely to be lower than the worst-case noise levels presented for notable periods of time during the works.

4.1 Plant and equipment

The predicted plan and equipment that will be used at the site are presented in Table 8 with their associated sound power levels. The schedule of plant and equipment to be used would be confirmed with the final construction program. The current staging and plant for the test pit and bore hole works have been provided by the client. The sound power levels of all plant/equipment, except for the pilling rig, have been derived from Transport for New South Wales' *Construction Noise and Vibration Strategy* (2018). The sound power level of the boring rig was based on a contractor measured noise level of 75 dB(A) at 7 metres, of an existing rig.

Table 8 Plant and equipment sound power levels

Stage	Plant and equipment	Typical Sound Power Level dB(A)	Number off	Operating time (% of typical 15-minute assessment period)	Estimated sound power level Lw, dB(A)
Test pit works (standard daytime hours only)	Excavator (20 tonne)	105	1	1	105
	Water cart	107	1	0.25	101
	Light vehicles	88	3	0.5	90
				Total Lw	**107**
Borehole works (24 hours; i.e. standard hours and OOHs)	Piling rig (bored)	100	1	1	100
	Water cart	107	1	0.25	101
	Light vehicles	88	3	0.5	90
	Daymaker	98	1	1	98
				Total Lw	**105**

4.2 Predicted construction noise impacts and discussions

Detailed predicted noise levels (PNLs) from the bore hole works are presented in Appendix B.

Based on our review of the predicted noise levels in Appendix B, it is noted that there are no exceedances of the standard hours and OOH noise management levels predicted at any sensitive receivers for any of the test pit and bore hole locations.

Notwithstanding, noise mitigation measures and application of good practice noise management have been considered. Noise mitigation and management measures are discussed in Chapter 5 of this document.

4.3 Construction vibration

It is understood that the vibration-intensive equipment that may be used during the proposal includes compaction equipment such as a vibratory roller. Relevant recommended safe setback distances to maintain building cosmetic and human comfort criteria for these types of plant are reproduced from the CNVG below in Table 9.

Table 9: Recommended safe setback distances for relevant vibration-generating plant

Plant Item	Rating/Description	Minimum Working Distance – Cosmetic Damage[1] (BS7385)	Minimum Working Distance – Human Response (OH&E Guideline)
Pile Boring	≤ 800 mm	2 m (nominal)	4 m

The nearest residential building has been identified to be approximately 0.5 kilometres from the nearest borehole site. At this distance, the works are assessed to comply with the safe working distance for potential building damage Pile boring as described in Table 9 and are not expected to result in vibration levels above the human comfort criteria.

5 Construction noise management and mitigation measures

This section details pre-construction and construction phase management and mitigation measures designed as best-practice methods to mitigate construction noise and vibration impacts regardless of predicted exceedances.

The management measures have been informed from guidance provided in the ICNG which promotes principles of best management practice and community notification of likely noise and vibration impacts.

It will be important for the contractor to undertake all reasonable and feasible measures to reduce noise impacts and minimise impact potential through programming works to minimise duration and liaise with affected landowners and local communities throughout the construction program.

All Contractors commissioned to undertaken construction works associated with the Project are recommended to adhere to all noise and vibration management and mitigation measures recommended.

5.1 Recommended measures

During the planning and scheduling of construction works, the predicted noise levels should be considered in establishing work site locations, construction techniques and on-site practices.

Construction works should adopt Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) practices as addressed in the ICNG. BMP includes factors discussed within this report and encouragement of a project objective to reduce noise emissions. BATEA practices involve incorporating the most advanced and affordable technology to minimise noise emissions. The following principles and proactive noise management measures are to be considered for implementation:

- Fixed and mobile construction plant and equipment shall be located to maximise separation distance from nearest noise and vibration sensitive and residential receivers.
- Construction plant shall be orientated away from nearest receivers where possible.
- Where practical, simultaneous operation of dominant noise generating plant shall be managed to reduce noise impacts, such as operating at different times or increasing the distance between the plant.
- Where possible and in compliance with occupational safety and health standards, reversing beepers on trucks would be replaced with low pitch non-tonal beepers (quackers). Alternatives to reversing beepers include the use of spotters and designing the site to reduce the need for reversing may assist in minimising the use of reversing beepers.
- Ensure that all works comply with the ICNG standard daytime period's start and finish times.
- Where feasible and practicable, surrounding residences shall be notified of potential OOH bore hole works at least 2 weeks prior to the commencement of works.
- Construction noise and vibration management practices are to be provided to all staff and contractors and be included during site inductions and daily tool-box talks. The tool-box talks should include as a minimum, the permitted hours of construction work, work site locations, site ingress/egress and the required noise management measures for each construction phase.

5.2 Monitoring of construction noise

This section details the noise monitoring strategy for borehole works:

- In the event of justified adverse community response or complaint to construction noise, monitoring of construction noise is recommended to confirm construction noise levels at the complainant's property.
- All noise monitoring should be undertaken by suitably qualified practitioners with consideration to guidance provided in the ICNG and relevant regulatory and statutory guidelines.

5.3 Non-compliance / complaint response

Non-conformances for noise and vibration during construction works may include:

- Exceedance of adopted receiver specific construction noise management levels; triggering the requirement for noise management measures.
- Exceedance of annoyance and structural vibration objectives.
- Justified community complaints relating to noise and vibration.

The construction works shall be immediately assessed to review operation of noise generating plant, required construction activity and current on and off-site noise mitigation measures in place.

Any non-conformances and subsequent corrective actions shall be resolved with consideration to the project's Community Consultation Strategy. The Environment Manager and Site Supervisor shall determine where corrective action is required and implement necessary mitigation measures.

All adopted noise mitigation measures should be updated in work method statements and identified as part of routine tool-box talks to inform staff of current construction noise and vibration issues and required mitigation measures.

Consistent with the noise mitigation measures presented in this report; examples of corrective actions to be implemented by the Environment Manager include:

- Implementing alternative construction methodologies utilising low noise or low vibration generating plant.
- Replacing excessively noisy equipment.
- Fitting additional acoustic controls to minimise emissions from machinery.
- Increasing separation distance between noise generating plant and nearest sensitive receivers.
- Consider respite periods where construction noise impacts include potential tonal, low frequency or impulsive annoying characteristics at nearest receivers.

6 Conclusion

Resonate Consultants has completed a noise and vibration impact assessment to support the application of the borehole works.

Due to the location of the construction site, several potentially affected noise and vibration sensitive receivers have been identified. Background noise levels have been established with unattended noise measurements and the NPI and have been used to establish the project specific NMLs.

Construction noise impacts have been assessed against the project specific NMLs in accordance with the ICNG. Construction vibration impacts have been assessed against recommended limits specified in the German Standard DIN 4150-3[3] and the *Assessing Vibration – a technical guideline*.

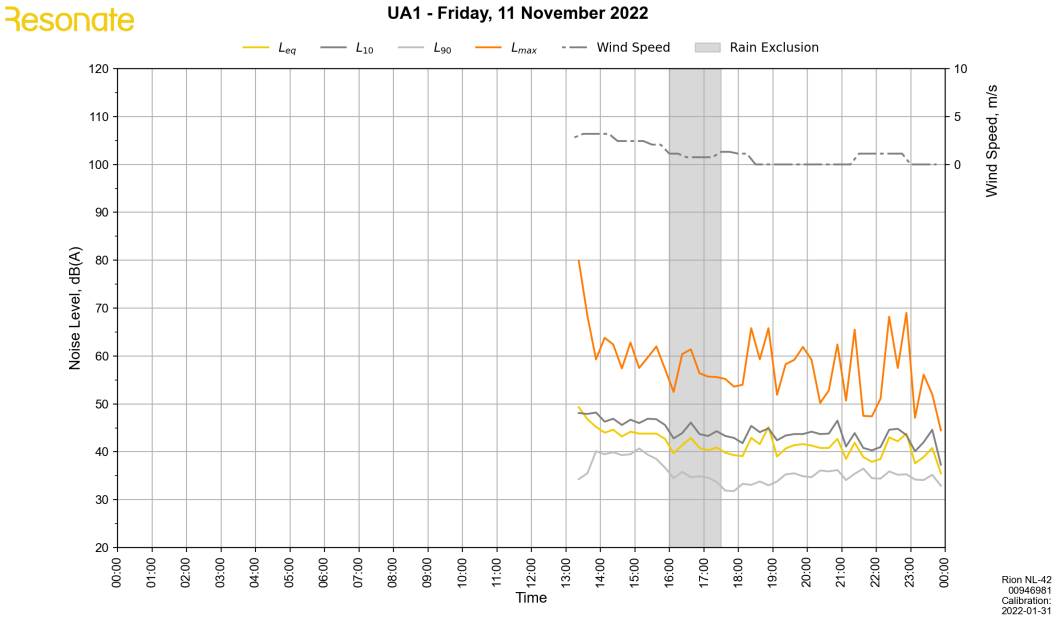
Based on our review of the predicted noise levels in Appendix B, it is noted that there are no exceedances of the standard hours noise management levels predicted at any sensitive receivers for any bore hole locations. Construction noise levels are predicted to be well below the highly affected NML of 75 dB(A).

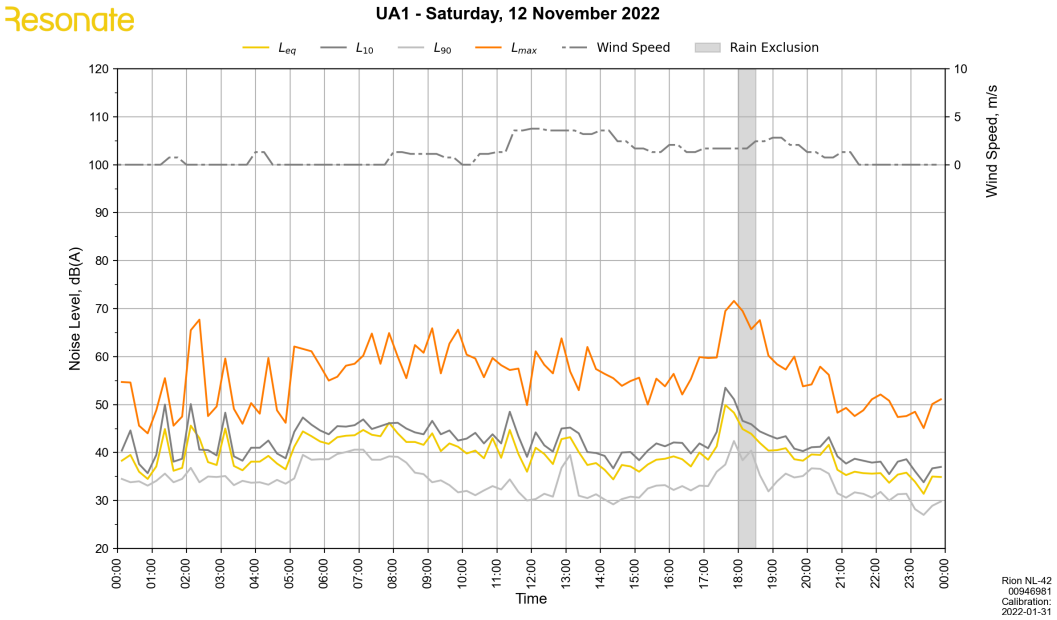
Based on the predicted noise levels, best-practice standard noise mitigation measures have been recommended for implementation where feasible and reasonable.

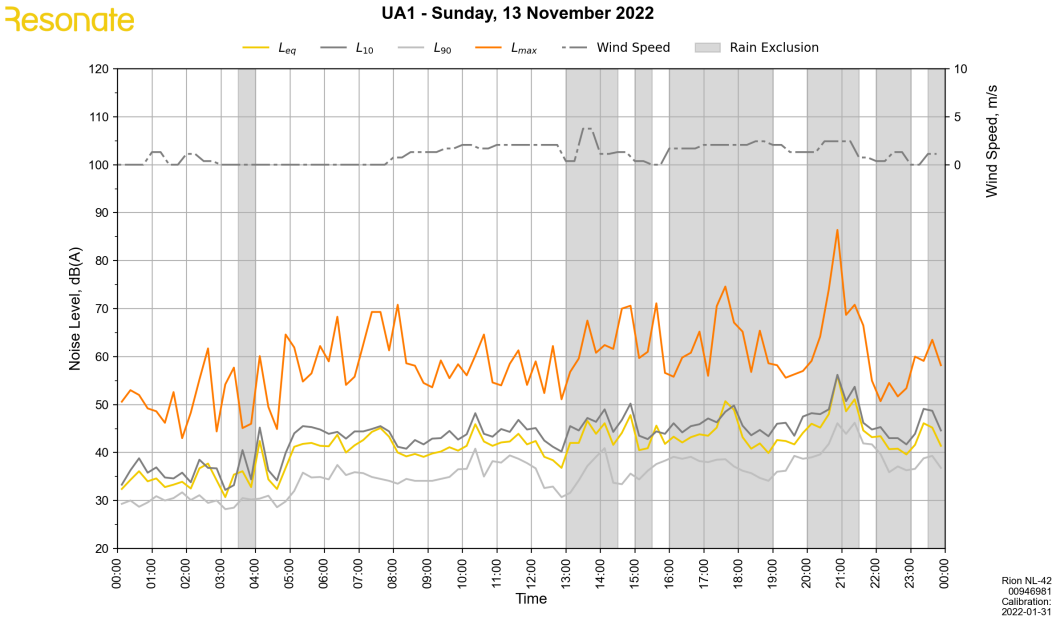
Vibration emissions generated by activities associated with the construction works have been assessed to have very low risk of structural damage to and adverse comments from the closest sensitive receivers. Based on the assessed compliance of the construction vibration, implementation of measures to reduce vibration impacts are not deemed to be necessary.

[3] German Standard DIN 4150-3, 1999, *Structural Vibration – Part 3: Effects of vibration on structures*.

Appendix A – Noise logger graphs



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Wind Speed, m/s
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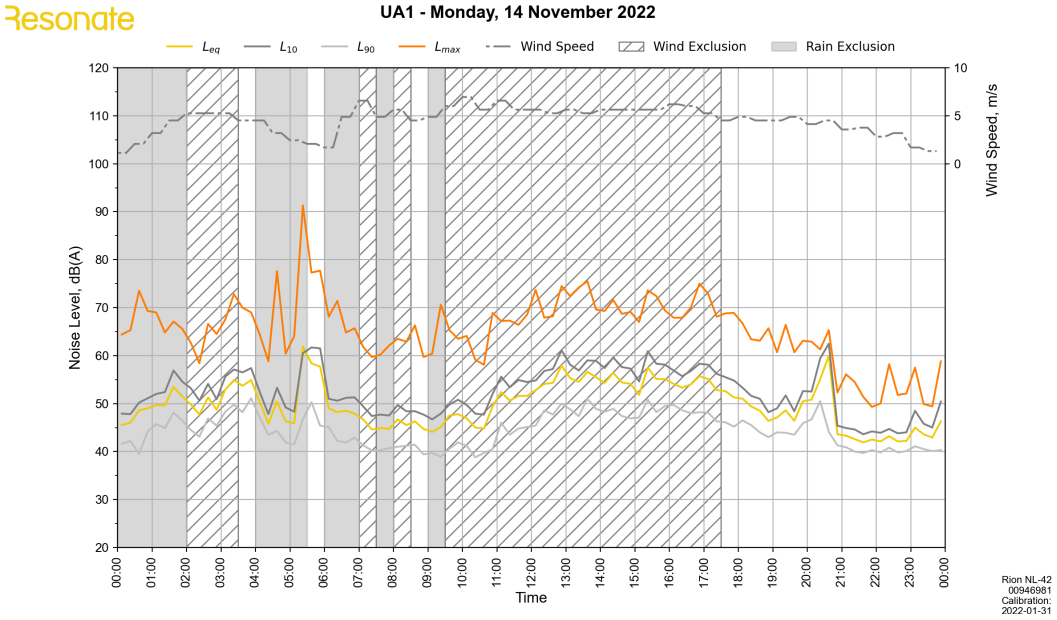
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Wind Speed, m/s
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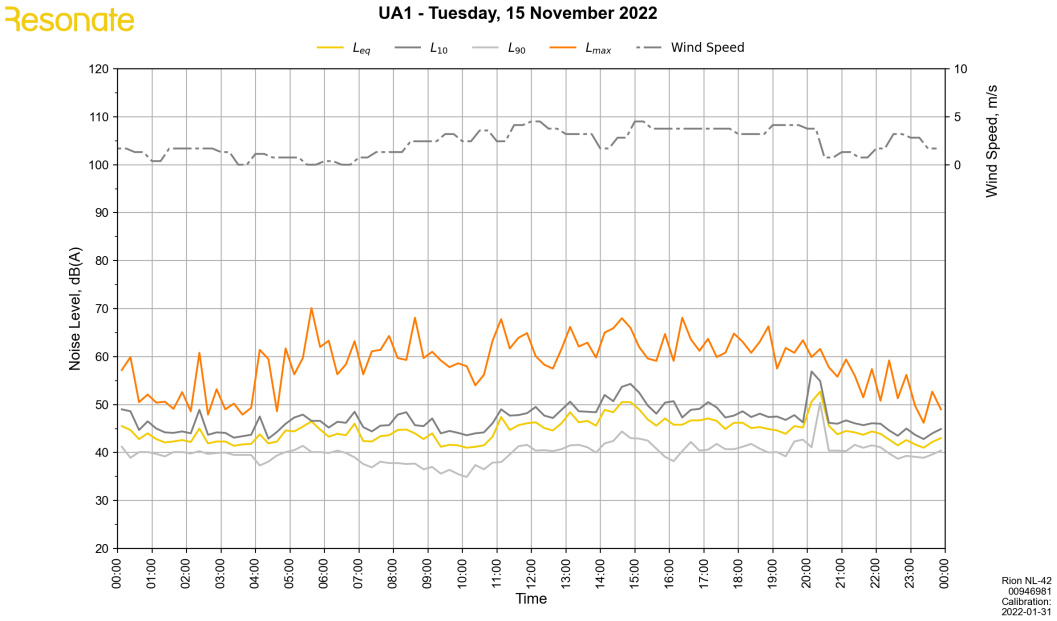
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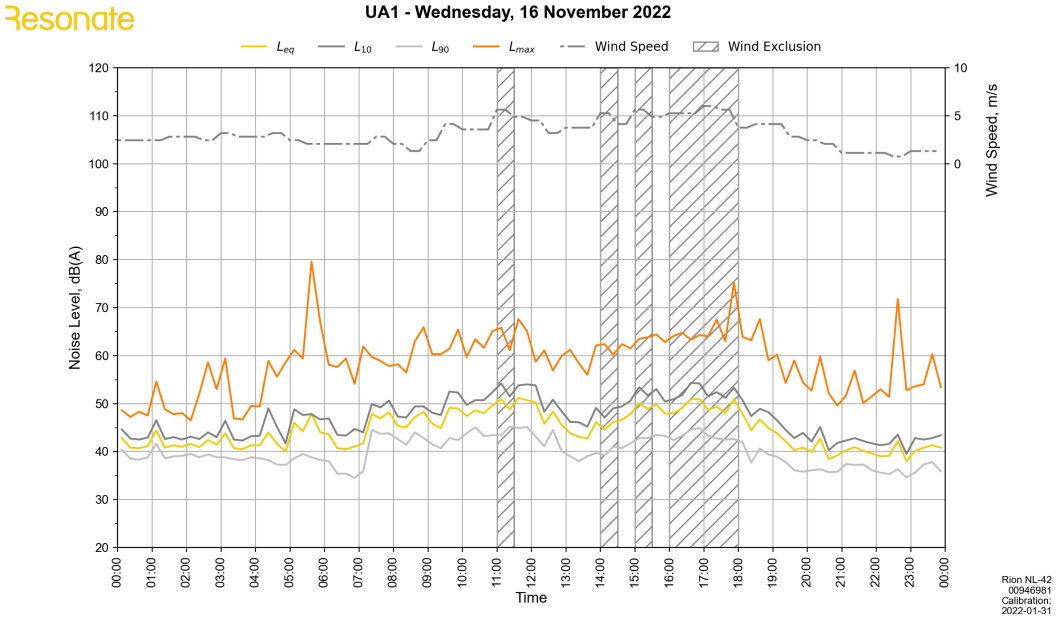
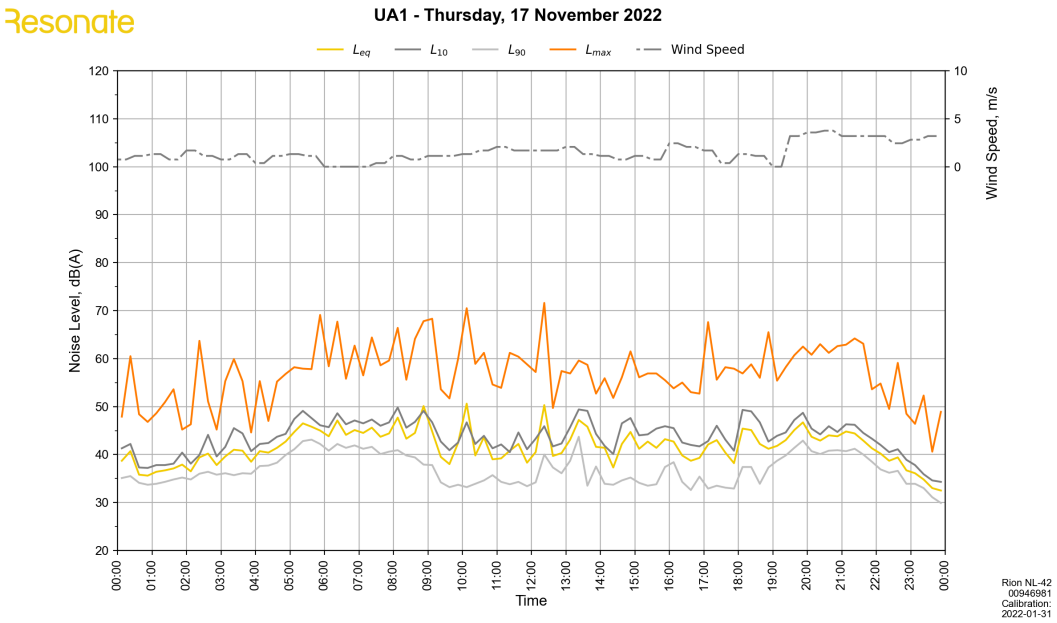
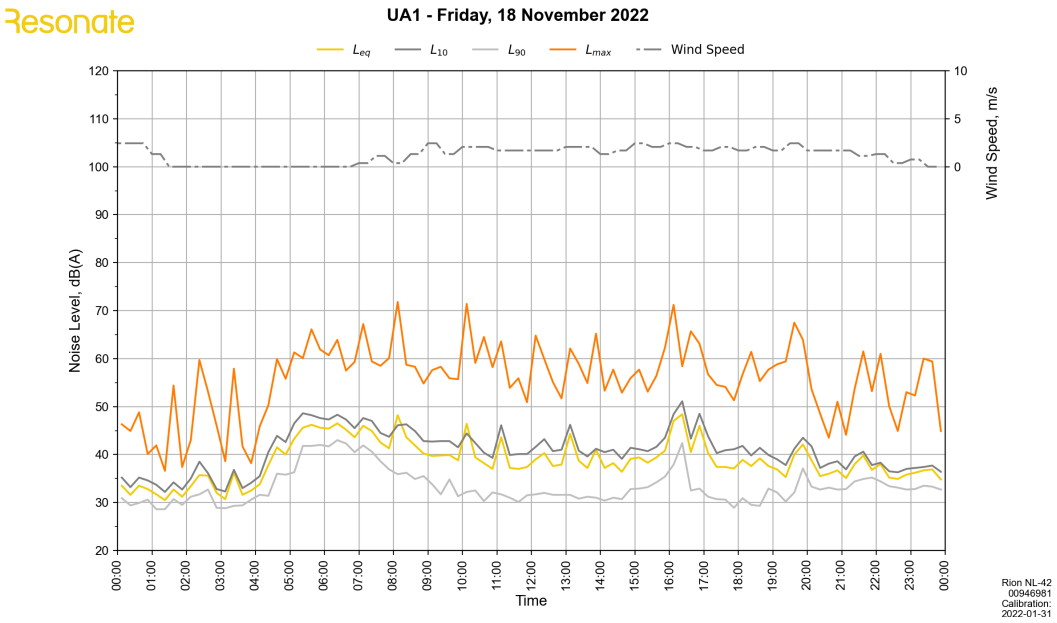
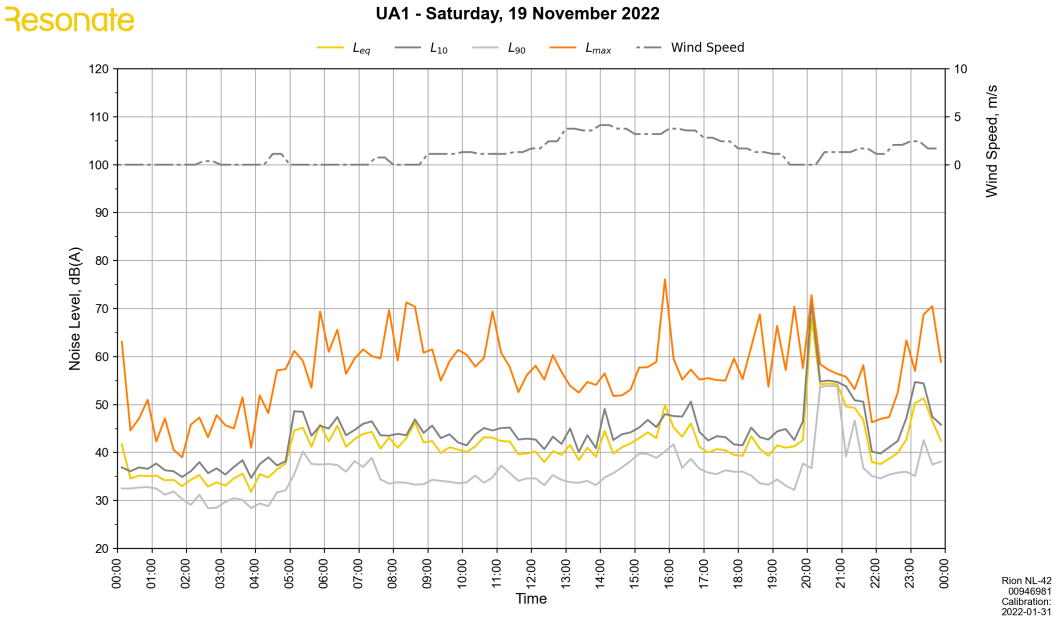
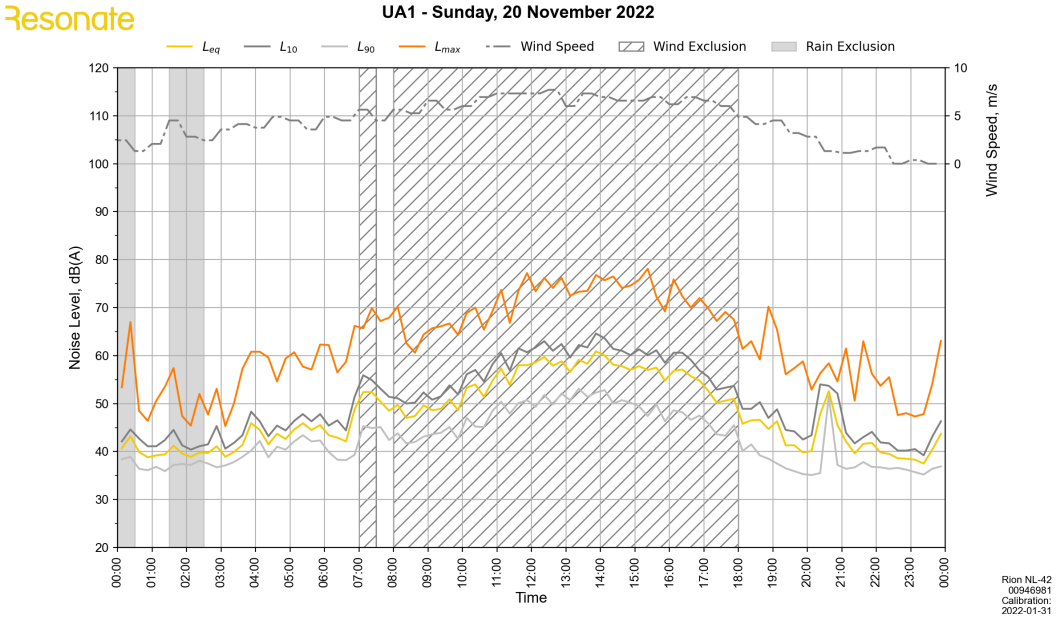

Resonate
UA1 - Wednesday, 16 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Wind Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946981
Calibration:
2022-01-31

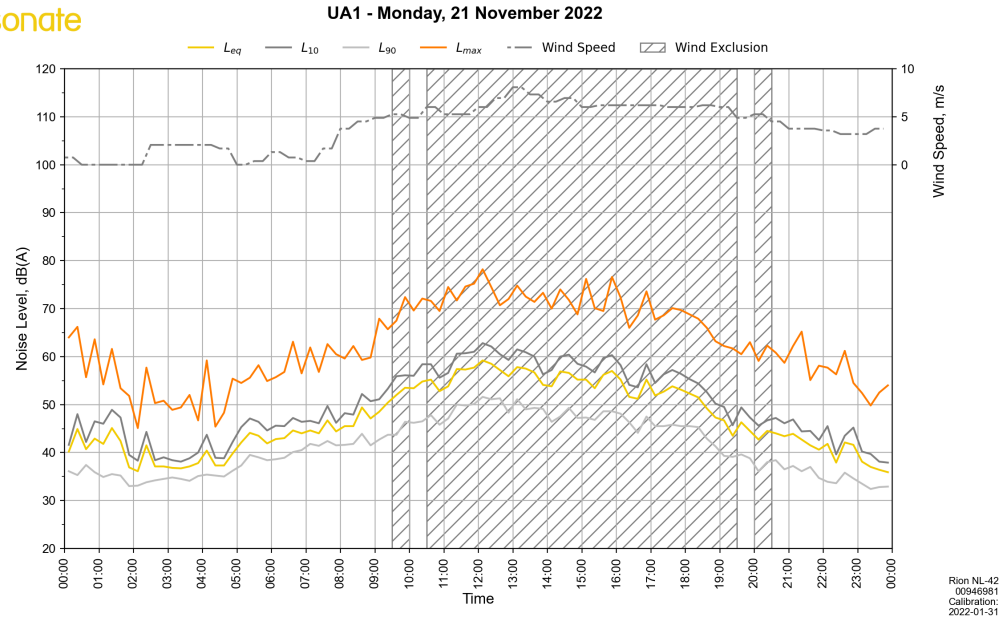

Resonate
UA1 - Thursday, 17 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946981
Calibration:
2022-01-31


Resonate
UA1 - Friday, 18 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946981
Calibration:
2022-01-31

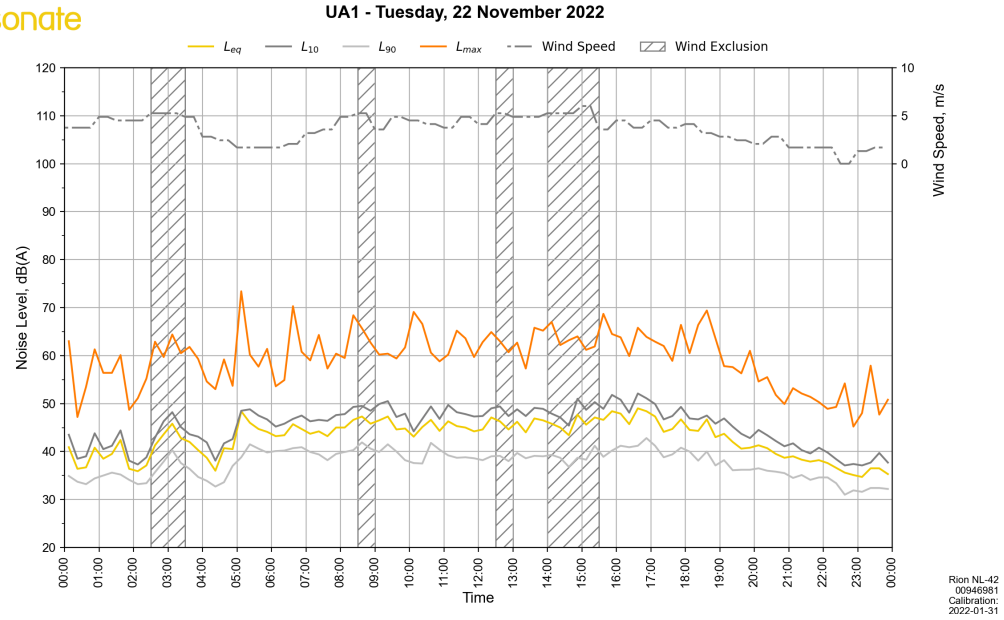

Resonate
UA1 - Saturday, 19 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946981
Calibration:
2022-01-31

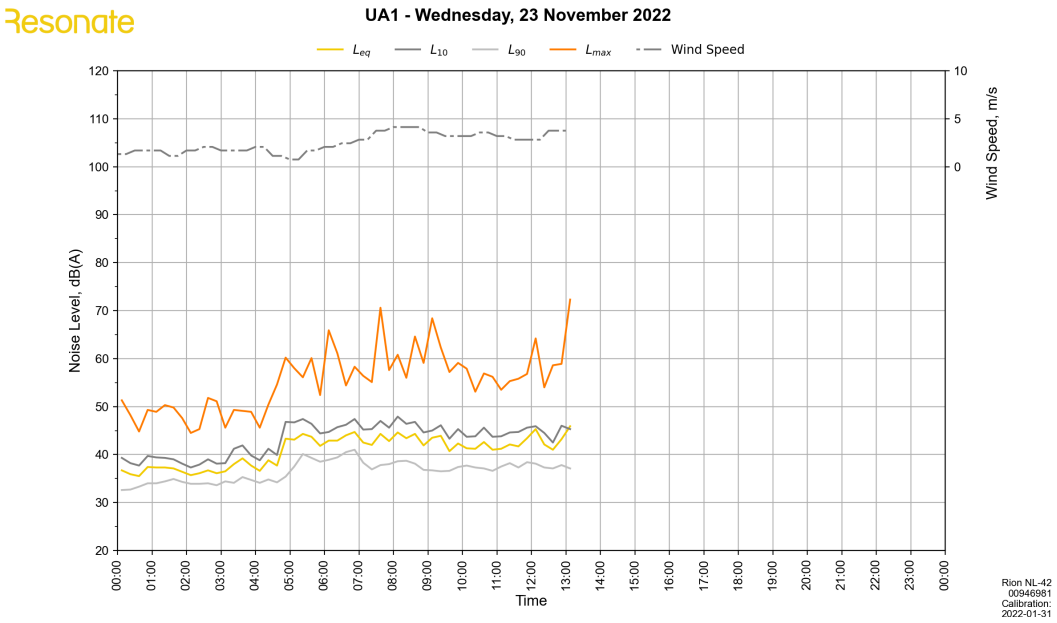

Resonate
UA1 - Sunday, 20 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Wind Exclusion Rain Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946981
Calibration:
2022-01-31

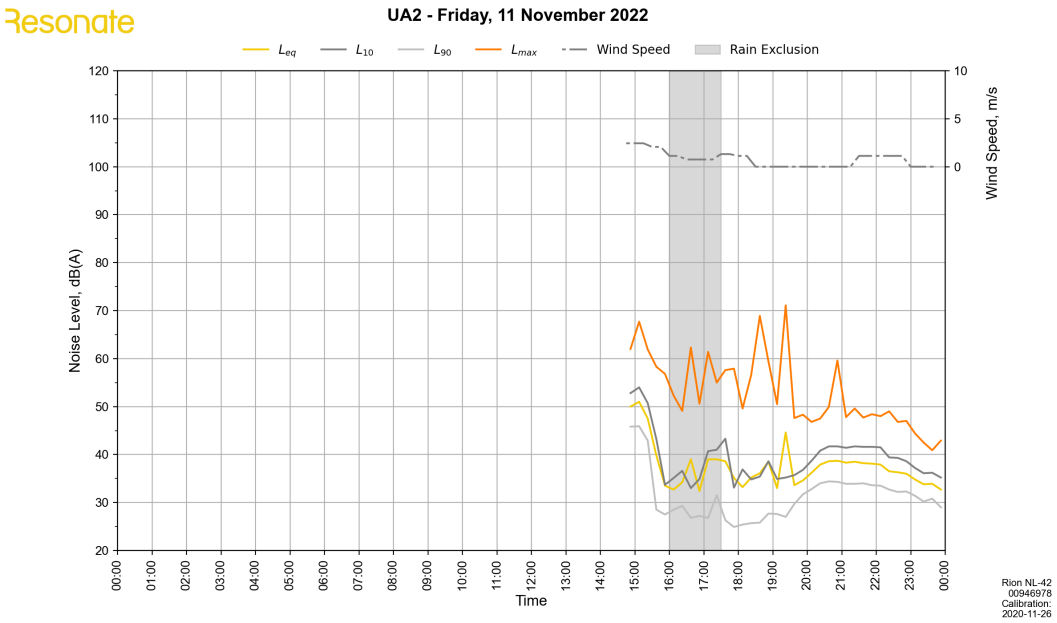
Resonate

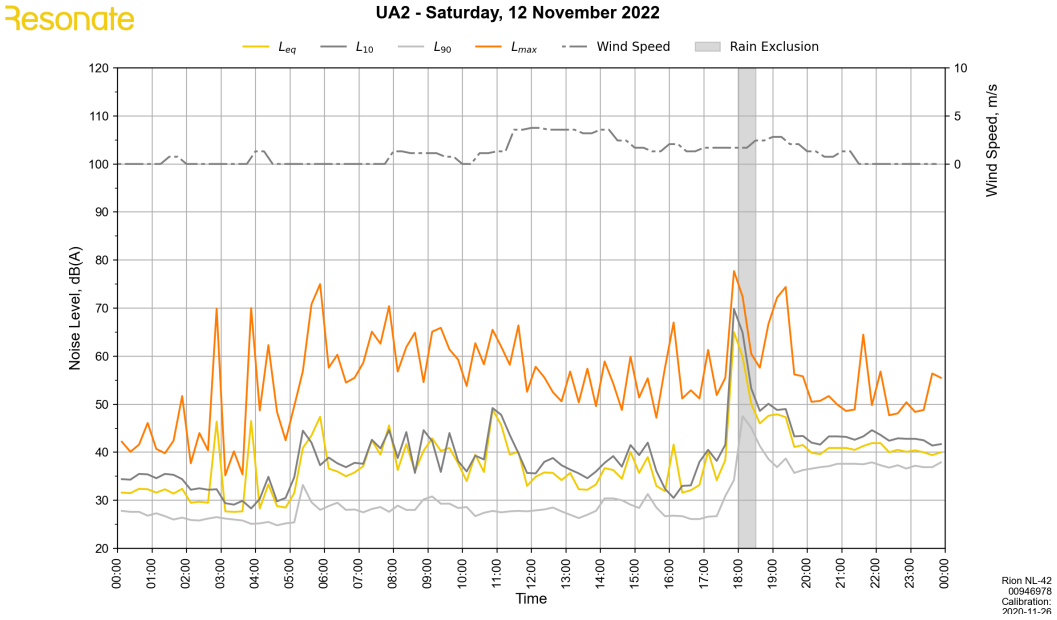


Resonate

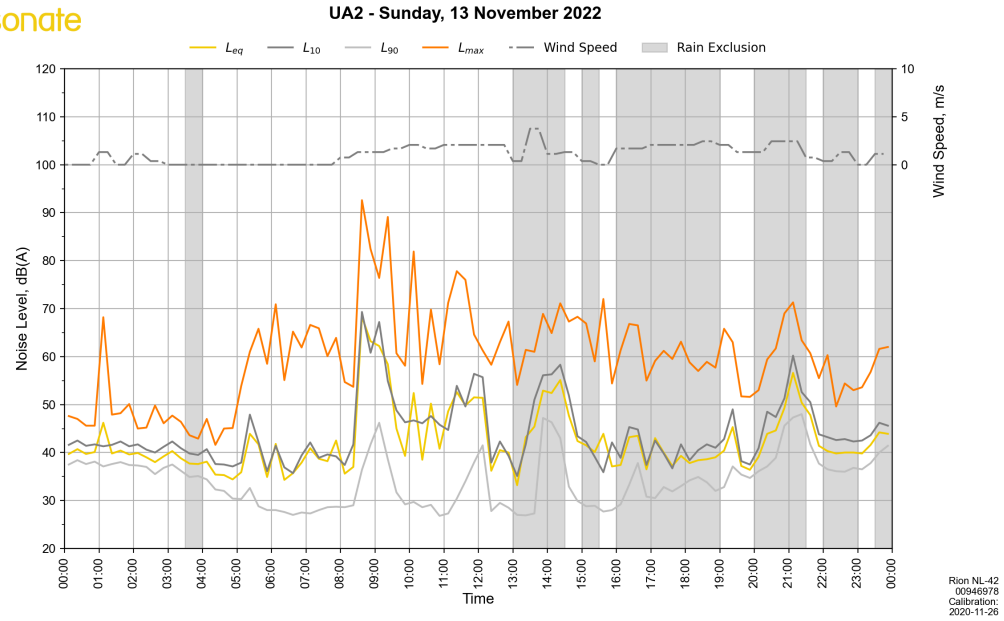



Resonate
UA1 - Wednesday, 23 November 2022
L_{eq}
L_{10}
L_{90}
L_{max}
Wind Speed
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946981
Calibration:
2022-01-31

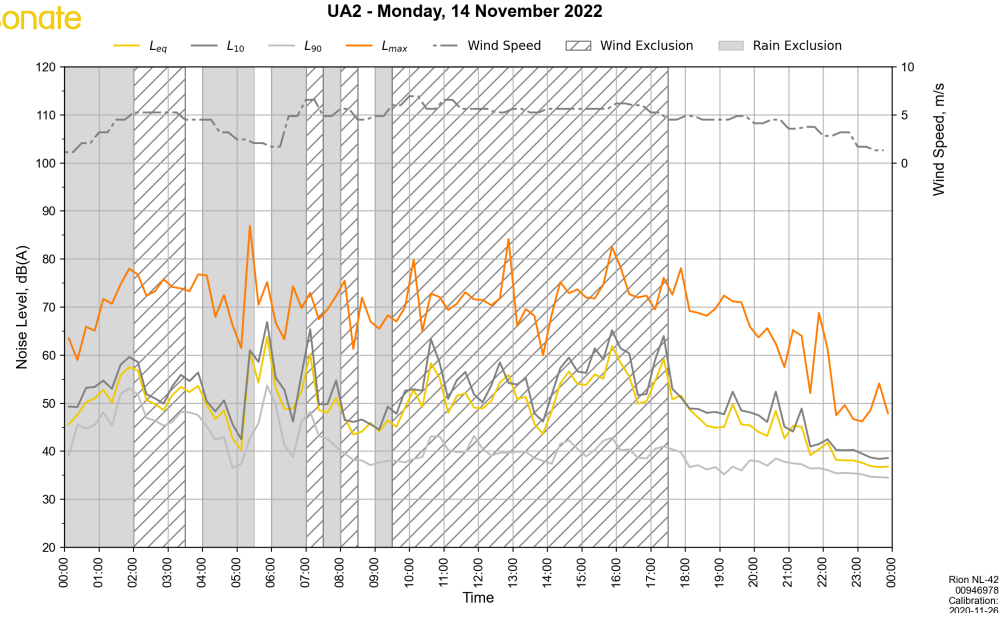

Resonate
UA2 - Friday, 11 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Rain Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946978
Calibration:
2020-11-26


Resonate
UA2 - Saturday, 12 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Rain Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946978
Calibration:
2020-11-26

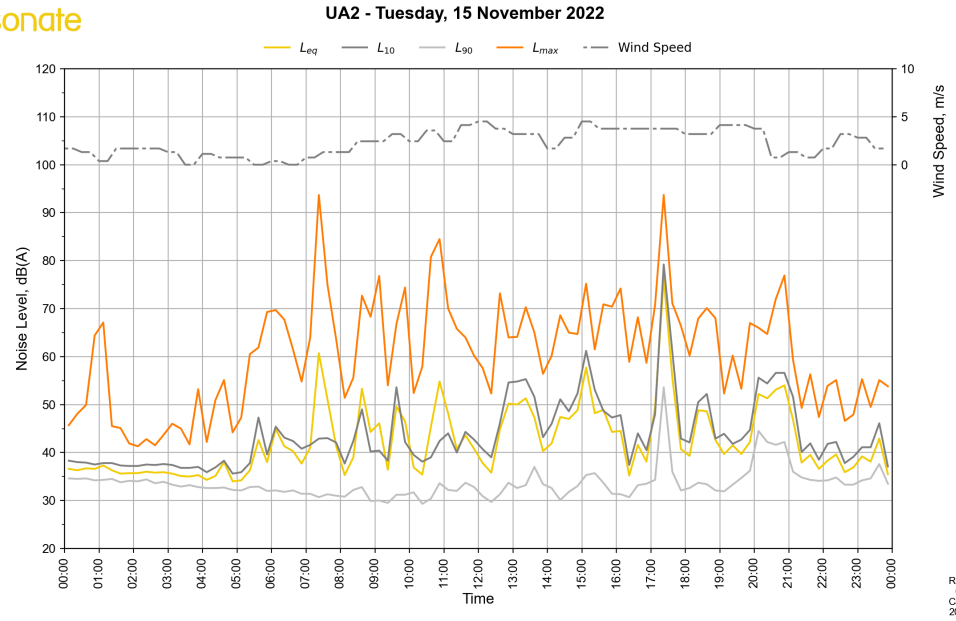
Resonate



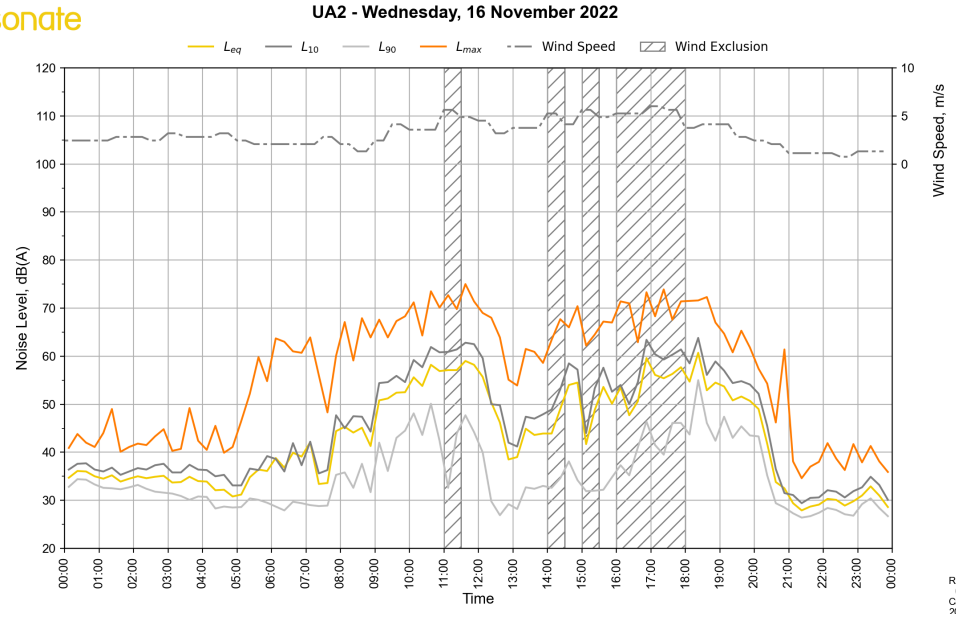
Resonate



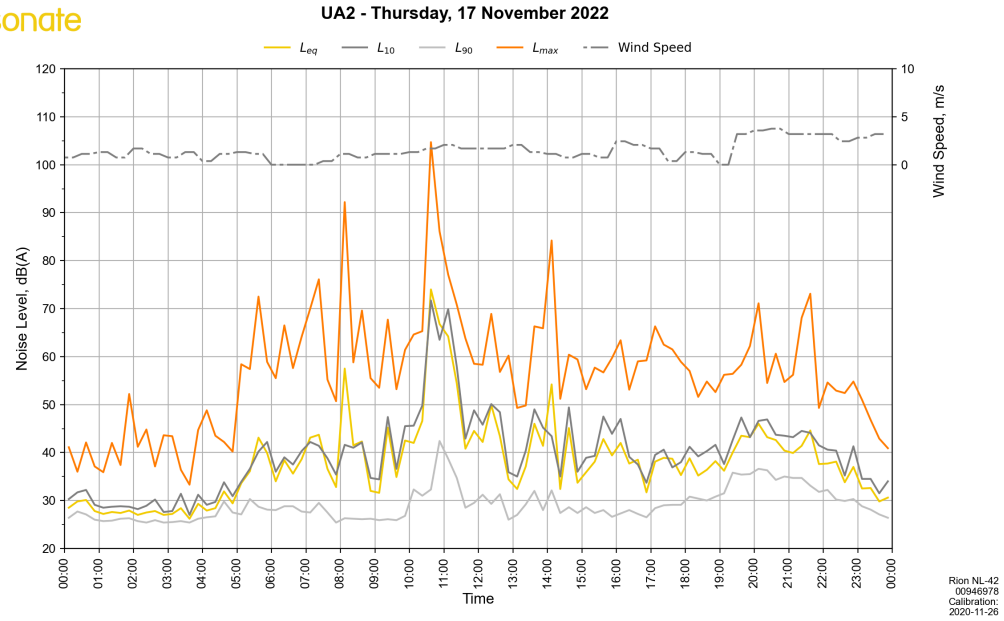
Resonate



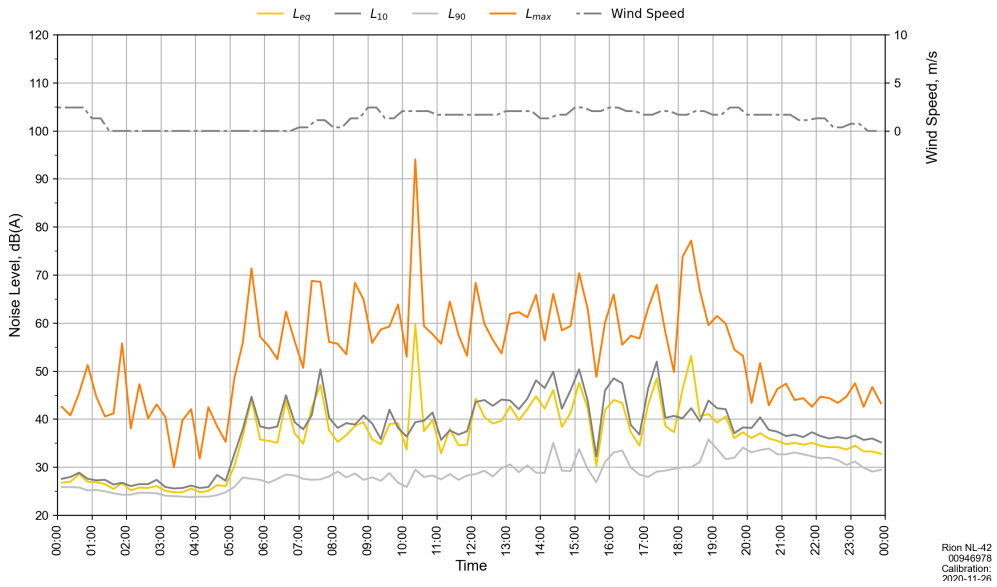
Resonate



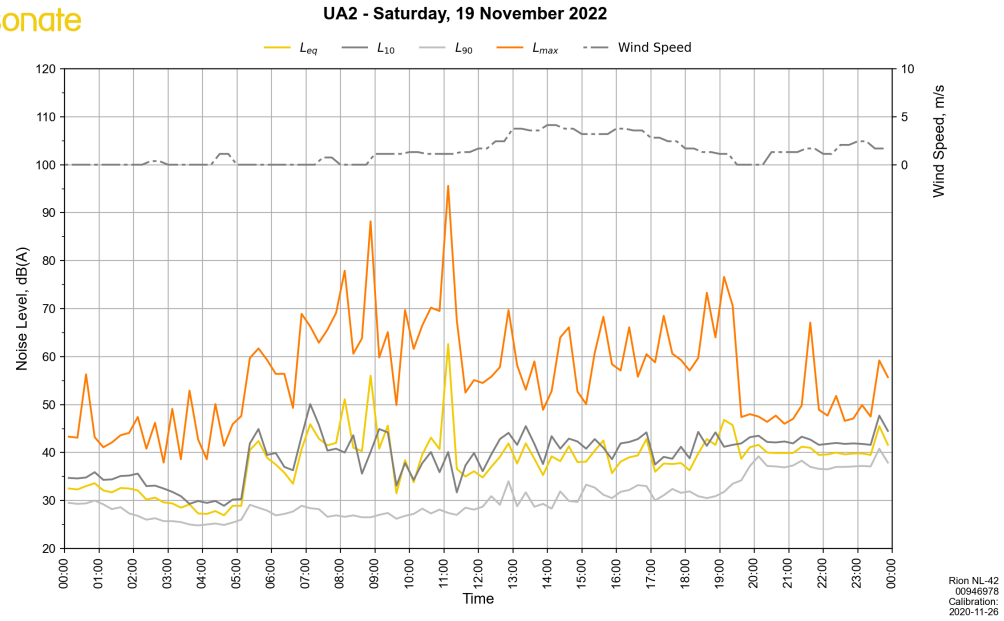
Resonate



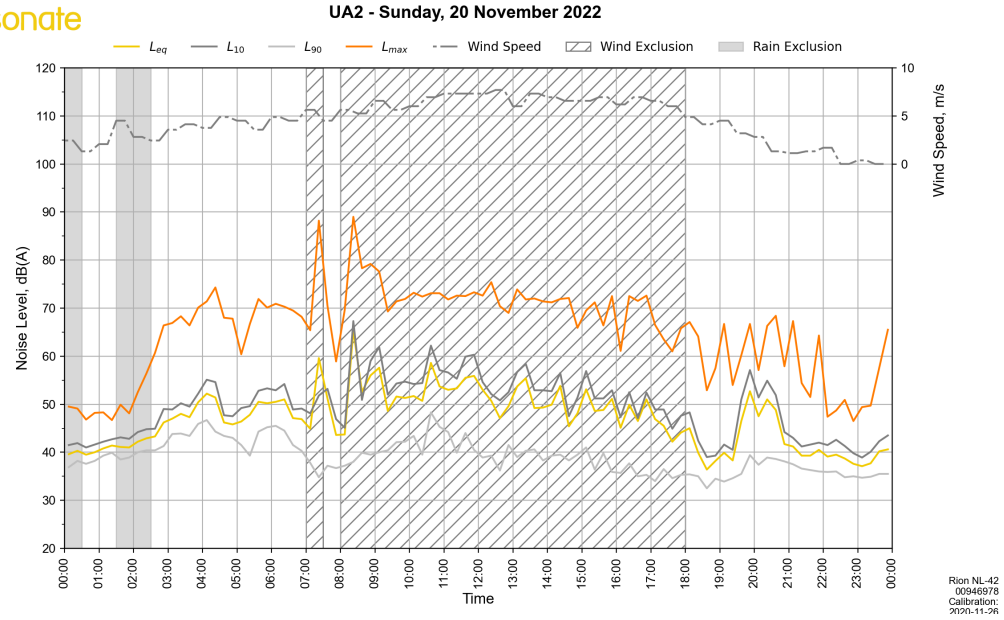
Resonate



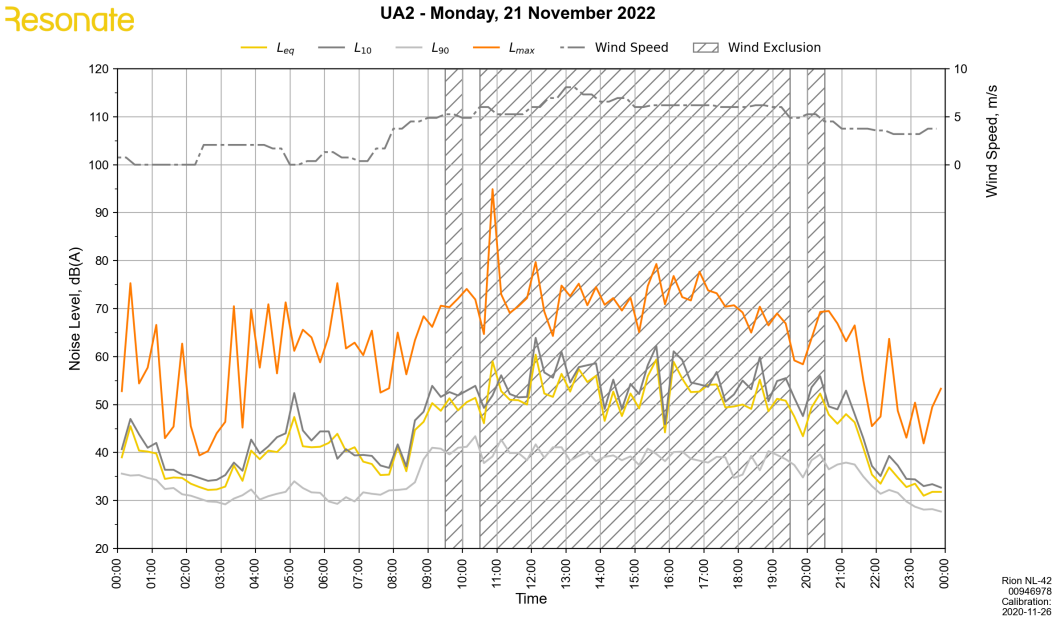
Resonate

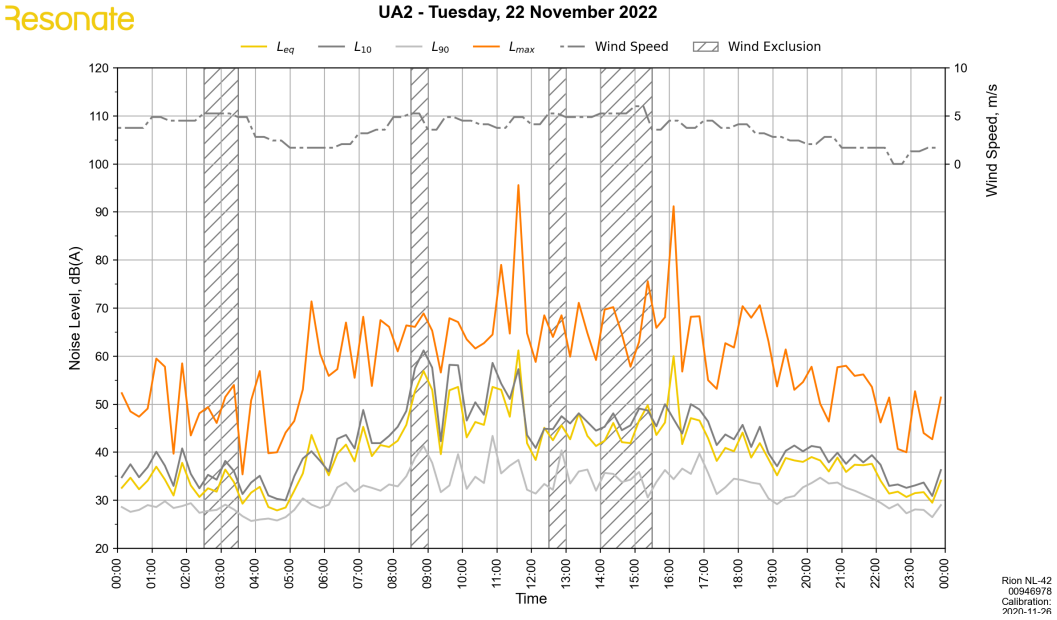


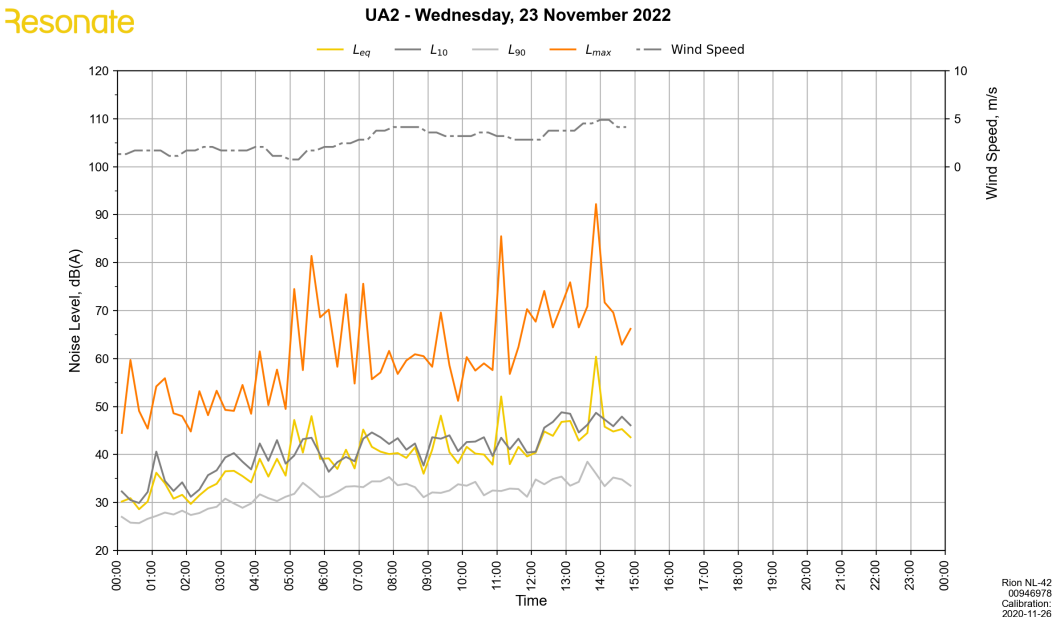
Resonate

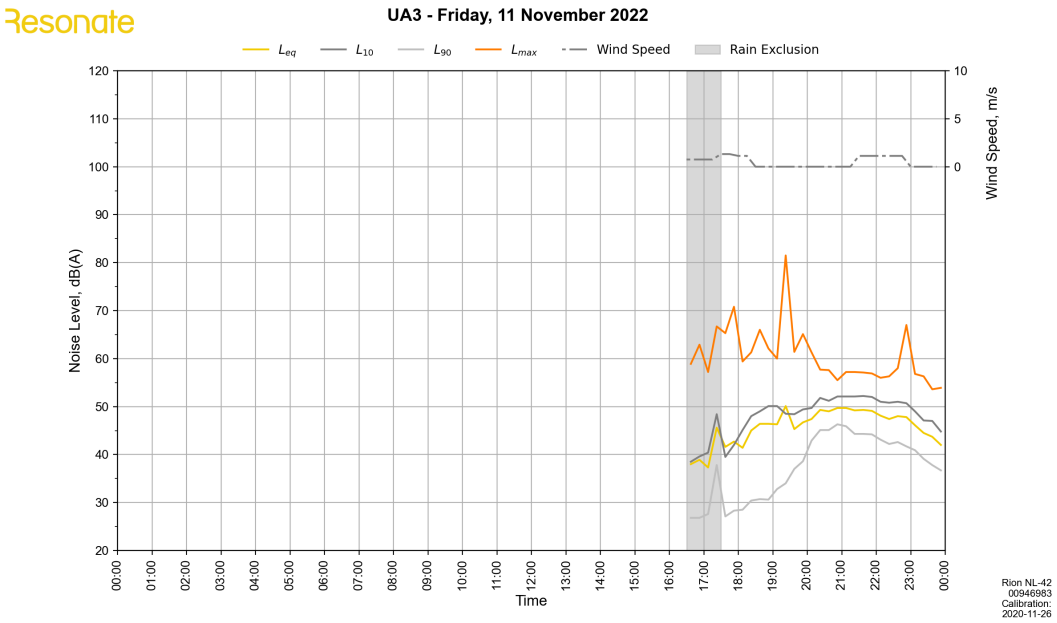


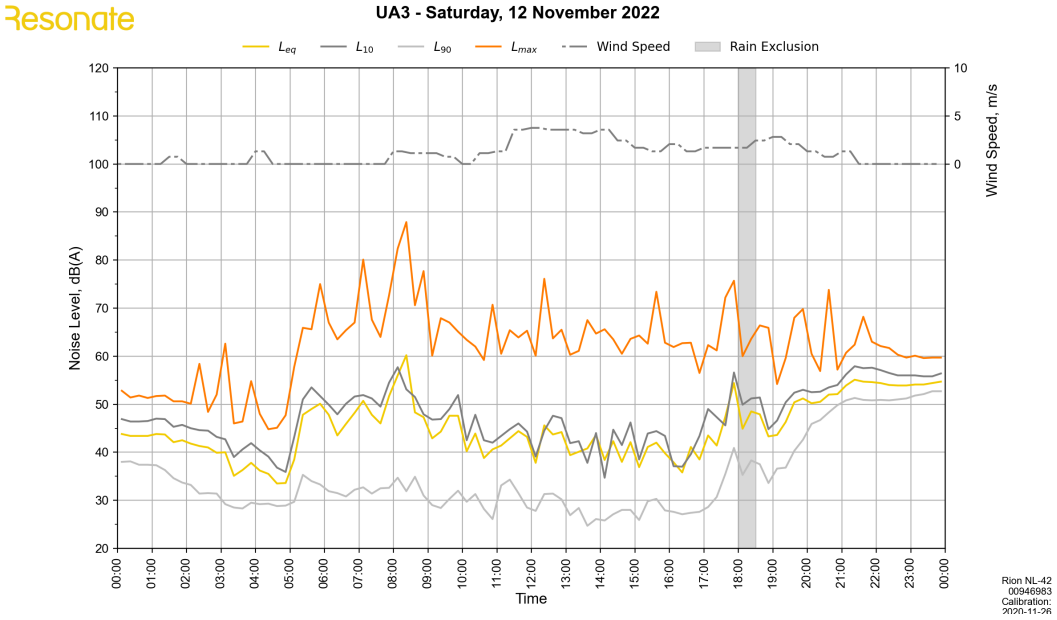
Resonate

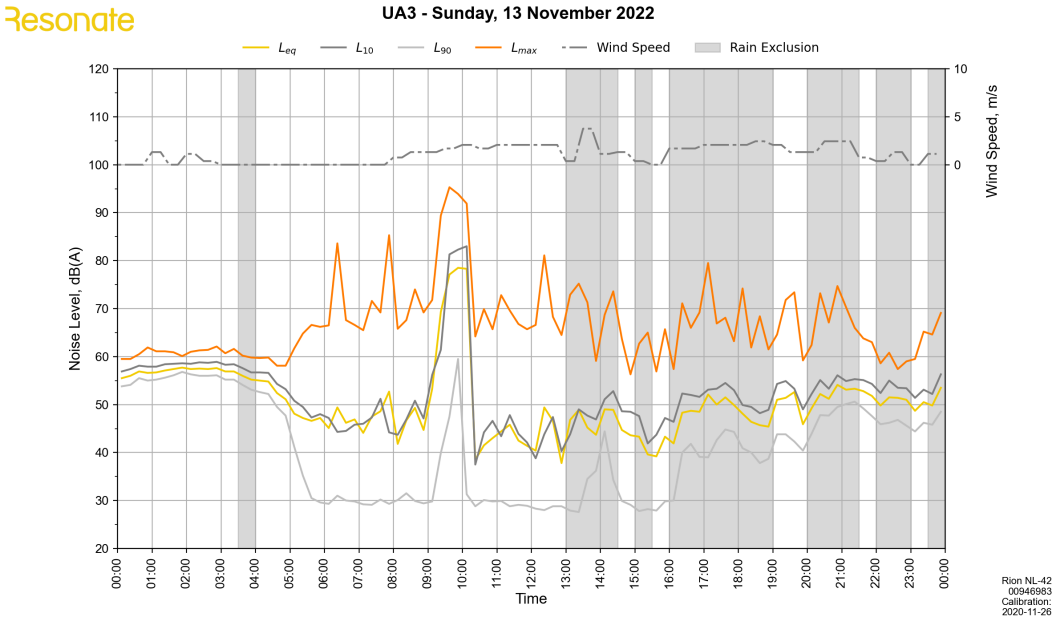

Resonate
UA2 - Monday, 21 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Wind Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946978
Calibration:
2020-11-26

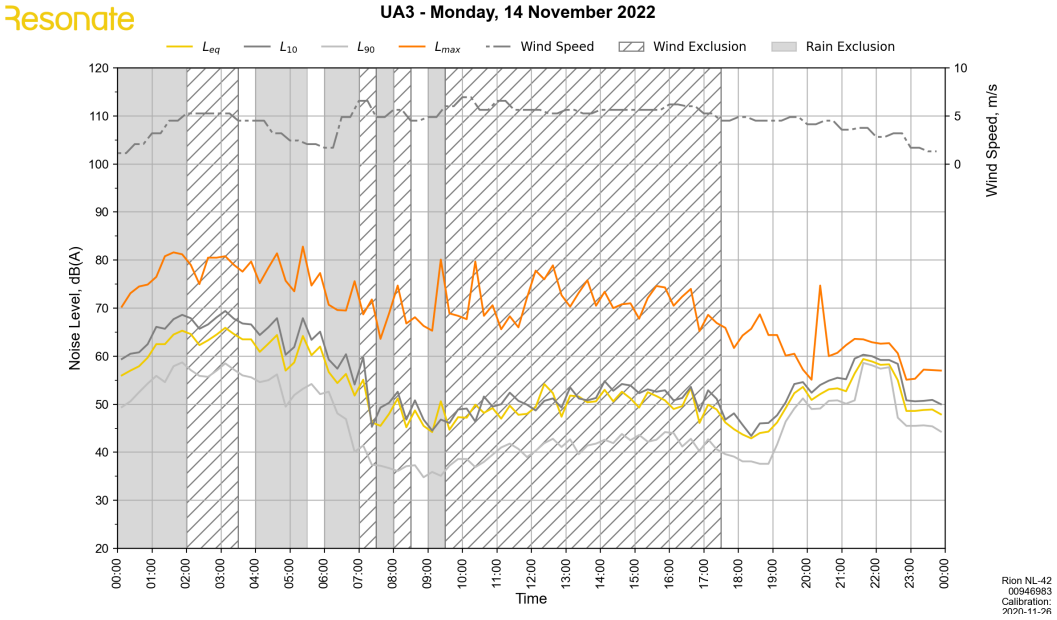

Resonate
UA2 - Tuesday, 22 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Wind Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946978
Calibration:
2020-11-26

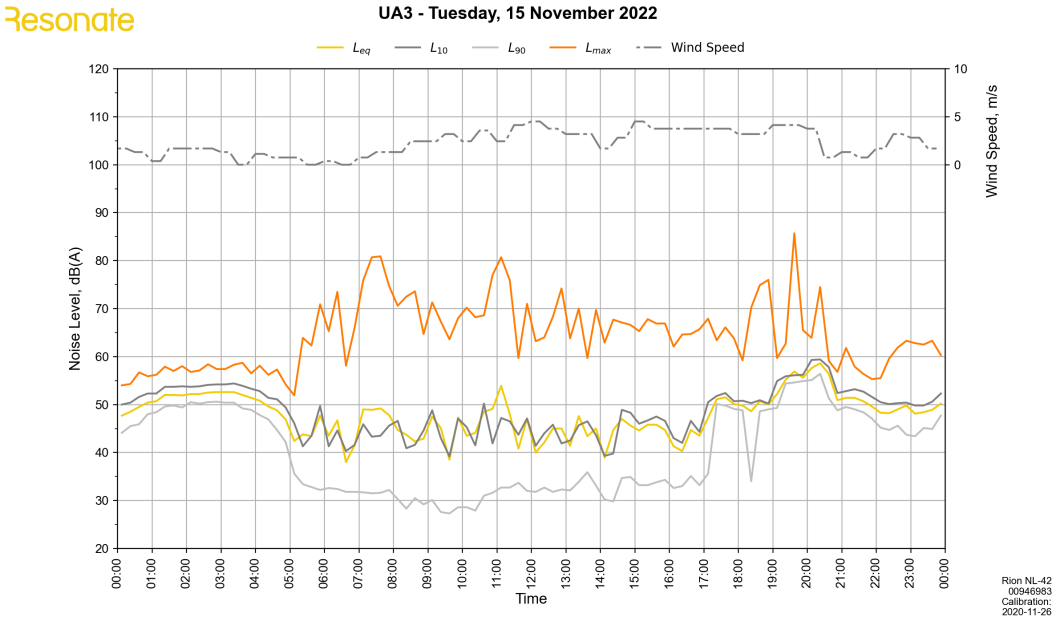

Resonate
UA2 - Wednesday, 23 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946978
Calibration:
2020-11-26

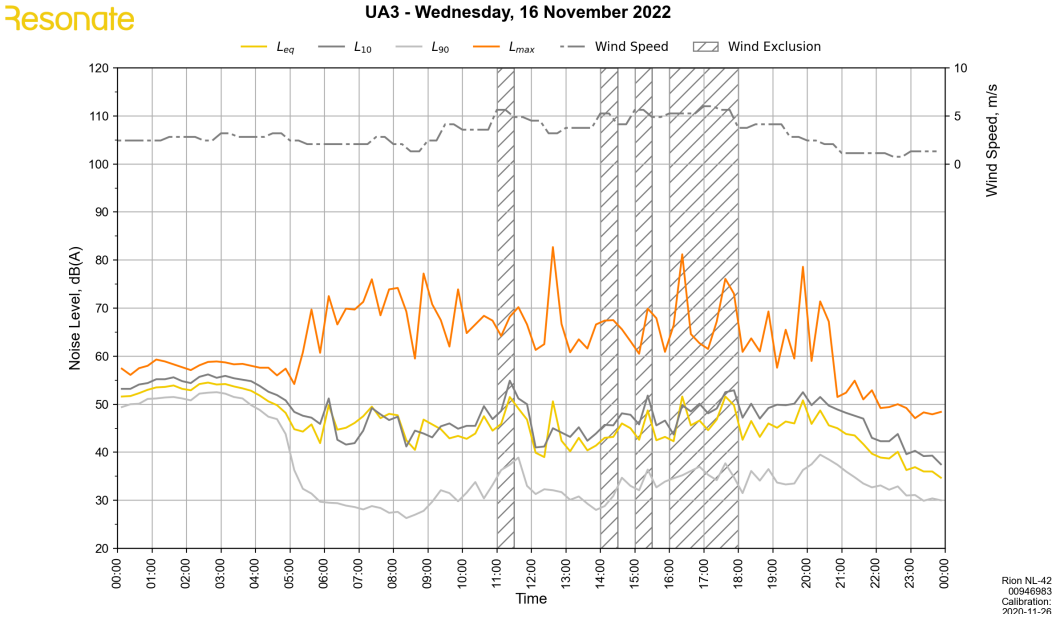

Resonate
UA3 - Friday, 11 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Rain Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946983
Calibration:
2020-11-26


Resonate
UA3 - Saturday, 12 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Rain Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946983
Calibration:
2020-11-26

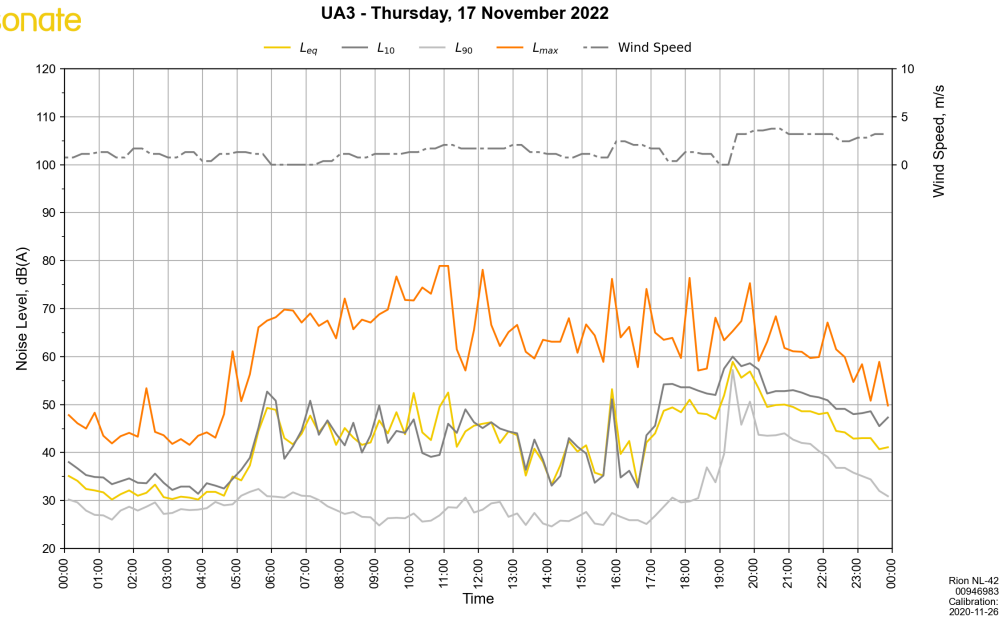

Resonate
UA3 - Sunday, 13 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Rain Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946983
Calibration:
2020-11-26


Resonate
UA3 - Monday, 14 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Wind Exclusion Rain Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946983
Calibration:
2020-11-26

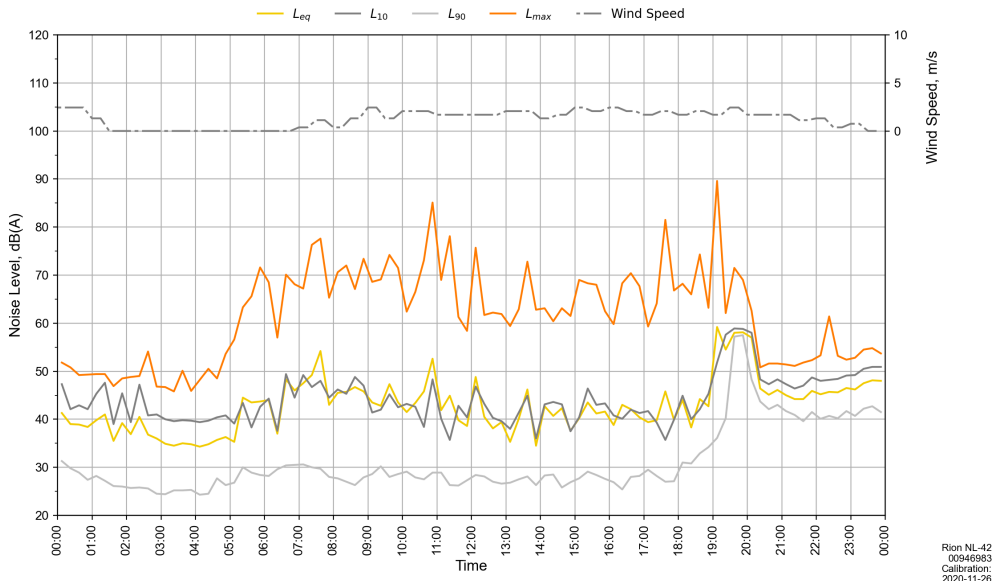

Resonate
UA3 - Tuesday, 15 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946983
Calibration:
2020-11-26

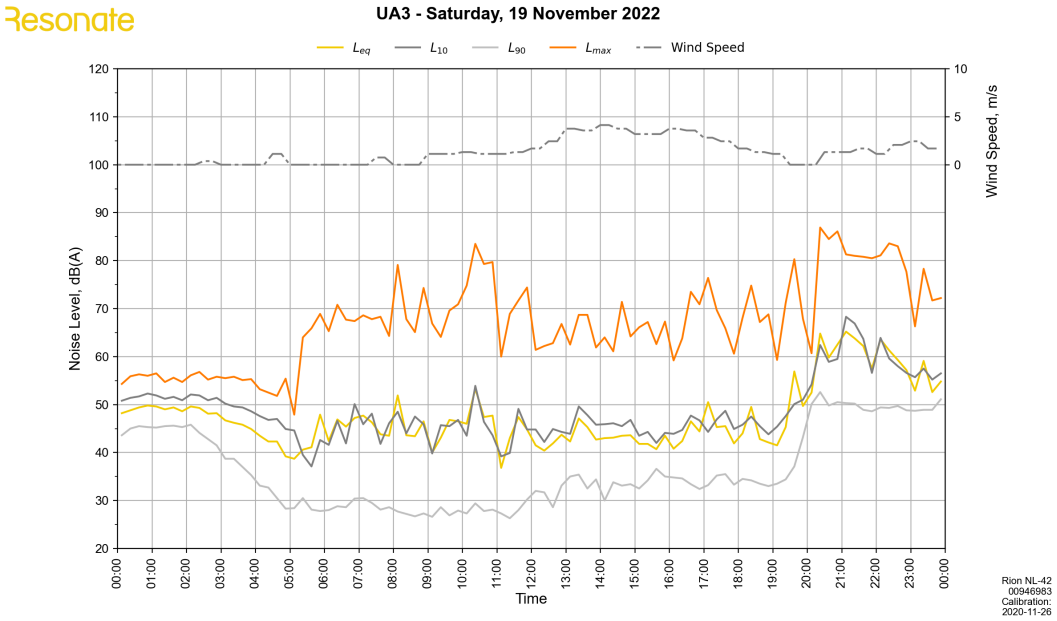

Resonate
UA3 - Wednesday, 16 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Wind Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946983
Calibration:
2020-11-26

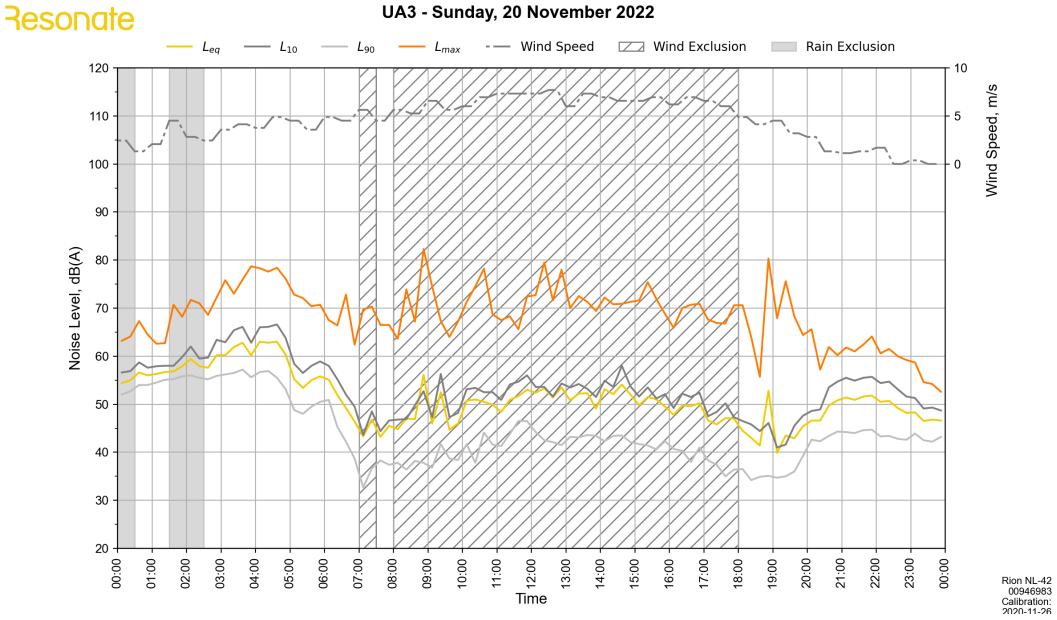
Resonate



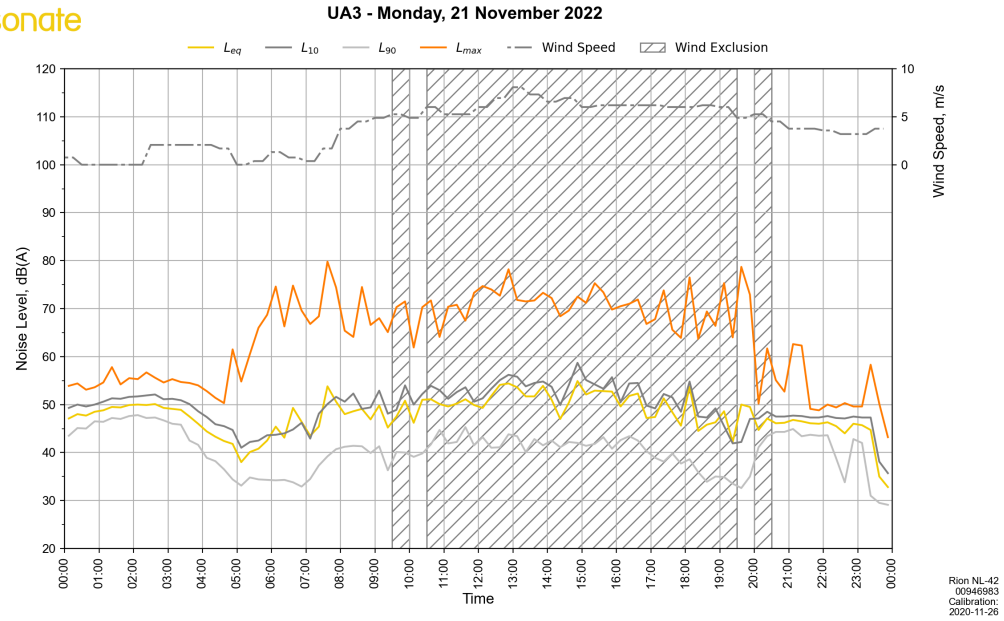
Resonate



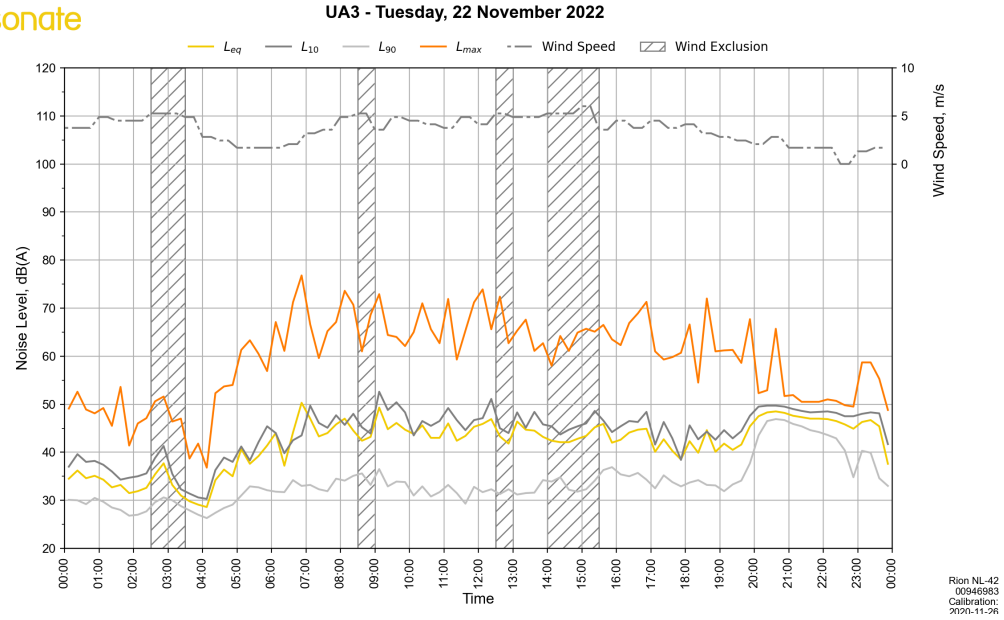

Resonate
UA3 - Saturday, 19 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946983
Calibration:
2020-11-26

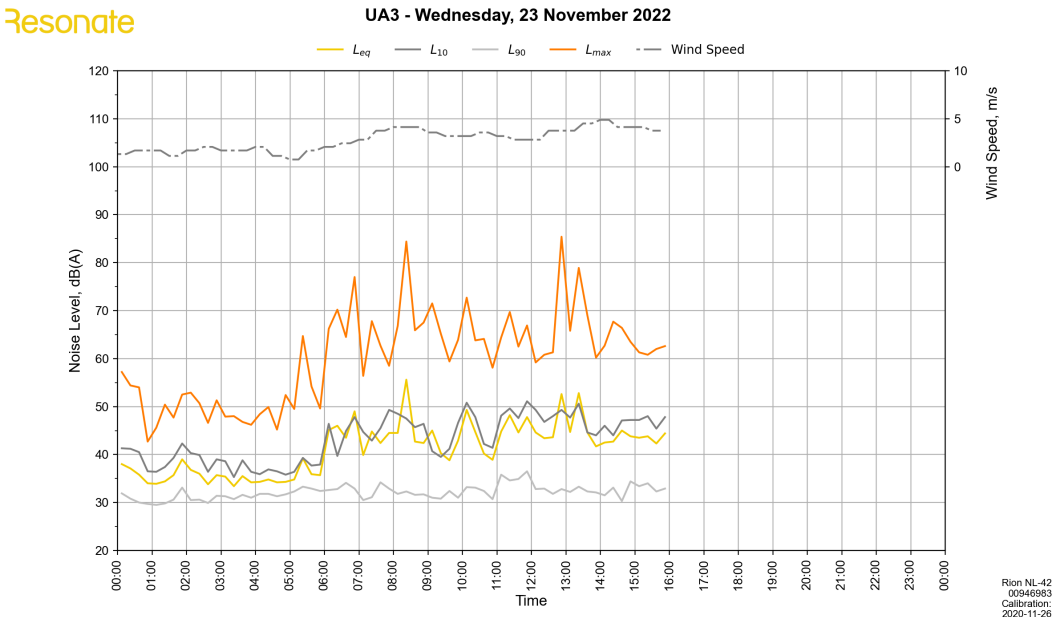

Resonate
UA3 - Sunday, 20 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed Wind Exclusion Rain Exclusion
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946983
Calibration:
2020-11-26

Resonate



Resonate




Resonate
UA3 - Wednesday, 23 November 2022
L_{eq} L_{10} L_{90} L_{max} Wind Speed
Noise Level, dB(A)
Wind Speed, m/s
Time
Rion NL-42
00946983
Calibration:
2020-11-26

Appendix B – Predicted construction noise levels

ID	Type	NCA	Predicted noise level, dB(A)			Standard hours NML, dB(A)	Out-of-Hours NML, dB(A)			Compliance				Sleep disturbance criteria, dB(A)		Compliance Sleep disturbance	
			Daytime Leq,15min	Evening & Night Leq,15min	Lmax[1]	Day	Day	Evening	Night	Day	Day (OOH)	Evening (OOH)	Night (OOH)	Leq	Lmax	Leq	Lmax
13	RES	NCA 1	12	9	17	45	40	40	38	Yes	Yes	Yes	Yes	40	52	Yes	Yes
54	RES	NCA 1	13	11	19	45	40	40	38	Yes	Yes	Yes	Yes	40	52	Yes	Yes
56	RES	NCA 1	12	10	18	45	40	40	38	Yes	Yes	Yes	Yes	40	52	Yes	Yes
57	RES	NCA 1	11	10	18	45	40	40	38	Yes	Yes	Yes	Yes	40	52	Yes	Yes
58	RES	NCA 1	11	10	18	45	40	40	38	Yes	Yes	Yes	Yes	40	52	Yes	Yes
1	RES	NCA 2	31	30	38	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
2	RES	NCA 2	37	35	43	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
3	RES	NCA 2	40	37	45	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
4	RES	NCA 2	35	23	31	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
5	RES	NCA 2	30	28	36	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
6	RES	NCA 2	29	27	35	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
7	RES	NCA 2	27	26	34	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
8	RES	NCA 2	28	27	35	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
9	RES	NCA 2	25	21	29	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
10	RES	NCA 2	27	25	33	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
11	IND	NCA 2	30	22	30	75	75	75	75	Yes	Yes	Yes	Yes	n/a	n/a	Yes	Yes
14	RES	NCA 2	19	13	21	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
15	RES	NCA 2	22	17	25	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
18	RES	NCA 2	17	13	21	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
19	RES	NCA 2	24	20	28	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
20	RES	NCA 2	17	15	23	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
21	RES	NCA 2	21	3	11	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
23	RES	NCA 2	14	12	20	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
25	RES	NCA 2	22	20	28	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
27	RES	NCA 2	22	11	19	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
28	RES	NCA 2	14	12	20	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
30	RES	NCA 2	24	22	30	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
31	RES	NCA 2	24	22	30	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
55	RES	NCA 2	22	13	21	45	40	36	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
32	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
34	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
35	RES	NCA 3	13	1	9	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
36	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
37	RES	NCA 3	1	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
38	RES	NCA 3	1	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
39	RES	NCA 3	1	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
40	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
41	RES	NCA 3	1	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
42	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
43	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
44	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
45	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
46	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
47	RES	NCA 3	1	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
48	RES	NCA 3	1	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
49	RES	NCA 3	2	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
50	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
51	RES	NCA 3	2	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes
52	RES	NCA 3	0	0	8	45	40	39	35	Yes	Yes	Yes	Yes	40	52	Yes	Yes

(1) Lmax is based on LAeq + 8 dB
(2) Negligible exceedances of 1 to 2 dB have been considered to achieve compliance with the criteria as 1 to 2 dB exceedances would not be discernible by the average human ear.